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# CALIFORNIA CULTIVATOR

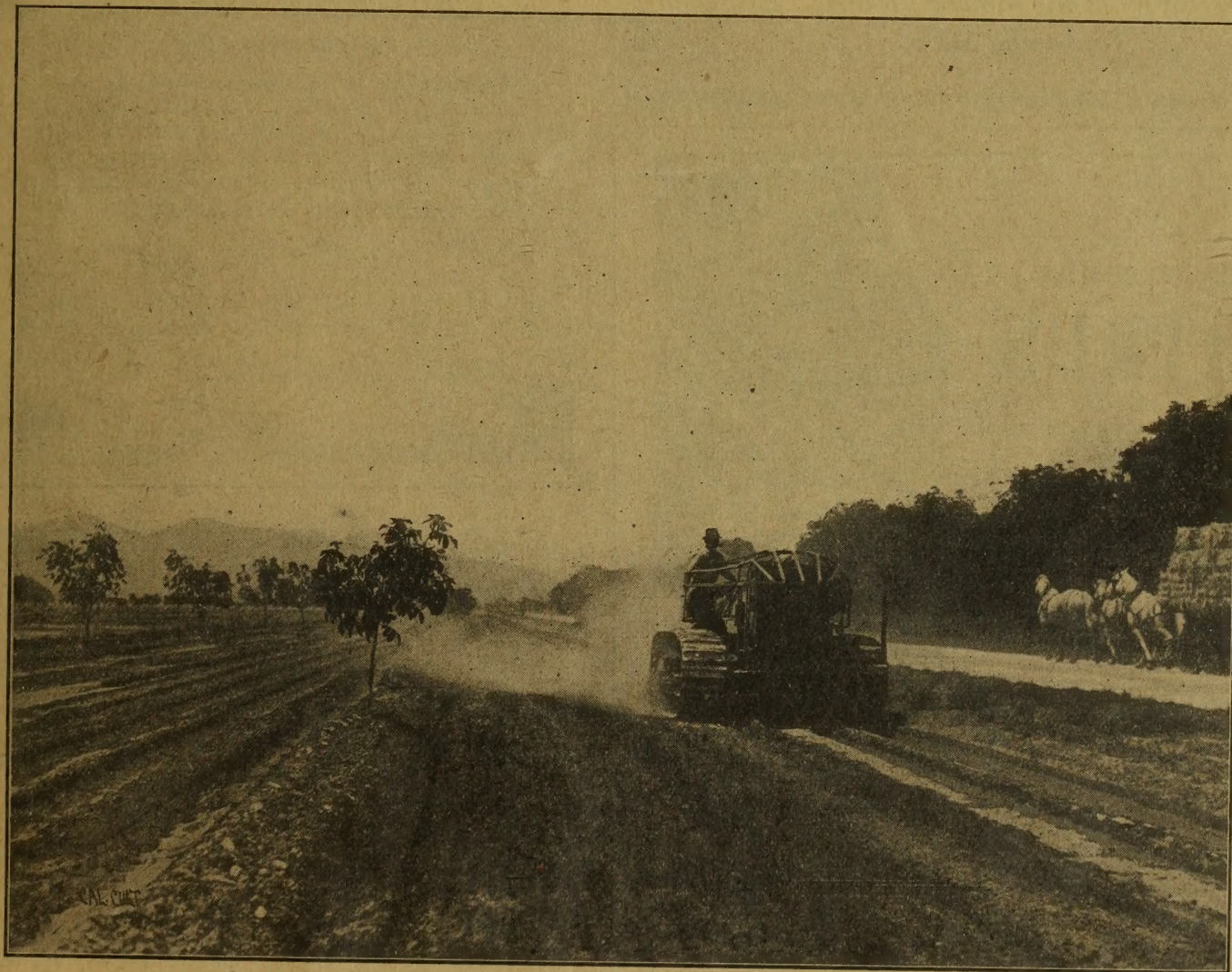
**THE LIVESTOCK and DAIRY JOURNAL** *Combined with* **CALIFORNIA CULTIVATOR**

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

July 7, 1917

SAN FRANCISCO



California is Helping Feed the World



# "REMCO"

**REMCO REDWOOD PIPE IS THE BEST PIPE FOR IRRIGATION**

**REDWOOD** air-dried, resists decay.  
**PIPE** made from air-dried redwood, longer lived.  
**IS** the result of years of pipe building experience.  
**THE** one pipe that is fully guaranteed by the makers.  
**BEST** quality of galvanized steel used for winding.  
**PIPE** easy to transport and easy to lay.  
**FOR** any purpose where a good pipe is wanted.  
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## Redwood Manufacturers Co.

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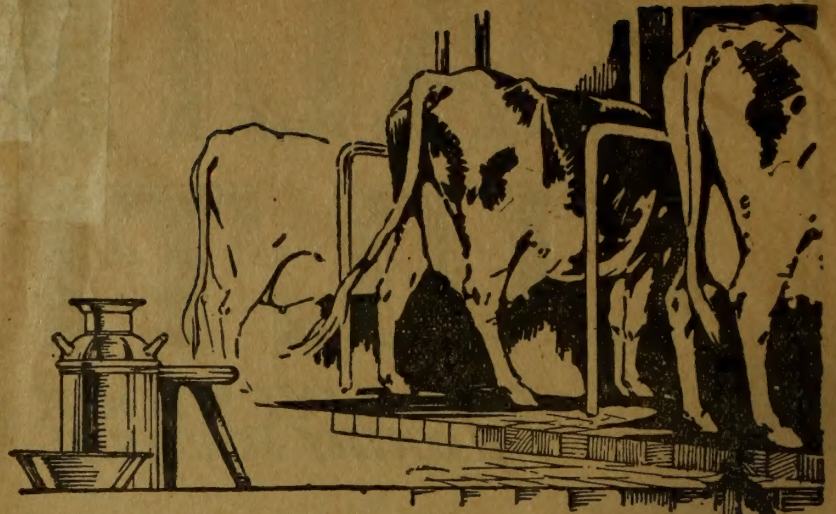
### OFFICE:

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### FACTORY:

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Also Manufacturers of the famous "Remco" Redwood  
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## U.C. Farm Expert says-

**"Wood blocks make a very desirable floor"**

Professor J. B. Davidson of the University of California, College of Agriculture, says:

"Wood blocks make a very desirable floor when well laid, either of durable wood or a treated wood, especially for that part of the floor upon which the animal is required to stand. The use of wood blocks obviates to a certain extent the use of a liberal amount of bedding where the animal must lie on the floor."

## California Redwood

Resists rot and fire

Redwood block paving is especially desirable—contains a natural preservative. No creosote or artificial preservative is necessary to increase Redwood's durability. Redwood block paving resists wet and dry rot, is permanent in shape and will last a life-time.

Redwood block paving is not expensive.

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CALIFORNIA REDWOOD ASSOCIATION  
770 Call Building, San Francisco

Ask for the Child's Story of the "big trees" of California—there's a copy for every child in the nation



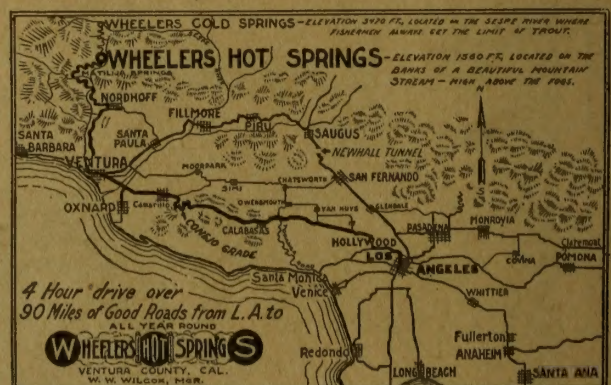
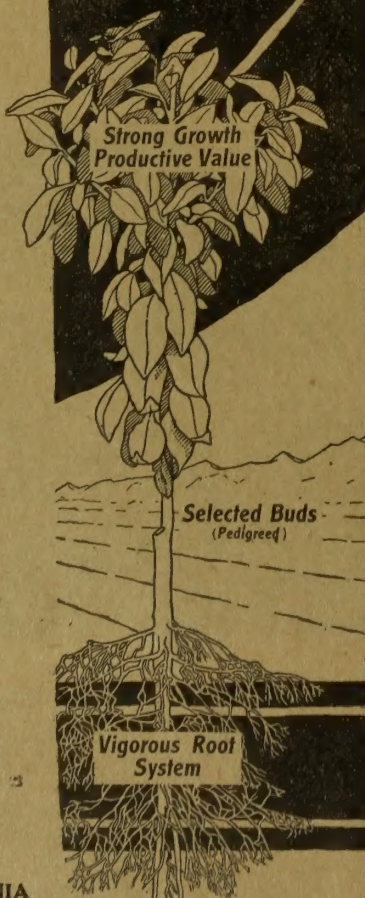
## TEAGUE QUALITY CITRUS TREES

AWARDED THE GOLD MEDAL AT FOUR INTERNATIONAL EXPOSITIONS.

For Productive values, fine quality of fruit and vigorous growth Teague's bud-selected, (pedigreed) properly trained and carefully handled orange and lemon, pomelo and lime trees are the trees to plant. An experience covering a third of a century warrants the assertion that Teague Quality Citrus Trees possess these qualifications in a superlative degree. All the standard commercial sorts, and garden and ornamental varieties; the largest assortment of citrus trees in America. . . . We invite correspondence from intending planters. . . . Consultations on citrus planting by appointment. . . . Prices cheerfully furnished.

**The R. M. Teague  
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# California Cultivator

Vol. XLIX No. 1

LOS ANGELES: July 7, 1917

One Dollar Yearly

## Grapes Under Standardization

Address of A. L. Rutherford of Stanislaus County Before the Horticultural Commissioners at Modesto. The New Law Will Prove Invaluable to the Grape Industry



ANY years ago, when fresh grapes were shipped to eastern markets, remunerative prices were obtained.

The grapes were of fine quality and much care was exercised in the packing. These good prices stimulated planting, so with each year large acreages were added to the industry until the market became somewhat overstocked.

Prices began to decline and this caused growers and packers to become less careful in both the growth of fruit and in the pack. So the business went from bad to worse until the railroads and packers were getting all that was to be made. The packers were getting their price for packing, and the railroads were charging the same freight, so they kept encouraging the growers to continue picking and delivering to the packing houses, even though the growers were not getting pay for the hauling.

During this time of general bankruptcy there were a few farmers who had not lost the art of putting good, clean fruit on the market, and they continued to receive prices that justified the expense and trouble. The prices which these people obtained were held up to the rank and file of growers to encourage more shipments. At last the time came when the fresh grape shipments would have to cease or the growers would have to assign, and it was not until

then that growers attempted to help themselves.

Committees of investigators were sent out to see what might be done. These investigators developed the fact that good ripe fruit was yet commanding good prices, so it was decided that only clean, ripe fruit should be shipped.

### First Legislation

Then it was that our farmer legislators in 1914 got their heads together, framed and passed a standardization law to control the quality of fruit shipped. This law, although somewhat lame, did wonders towards restoring profitable prices. Two parts of the section of the law provide that all fruit shipped must be practically free from insects and fungous diseases, and that grapes shall show at least 16 and 17 per cent Balling scale. These are the main features of the law of benefit to the fruit grower.

### Inspection

In 1915, when the law became operative, it was quite a serious problem with the different horticultural commissioners to determine just how to proceed. I put my machinery to work, then slipped down to Fresno, then to San Joaquin County, to see if my system of inspection could be improved, but to my surprise I found both Fresno and San Joaquin doing just as I had planned.

The task was so expensive, with

insufficient money available, that it was out of the question to put an inspector at each of the packing houses. So the next best thing was done—that was for the inspectors to visit each packing house one or more times a day, as the demand might require, and not at any particular hour. Often two inspectors would have overlapping territory, so the packers would not know where or when to look for an inspector. Then the commissioner made it a point to visit each packing house every other day, if not oftener. The commissioner and each inspector were provided with a Balling scale testing outfit, and these were used whenever there was any suspicion of the fruit not being up to the required test. Mildew and insect diseases were carefully looked after.

The word "practically" in the sentence (practically free from insect and fungous diseases) was the cause of much discussion. The packer would insist that where there was but a slight infestation of mildew the grapes were practically free, and again the packers would put up two grades for shipment, one for local and the other for foreign or interstate shipment, so it was not always possible to know just where the grapes were to be shipped.

### Benefits Realized

Most packing firms and the packers took pride in putting out a clean, fancy pack. There were others who

only cared to get out quantity, and not until a few packed cars were turned down and threats made of arrest did these packers come to understand that their packs must conform to the requirements of the standardization law in every possible way.

During the season of 1916 there was a decided improvement over the pack of 1915, due to the growers using greater effort to subdue the mildew, waterberries and prohibiting the gathering of under-ripe fruit. And most all packers had learned that it was to their interests, as well as to the interests of the growers, to send forward honest packs. Consequently last year it required less vigilance on the part of the inspectors to obtain a better pack.

### New Law

During the past session of the legislature the promoters of the first standardization law, with the state commission of horticulture and the different horticultural organizations, framed and passed an amendment to the law, which our governor has seen fit to sign. This law, relative to grape shipments, affords some improvement, opens the way to produce splendid results, and promises the restoration of early day prices to the grape owner.

Standardization and organization is the keynote of prosperity to the farmer and the fruit grower. Let the good work go on.

## War's Challenge to the Poultry Keeper

Mrs. Jean A. Koethen Writes for Cultivator Readers from Practical Experience of Things to do with Poultry in These Troublous Times when Wheatless Days and Meatless Days are Necessary for Poultry



IT does not come to every generation, but now and then to some generation there comes a crisis that compels radical change in habits of thought. We are fortunate, perhaps, that our generation must face such a crisis and force itself, willy-nilly, out of its rut. Like little Dorothy in "The Wizard of Oz," we have been caught up in a cyclone and now must adapt our lives to suddenly changed conditions. How foolish we are if we hide behind that flimsiest of excuses, "I don't believe in war," as if that had anything whatever to do with the case. Whether we believe in it or not, the country is at war, and we must for once forget ourselves, forget our own tastes and inclinations and our preconceived notions of what the world owes us and do our "bit" in the place where we are.

Hitherto the first and often the last question asked about backyard poultry keeping has been, "Does it pay?" We must tear ourselves loose now from that commercial issue. Keeping chickens in a small way will

probably pay as well as it ever has paid in dollars and cents, but it will pay still more in other and more important ways. "Poultry," an English publication, said recently: "While stimulating the efforts of the large farmers and breeders who are the backbone of the industry under present conditions, we have realized that the salvation of the national egg supply rests mainly with the masses, who by keeping a few hens and raising a limited number of chickens according to their accommodations can meet their own domestic requirements and possibly assist their neighbors who are not so well situated. Poultry keeping is the most accommodating food producing industry. You can keep hens where you cannot grow potatoes or feed a pig. . . . There is not a back yard or a garden in the British Isles where a few hens could not be kept with substantial profit, simply by exercising ordinary care and intelligence in the provision of accommodation."

If this is true in England, where feed must be husbanded with extraor-

dinary care, how much more true is it in America, and especially in our own California, where hens are kept with a minimum of housing and where green feed may be grown eight months of the year. Still more emphatic are the closing lines of this editorial: "The war has made poultry keeping a national necessity and a universally popular household industry. Let us see that we develop its opportunities now and always to the best of our ability."

If poultry keeping is a "national necessity" in England, is it not a good plan for us, who have as yet not felt the pinch of war conditions, to put our shoulder to the wheel, stop complaining about feed prices and do our very best with what we have? Most commercial poultry men, I believe, are doing this very thing. In my visits to poultry plants in and about Los Angeles I have been surprised at the optimism displayed by everybody. Unprofitable stock is being culled out more carefully than ever before, feeding problems are being studied with renewed enthusiasm, more feed will

be raised on poultry farms than has been thought possible. Last week at one of the University of California poultry schools, which are now held every summer in Southern California, an enthusiastic crowd gathered on one of the hottest days in years to discuss poultry problems and learn better methods, and I did not hear one single person ask if poultry could be made to pay. They knew it could, every one of them, and were bound to find a way.

One poultry association recently passed a resolution advising novices not to try to enter the business under the present conditions, and this was both wise and sensible. Poultry keeping as a commercial venture is not for the novice, and it is quite time he understood it. But everybody ought to keep hens, and a few hens carefully kept will do their full share in keeping the family.

Whether or not the salvation of our national egg supply may ever come to rest mainly with the side-liner, as it does in England, we do not know.

Continued on Page 18.



## Selecting Buds



WING to the large number of "boarder" trees in nearly all citrus orchards live orchardists are working over tops of such trees, using buds from tested trees and the fruit bearing wood on those trees. Some call these trees "pedigreed," which term is not permitted by some others. However, the idea is the same, that trees known to be heavy bearers of high grade fruit should be used not only in working over the orchard but in budding nursery trees which are to be used for planting. From observations made by A. D. Shamel, expert physiologist of the bureau of plant industry, 25 per cent of California's citrus trees are unprofitable. This is an awful waste which has been appreciated and stopped by some orchardists, and with

the present movement toward conservation of energy and conservation of resources the impressing of this lesson on all should be easy.

Mr. Shamel adds that this 25 per cent loss means an average of \$100 per acre. Mr. Shamel has been studying for years the variations in citrus varieties and the possibility of improving these varieties through the elimination of inferior strains. He adds:

"The plan of our work has been to cooperate with the grove owners in keeping individual tree records in selected plots of each of the important citrus varieties. The results of our work have shown that not less than 25 per cent of the trees in our plots have been unprofitable and undesirable. From tree census observations

in many orchards it is evident that California citrus orchards average more than 25 per cent of trees that are of inferior strains and bear light crops of poor quality.

"In our performance record plots the actual losses due to the presence of these undesirable bud sports has amounted to approximately \$100 per acre every year. We believe that this is a fair and conservative figure, and shows the average loss through low production and inferior commercial quality in California citrus orchards as a whole. Individual tree records are of value to the grower in enabling him to discover drone trees to be top-worked with reliable buds or to be replaced with pedigreed trees. We believe that records for two successive normal seasons are sufficient to enable the grower to locate his drone trees."

This work as conducted by the de-

partment has resulted in the furnishing of more than 2,000,000 buds to growers for top-working of established orchards and for nursery stock. In order to extend this work and make it of greater value the Fruit Growers' Supply Company has arranged with owners of orchards which have been tested for a period of years, and on which records of production both as to quantity and quality have been kept, to supply these buds for its members. Not only will good orchards be chosen but good trees in such orchards and bearing wood only will be supplied. That is, the wood chosen must carry fruit at the time the bud stick is cut. A price will be made which will cover simply the cost of expert work. Mr. Shamel and experts of the department of agriculture will aid citrus growers in every way in determining the trees in their orchards which should be eliminated or worked over. C. S. Milliken will have immediate charge of this feature of the work so far as the company is concerned, of course under general direction of Prof. Shamel.

### Chilean Nitrate in Relation to Pan-American Trade

Written for California Cultivator  
By William S. Myers



HE nation that can dominate the sea can dominate the world. The present vast commercial advantage of the United States may only be temporary, since European nations, by domination of the cheapest transportation of the world, by water, may after the war resume the financial ascendancy which was theirs before 1914.

We shall certainly fall back to the position of second or third place if we do not build up an American merchant marine now in short order. It will be of little account, however, unless we have a powerful navy to protect it.

One of the most important items in the preparation of munitions of war is nitrate of soda. The scarcity of shipping at present is such that the water freight rates on nitrate from Chile to the Atlantic ports of North America have advanced from the usual \$5 per ton to upwards of \$25 or more. The situation calls for an enlightened governmental policy for promoting shipbuilding in South American countries as well as North.

#### Need of Nitrate

Quite aside from the importance of nitrate of soda in agriculture and its importance as an article of commerce in the development of Pan-American trade is the necessity of a goodly reserve supply of this material by our government for making munitions of war.

So many sensational statements have received credence of late that uninformed people might suppose that Chilean nitrate supplies would be exhausted at a very early date. Nitrate grounds already surveyed, however, still contain enormous quantities. The surveyed and certified tonnage opened up at the present time, ready for extracting, is estimated at 250,000,000 tons. The specific life of the surveyed deposits is estimated at upwards of 200 years, even allowing for a steadily increasing annual rate of consumption.

#### Pan-American Railway

An important consideration for those of us interested in Pan-Americanism is the completion of the longitudinal railway from Kansas City to

# -wide awake ranchers are now planting SUDAN HAY!

Nation's  
HAY CROP  
is LIGHT

Plant  
SUDAN  
SEED NOW  
and MAKE  
MONEY

CROP  
MATURES  
IN 50 TO 60  
DAYS

Sudan hay growers will "coin money" this year because of the scant general hay crop. Do you realize that all classes of hay are commanding fabulous prices? Do you want to "get in" on this high-priced market? Then plant Sudan seed at once and harvest a bountiful crop in 40 to 60 days—a rich, sweet, nutritious hay relished by *all kinds of stock*.

Do you know that Sudan is recommended by agricultural experts all over the country? It grows so fast and thick that it crowds out all weeds. It is twice as nutritious as barley, timothy or rye—and gives twice the yield per acre. Farm papers throughout the State are urging ranchers to plant Sudan hay to counteract hay shortage.

If you want to add substantially to your bank account with mighty little trouble and effort—plant Sudan now—the safe, sure, "easy-to-grow-and-handle" crop. Ask the editor of any farm journal. Read the last bulletin on Sudan grass issued by the University of California. Big free illustrated folder will be sent by return mail.

### Special July Prices

Single pounds (enough for 50x50 feet)—36 cents.  
10 lb. lots—(Will plant half an acre, sown broadcast)—34 cents per lb.  
25 lb. lots—32 cents per lb.  
100 lb. lots—28 cents per lb.

Note: Express or postage extra. Get rates from your express office or mail carrier.

**Germain**  
Established 1871  
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Enclosed find \$..... for which  
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Proven Sudan Seed.

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Buenos Aires, so that in time of war we would have not only nitrate deposits available for use, but safe and rapid transportation of other munitions of war, should we be called upon to help our southern neighbors; for, even with a powerful navy, which is absolutely necessary, the regular and expeditious arrival of supplies would be even more fully insured by the completion of a railway from Buenos Aires to Kansas City than could be provided in any other manner.

#### Responsibility of Free Nations

The present crisis is throwing a cold, dry light on our policies, and

broad, comprehensive views of them are strongly suggested. Never has there been a time when such views were more necessary.

The efficiency of democracy is everywhere on trial as never before, and the free nations of Europe have much more than ordinary responsibilities of war, since they must now demonstrate whether they are more efficient than the typical central monarchies of Europe.

Some practical legislative proposals are now in order to help avoid military and naval unpreparedness in future, and let us hope for them soon. Two or three are obvious enough to invite immediate consideration.

## Selling Fruit by Auction

**T**HE EDITOR of the Redlands Facts, Senator Lyman M. King, has made the rounds of some of the Eastern fruit auctions and writes interestingly of his observations:

While "back east" recently I had the privilege of spending a part of one forenoon down on the docks of the Erie railroad, where California fruits are auctioned off every day except Sunday, to the wholesale buyers of New York and the section immediately contiguous thereto. It is really one of the sights of the metropolis, and Californians who are interested in the orange business would find it of intense interest to include this in the list of things to see when they plan to visit the white lights and other diversions of "little old New York."

This one dock is, given over to the display of fruit offered for auction and everything shown on the dock in the morning is sold before the day's business closes. It is a rule of the management, and one that has been found important, that every bit of produce offered in the morning shall be sold. There is nothing left over for the next day. Anyone who puts up his fruit must take the consequences of the conditions of the day's sales. He cannot open his fruit and, seeing the market fall off, pull it out until a more favorable time.

The Erie dock is a long one. It has to be to accommodate the large offerings of California fruits. Not only citrus fruits are sold here, but also the cherries, peaches, pears, apricots, nectarines and other deciduous productions of the central and northern part of the state. The morning we attended, June 5, four cars of California cherries were on the dock. They were fine looking fruit, well packed; 2000 crates to the car, or a total of 8000 crates of cherries sold in this way in one morning. How great must be the stomach of Gotham to consume this immense offering of one kind of fruit.

Such fruits as cherries, being more perishable than the citrus fruits, come across the continent by express. Those shown the day we were in New York were in excellent condition, and the buyers snapped them up greedily. It was especially interesting to note the sale of one special pack. Some enterprising shipper, in an attempt to please the retail trade, had packed his cherries in little round containers in the regulation crate. The bidders jumped all over each other, literally as well as figuratively, in bidding for that special pack of cherries. It saved a repacking on the part of the retailer, and the wholesale buyer knew he could turn over that lot with no trouble whatever. Whether the added price to the grower was sufficient to care for the extra expense or not, I

had no means of knowing, but it looked as though a certain amount of fancy fruit of this kind so packed, would bring a very remunerative price.

The orange market, however, is the part of the auction of especial interest to us. The dock is a long one, and the oranges, lemons and grapefruit were displayed down the two sides thereof, leaving an abundance of room in the center for removal of the fruit after it is sold and for the inspection of it prior to the sale. The fruit is very attractively displayed. It is racked up, with a general effect not unlike that achieved at the National Orange show, though naturally with some less attention. But sufficient of it is shown to make a remarkably inviting display. In front of each offering are several boxes, to which buyers have free access, for the purpose of examination. They go around digging into these boxes, catalogue in hand, for every lot is catalogued, and the actual sale takes place a little later in the auction room, every buyer with his catalogue marked as he desires for his individual purposes.

The amount of decay in a lot is shown by leaving the wrap on individual oranges on the top layer of the dig-in box. If there are three wrapped oranges on the top layer, it indicates that each layer contains three decayed fruits, and by figuring the number of layers in a box, one arrives at the percentage of decay. Practically all of the fruit on display the day of our visit was navels, and in excellent condition. One could not but be very proud of Southern California, to see the magnificent lot of citrus fruits offered for sale, and realize that this was but a single day of business, in one line, in one city, though, of course, the New York auction is the largest of all.

The exchange fruit is shown on one side of the dock, beginning at the front entrance, and extending down and around the other end, if there is sufficient of it to make the turn. Independent shippers have the right hand side of the building, as one enters. The exchange fruit is the first sold. The exchange had on display the day of our visit enough to practically take one-half the dock facilities. The other shippers had approximately one-third as much. The exchange offerings included quite a few lemons and some grapefruit. No other fruits than oranges were offered by other shippers.

There was no Redlands fruit on sale the day of our inspection. Rialto, Upland, Highland, Riverside and other nearby districts were included, with some showings from Orange County, especially from Anaheim. But the excellent quality of all the fruit was very noticeable, and the attractiveness of the pack and of the display drew admiring comments.

## A Bigger Yield From the Same Field

From any field that you have been manuring by the hand method you can get a bigger yield if you use the spreader method—and save much time and labor.

A good spreader tears up the manure into small particles and spreads it evenly. The manure goes farther. It can be worked well into the seed bed so that the plant roots get all of its valuable plant food. *Wasting manure is like wasting money—a good spreader makes every particle of manure count.* A Newton County, Ind., farmer testing the spreader and hand methods of applying manure on two ten-acre tracts found that the spreader method gave 120 more bushels of corn, 140 more bushels of oats and 9 more tons of clover.

### The John Deere Spreader

The Spreader with the Beater On the Axle

has special capabilities for increasing your crop yields. Its exclusive features make it the ideal implement for the best method. Ask any owner of the John Deere Spreader about the way it increases crop yields and saves time and labor. After you have operated a John Deere Spreader of your own for a year, you will fully appreciate how much these gains really mean. You'll find that the Spreader with the Beater on the Axle more than pays for itself in one year from the gains it gets on even a fair-sized farm.

The beater on the axle construction eliminates all chains, clutches and scores of other trouble-making parts. Does away with half the types of castings otherwise necessary. Does away with adjustments. Puts upkeep at minimum. Makes the John Deere Spreader exceptionally long-lived.

Beater is all steel—practically indestructible—runs on roller bearings, aiding light

draft. Beater teeth spirally arranged—tear up manure perfectly and distribute it evenly. Deliver manure close to the ground—wind does not affect spreading.

Revolving rake feeds manure to beater evenly, aiding in uniform distribution. Shock—absorbing spring relieves spreader and horses of sudden strains.

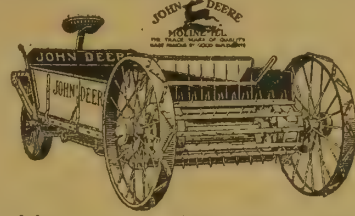
Spreader only hip-high to top—easy to load. Big drive wheels—light draft. Ball-bearing apron drive—apron travel frictionless. Simple

gear attachment keeps weight of load from making apron race when spreading up hill.

Easy to operate—only two levers—one lever determines number of loads spread to the acre; the other starts and stops the spreading. It's so simple, a boy can operate it.

Wide-spread attachment for extra wide spreading.

Write for booklet on the John Deere Spreader.



## Thoroughly Disc Before and After Plowing

After the grain has been cut from your fields and before the hot August and September sun has cracked the ground, allowing the subsoil moisture to escape, use the

### John Deere Model B Disc Harrow

Noted for Thorough Disking

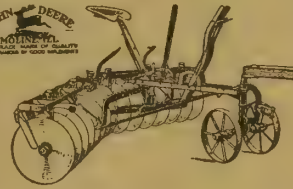
It produces a fine dirt surface mulch that stops evaporation of moisture and catches and holds rainfall. Mixes stubble, trash and weeds thoroughly into the soil. Checks weed growth. Pulverizes surface thoroughly—ground is kept mellow—plowing is made easier.

Using the Model B after plowing completes a seed bed that is thoroughly

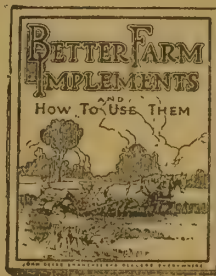
pulverized through and through—no trash bunches—no clods—no air spaces—seed bed fits the subsoil perfectly.

The Model B is exceptionally flexible—that is why it disks so thoroughly. The spring pressure third lever assures uniform penetration regardless of dead furrows or ridges.

Write now for free booklet on this profitable disc harrow.



## Big Book Free



### Better Farm Implements and How to Use Them

America must produce more food. Labor-saving implements will play an important part in increased crop production.

This book tells all about a full line of labor-saving farming implements. Tells how to

adjust and operate many of them. A practical farm implement encyclopedia. Worth dollars. Illustrates and describes the following machines: Walking and Riding Plows, Tractor Plows, Disc Plows, Disc Harrows, Spring Tooth and Spike Tooth Harrows, Corn and Cotton Planters and Drills, Listers, Alfalfa and Beet Tools, Grain Drills and Seeders, Riding and Walking Cultivators, Lister Cultivators, Mowers, Side Rakes, Loaders, Sweep Rakes and Stackers, Hay Presses, Grain and Corn Binders, Corn Cutters, Stalk Cutters, Kaffir Headers, Manure Spreaders, Portable and Inside Cup Elevators, Corn Shellers, Wagons, Farm Trucks and Buggies. This big book will be sent FREE if you state the implements in which you are interested and ask for Package X-1110.

## John Deere Said

in reviewing his career, that he felt most pride in the consciousness that he never produced an implement of poor quality.

The same pride that John Deere felt is the pride of the makers of John Deere implements today. It is a powerful incentive to the maintenance of the high standard to which John Deere tools have been kept for eighty years.



JOHN DEERE, MOLINE, ILLINOIS

The advertisers in the California Cultivator are known to be reliable and we recommend them to our many subscribers.



The auction sale itself was bewildering until one could "get the hang of it." The auctioneer, flanked by an array of clerks who seemed to have no difficulty in knowing what he said, was at a long raised counter in the part of the building that would correspond to the stage in a theater. In

## AMERICAN BEAUTY DUST SPRAYERS



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## Bean Growers

One man, with an American Beauty, will treat 20 to 30 acres of beans per day, and destroy mildew, red spider, rust and other pests and diseases.

It will save you dollars in time, material, and crops.

"A Puff in Time Saves the Vine"

Best of peas, beets, corn, cotton, melons, squash, etc. Invaluable for oranges, almonds, prunes, peaches and other fruits.

Let us tell you how to kill gophers and squirrels.

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front of him, packed in closely in seats just like those of a playhouse, except that the rise in elevation was greater, sufficient for the buyer to make his individuality immediately known when he jumped to his feet, shouted at the top of his leather lungs and waved his catalogue wildly in the air, were the bidders.

Most of the buyers were foreigners, Italians and Greeks I would say predominate. At least most of them were of the Latin cast of features. But they are mighty shrewd businessmen, know their business, and the competition of the auction makes them quick of action, both bodily and mentally. They are very thorough in their early inspections and they are not fooled a bit as to the quality or condition of any package offered. Of course, they buy for as low a price as they can—that is to be expected. But there is genuine competition. There were probably 150

## Claremont Pomological Club

The Last Meeting of the Season at Ganesha Park, Pomona, with All Day Discussion of Live Topics

**A**S usual a large attendance was given to the last meeting before the summer vacation of the Claremont Pomological Club at its meeting last Saturday at Ganesha Park. The meeting opened in the morning and live discussion continued until luncheon time. After an excellent luncheon under the great trees the program was taken up for a full afternoon session.

Legislation was discussed by E. R. Shepherd. Special reference was made to legislation which will be of value to the producing interests and fullest commendation given the recent legislature because of beneficial enactments.

C. P. Claussen, who has been acting for the federal department of agriculture in an effort to secure parasites of citrus scales and citrus mealy bug in Japan, returned from the Orient in time to attend this meeting and made an address, which was listened to most intently, telling of the success which attended his efforts in his search for these parasites.

One strong feature of this meeting was to have been a resolution urging that Mr. Claussen be secured to take charge of the insectary recently established at Alhambra, Los Angeles County, but instead of a resolution being necessary the announcement was made that the appointment of Mr. Claussen had already been made and that he had accepted the work and will be in charge of the Southern California insectary.

Dr. Webber of the citrus experiment station spoke of the insectary and its opportunity for great work. He also spoke of the experiment station at Riverside and the fact that it is now getting ready for greater service than ever. Incidentally, he discussed the matter of the recent hot wave and its injury in all parts of California. This brought up general discussion and reports from all sections. Many were very pessimistic. Others were more hopeful and thought that as time passed it would be found that the per cent of injury would be much less than at first estimated.

J. W. Mashmeyer, one of the Los Angeles County horticultural inspectors, reported that he had made most careful investigation of the effect of the heat on the insects and found that not only were the young scale killed but eggs showed no sign of life. Instead of recommending a discontinuance of fumigation nearly all who spoke on the subject recommended that fumigation be followed as usual, and if carefully done almost a complete extermination of the scale should be possible.

Senator Rominger discussed legislation beneficial to the fruit industry, citrus as well as deciduous. He also discussed the advantages which will accrue to the state—and especially to the drainage district of the San Gabriel River—because of the appropriation by the recent legislature of \$1,080,000, which sum is to be duplicated by the federal government. Also Los Angeles and Long Beach will supplement these funds. These appropriations will make possible the saving of thousands of acres of val-

uable land and give assurance of protection to those who are near the San Gabriel and Santa Ana Rivers.

Harry S. Smith spoke of the new insectary and referred to its opportunity for benefiting the citrus industry of the southern end of the state. In connection with this discussion it was announced that Avery S. Hoyt has been appointed by State Commissioner Hecke as field deputy for Southern California and it is hoped he may make a trip through Florida and investigate methods of work with citrus canker and bring back to California information as to best means of control in this state should this pest ever appear. R. P. Cundiff will be field deputy for Northern California.

Many attendants at the picnic referred to the fact that the Argentine ant is appearing in greater numbers than ever before. We hope we may be able later to give methods of handling this pest.

A resolution was passed urging that the department permit R. S. Woglum, who has been in California for many years investigating fumigation and insect control, to be transferred to Ontario and that he be requested to unite with state and county officials in a thorough study of the citrus mealy bug and best methods of control.

Another resolution expressed the thanks of the assembly to the state horticultural commission and to the state board of control for their activity and definite action regarding the establishment of an insectary in the South and for the appointment of

Mr. Claussen, also for the appointment of Mr. Hoyt as deputy commissioner. There is now entire harmony between the state commission, University of California and the federal department of agriculture. The commission will have charge of police and quarantine work, while investigational work will be left largely to the university.

Prof. Wm. Mertz of the Riverside station made an exceptionally fine talk on the results of rejuvenating old worn-out orchards. This work has been conducted by the Riverside station in regular commercial orchards and Mr. Mertz outlined much about other methods which have brought about the production of seven or eight boxes per tree from orchards which when taken produced nothing. As to whether such orchards should be taken in hand or uprooted and new trees planted instead, Prof. Mertz was emphatic that the bearing orchards could be brought on quicker from the old orchards than from replanting. Prof. Mertz was repeatedly interrupted and the entire assembly united in the discussion of this matter.

Toward the end of the session home canning, especially of vegetables, was taken up. Mrs. Mertz led in this discussion, and in it she was joined by Mrs. Kelly and Mrs. Webber. The ladies were asked many questions, and much information was given which will aid in more general canning.

The recently elected officers of the Claremont Pomological Club are C. H. Needham, president; E. W. Olds, vice-president; Mrs. W. L. Fretz, treasurer and V. V. Leroy, secretary.

The farm bureau at Carneros, Napa County, recently met and elected officers for the coming year.

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# Vegetable Planting Calendar for July

## Southern California

Written for California Cultivator By D. F. Reichard



OUR warm ripening weather of the past month is no doubt maturing so much garden stuff that it cannot all be consumed while fresh. If you are not able to sell your surplus, either can, dry or preserve it. Do not allow it to be wasted, for every pound of fruit or vegetables grown for consumption at home is that much less taken from the stream of foodstuffs that America must keep flowing to Europe. Whatever each of us consumes must be taken from that stream unless he produces it himself.

As each plot is harvested clean it up, and if the ground is not naturally moist soak it thoroughly. Wet it so that the moisture will be down at least three feet. Work up the soil as soon as it is fit to a depth of one foot and settle well by thoroughly pulverizing. Soil in this condition, unless naturally porous, will retain the moisture for three or four weeks, so that seed sown soon after the soil has been thus worked will come up without any further irrigation. This is especially desirable at this season of the year, as a crust is so easily formed

by irrigating or particularly sprinkling during warm weather. It is advisable to plant all seeds a little deeper at this time where they will be in moist dirt, which is necessary for good germination.

After the deep working of the soil the wheel hoe does away with much of the back-breaking work of weeding and hoeing. Work that used to be hard and tiresome for a man to do can easily be done by half-grown boys or women, if they please.

Plant during July vegetables for late fall and winter use. String beans, squashes, cucumbers, melons and corn may all be planted with safety. The hardier vegetables, like beets, carrots, parsnips, salsify, peas, turnips, lettuce and radishes, should be put in if there is room in the garden. The early plantings of winter potatoes are put in during the latter part of July.

Sow the seed of cauliflower and cabbage now for plants to set out that will mature for Christmas and early winter. Tomatoes and peppers may also be started for planting out in frostless districts for winter fruiting.

## Northern California

Written by California Cultivator By A. R. Gould



OBSERVATIONS and various reports from all parts of the state lead us to believe that there has been increased planting this season of all kinds of vegetables, and land which was formerly growing weeds has been put to good use. While it is now getting rather late in the year to continue this good work on a large scale, there may be a few instances where there is a small plot close to a water supply where a few feet of hose and a sprinkler would work wonders if the land were cultivated and put into condition for planting.

There are a few subjects which could be grown to advantage. Then again, some may have poultry to feed, and grain feed is high, but if the vacant plot is brought into use kale and sea kale beet can be grown to supply the need of the poultry, which is an important consideration these days. We would like to urge our readers to give this some thought, and if there should be an opportunity, to seize it at once.

Watering, weeding and cultivating are the principal duties for this month, and harvesting some of the crops should bring joy to those who have toiled long and constantly. Successional sowings may be made for the fall of turnips, parsnips, carrots and beets for storing in the fall.

### Tomatoes

It will be necessary to cultivate around the plants, and where these are planted out in quantity on a large area and they are to be allowed to ramble on the ground, earth up around the roots and form a dry mulch. These will then grow throughout the season without much more attention.

Where the method of growing on the single stem or three main stems is adopted it will be necessary to stake the plants and pinch out all the lateral shoots. That is to say, those small shoots which appear in the axils of the main side branches, as only about four fruiting branches are allowed to remain on the plant, and the vine is

stopped or pinched at the top after these have set their fruit. This method is largely adopted in Europe, and choice early fruits are secured while the vines are not allowed to make such rank growth as they otherwise would do under natural conditions. However, in California splendid crops are obtained by allowing the plants to ramble unrestrained on the ground where they thrive in full sunshine. If signs of aphids are observed spray at once with blackleaf 40.

### Turnips

Make a sowing of Early Snowball, Purple Top, Flat Dutch and Purple Top White Globe. These will all come in for fall use and may be stored later on. Water and cultivate liberally.

### Beets

Sow Extra Early Blood Turnip and Detroit Dark Red for fall use and storage. Keep these fairly well supplied with water.

### Brussels Sprouts and Kale

Make a sowing of these for winter supply. Prepare a seed bed and secure seeds of Cooper's Selected Aigburth Brussels Sprouts. A one-quarter ounce packet will supply thousands of seedlings which should later on be transplanted. Sow thinly broadcast. Sow one-quarter ounce of Tall Green Curled Scotch Kale broadcast and eventually transplant. This is excellent for poultry feed, and when used young the leaves make a fine vegetable.

### Kohl Rabi

A sowing of this should now be made for fall use, and if well supplied with water will mature early and will be found to equal turnips in flavor. Early White Vienna and the Large Green are both good varieties to grow. Carrot

Make successional sowings this month of Early Short-Horn and Danvers Half Long. Sow in quantity as they may be stored later for winter use. Thin out the seedlings when large enough. Keep fairly well sup-

plied with water and cultivate between the rows.

### Cabbage

Seeds of winter varieties such as Savoy, Perfection, Drumhead, Autumn King and Burpee's Surehead, should now be sown on a well prepared seed bed broadcast. Sow the seed thinly.

### Parsnips

Another sowing of Hollow Crown may be made this month for a later supply and storage.

### Celery

This should ere this have been planted out in trenches and will require lots of water. Keep a close watch for slugs which will soon destroy the plants.

### Melons

Watermelons, muskmelons and casabas should have been thinned out, leaving one or two plants to a mound, and given a liberal supply of water.

### Swiss Chard

Make another sowing of this toward the end of the month. The large ribbed white is the best variety to grow for table use or poultry feed.

### Lettuce

Make successional sowings of White Paris Cos and California Cream Butter for transplanting and thinning out. Sow in rows.

### Beans

There is still time to sow beans. Early long yellow and Refugee may be sown. Keep the cultivator busy between the rows of those sown earlier.

### Corn

Make the last sowing of this before the middle of the month and sow Early White Cob, Cory or Golden Cream.

**GLENN COUNTY FARM BUREAU**  
Farm Adviser W. H. Heileman of Glenn County, Sends Schedule of Meetings and Notes on July Work

July 2 and 3, Ord. night meeting, Tuesday, July 3; 5, national farm loan at Greenwood; 5 and 6, Bayliss, night meeting Friday, July 6; 7, directors meeting at Willows 10 a. m.; 9 and 10, Codora, night meeting Tuesday, July 10; 12 and 13, Larkin, night meeting Friday, July 13; 16 and 17, Orla, night meeting Tuesday, July 17; 19 and 20, Jacinto, night meeting Friday, July 20; 23 and 24, Elk Creek, night meeting Monday July 23; 26 and 27, Plaza, night meeting Friday, July 27.

Regular monthly meeting of directors will be held at Farm Adviser's office, Saturday, July 7th at 10 a. m.

The Codora Center will assemble for a home canning lecture and demonstration early in the month. Date will be announced later.

Mr. Henry Washburn, of the staff, will remain in the county until the middle of the month to aid in starting farm record work. Farmers can get into touch with Mr. Washburn through the adviser's office.

Persons interested in grasshopper, squirrel, and gopher control work should get into touch with the farm adviser or county horticultural commissioner.

Various counties in the state having farm bureau organizations are making inquiry for barley, wheat, alfalfa, and grain hay, and grain sorghums. Farmers having any of these products should list them, giving prices.

### NURSERYMEN ARRANGING FOR CONVENTION

The California Association of Nurserymen is planning for its seventh annual convention, which will be held in

San Jose October 11-13, when there will be discussions on horticultural progress of California and questions of interest to the nursery trade. Santa Clara Valley people promise a live interest in this convention of nursery people, and as that section is one of the earliest fruit growing sections of California and is today one of its most important it should call for a big attendance.

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500	"	" 8	" "
700	"	" 12	" "
500	"	" 14	" "
700	"	" 16	" "
300	"	" 18	" "
300	"	" 20	" "
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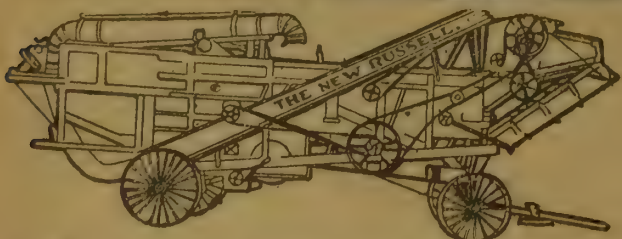
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## Ornamental Planting Calendar for Northern California

Written for California Cultivator By A. R. Gould



IN THIS department we must keep busy with the sprinkler and hoe. It is getting late to plant very much, although there are a few subjects we can sow for future use and we have to think of our early spring display.

### Annuals

Most of these have no doubt been established and will be providing us with flowers. Tall growing subjects such as cosmos and sunflowers will require supports, and stakes should be provided. A sowing of Shirley poppy and mignonette, Golden Machel may be made.

### Chrysanthemums

These will require stakes and should be cultivated frequently. A mulching with manure will prove beneficial.

### Roses

If these are cut back now a second growth will be encouraged and another supply of blooms will be the result. Keep a close watch out now for mildew and dust with dry sulphur or spray with lime and sulphur solution.

### Spring Subjects

It is now time to look ahead and

plan for the spring display. The following should be sown to supply the need in early spring: Wallflowers, Double Daisy, Giant Ranunculus flowered Forget-Me-Not and Alpestris are all good varieties.

Arabis alpina, a beautiful white flowered trailing plant will provide a carpet of bloom. Useful for rockeries.

Violas, or tufted pansies may be secured in white, mauve, yellow, blue and purple and will flower for many months in shade or sunshine. They are fast becoming very popular and may be used to carpet bulb beds or for borders. Sow the seed of all the above subjects in boxes of well prepared soil or on a seed bed. Keep well watered and shade from the sun. Watch for slugs constantly when the seedlings are about to appear.

### Dahlias

These will now require strong stakes for support, and if large flowers are required disbudding should be practised, which means that where three buds show on a shoot the two side ones should be removed, leaving the central to develop.

## Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

### Cheese From Sheep's Milk

An Eastern inquirer wishes information as to possibility of securing a supply of milk from sheep for the manufacture of a certain type of cheese most popular in Europe and used to a large extent in this country. An effort along this line was made in Solano County. Mr. J. H. Glide at one time gave a fair trial to this product. We wrote Mr. Glide and have from him the following: "I do not know of any place in this country where you could secure the ewes and the feed so as to make a success of producing the milk of sheep for the manufacture of cheese. I discontinued it for the reason that the Greeks employed were very unreliable and would only use the ewes for a short time."

### Bean Straw.

A subscriber wished information as to the price and tonnage per acre of bean straw, especially as to Tepary. The matter was referred to A. A. Brock, horticultural commissioner of Ventura County, and he answers:

"Relative to price of baled bean straw and tonnage produced on an acre by various beans, we have no data on the Tepary other than that obtainable through articles written in our agricultural papers. Baled lima bean straw can be bought early in the fall at from six to ten dollars a ton, depending on the season. If we have early rains the straw is so damaged that little of it is suitable for stock feed; therefore prices are generally high. If the bean straw is baled before it has been rained on the supply is sufficient to meet local demands and prices are somewhat less. If the straw is rained on before it is baled it can be used as fertilizer. I believe that straw of this kind sold last year at from three to five dollars a ton, loose. The demand for lima bean

straw for citrus orchards is rapidly increasing, therefore prices may rise accordingly. You, of course, have the analysis of bean straw and well know the value of this material as a fertilizer. The amount of lima bean straw produced on an acre agrees with the pounds of beans produced, and in this county is about a ton to the acre. I have no data on the tonnage of black-eye straw per acre, but, judging from the amount of vine, I imagine it is somewhat heavier in proportion to the amount of beans than with the lima. Small whites I have no data on, but believe that the pounds of beans produced would exceed the amount of straw. We have been growing small whites on a commercial scale for only a few years. There are a number of other varieties grown in this county for seed, but I have no data on the amount of straw produced."

Director R. H. Forbes of the Arizona experiment station also writes: "Baled bean straw has not been made use of as a commercial article thus far in Arizona. With reference to the tonnage of bean straw from Tepary beans, I will say that we have obtained as much as three tons of Tepary bean hay per acre, from which fact, I should judge, allowing for row planting and beans taken from the crop, that the yield of bean straw ought to be between one and two tons to the acre."

### Artichokes

I have California artichokes three years old. The stalks are thrifty but this year the fruit is small. Kindly advise me how and when to handle.—Subscriber.

We presume you refer to the Green Globe artichoke and would say these require a strong heavy soil, adobe being preferable, but good results can be obtained on lighter soils by heavy fertilization with barnyard manures. In the early fall we recommend cutting the tops back and abstaining from irrigation.—D. F. R.



### Potato Tops

What causes tops of potatoes to grow high and rank?—Subscriber, Los Angeles.

One reason for this is that a faulty system of irrigation may have prevailed. The tops of potatoes should never be sprinkled. Irrigate deeply, then cultivate frequently and allow surface soil to warm up and not become crusted or bake over, which it surely does when sprinkling is indulged in. When the vines are large enough to cover all the ground cultivation may cease.

### Pest of Birds on Figs

I have a White Adriatic fig orchard and suffer considerably from the depredations of birds which consume a large part of the crop. Principal offenders are magpies, crows, linnets and sparrows. Can you tell me of some means to minimize the danger?—Subscriber, Oroville.

We know of no practical remedy. Scarecrows help a little. Fluttering pieces of tin or cards tied to the branches of trees may be used. We read recently of a device fitted up by a farmer in Shasta County whereby a system of cow bells was attached to a water wheel, and the constant ringing of the bells effectually frightened away the birds. The use of a shot gun to frighten them away is sometimes practiced. Where it is desired to protect only a tree or two mosquito netting may be spread over the tree. The use of strychnine on freshly cut fruit or other bait distributed about the orchard is practiced by some, but, of course, there is the possibility of killing off many beneficial song birds. If subscribers of the Cultivator have helpful suggestions we will be glad to pass them on.

### Cactus for Rabbits

Would appreciate information through the Cultivator as to any experiments in feeding spineless cactus to rabbits.—Subscriber, Milton.

The advisability of any kind of green feed for rabbits seems to be a mooted question. Some go so far as to claim that no green feed should ever be given. By far the greater number, however, do feed some succulents. We note in "The Belgian Hare Guide": "There is little doubt that bad effects result from a too liberal supply of green feed, and the same may be said when the amount is too restricted. But the large majority of the rabbit breeders find that green stuff is essential to the health and well-being of their animals." Also, we note: "Lettuce is particularly useful for breeding does, although of so watery a nature that it should not be given in large quantities nor in wet seasons." The same warning is given as to cabbage and other plants which are too watery and cold. Also, Townsend's "Practical Rabbit Keeping" says: "Both cabbage leaves and lettuce are too watery and should not be used." This author, however, recommends many weeds and other green feeds and gives warning as to excessive feeding of carrots or other roots, which are, however, highly recommended if fed with caution. As to cactus, we find no notation from any who have tried it. We will pass the question on to our rabbit fanciers.

### Cold Storage

Please give information in regard to cold storage, what it would cost to start a plant for say 10 to 20 tons of potatoes?—Subscriber, Bishop.

We hardly think cold storage would be practicable for so small a quantity. There are two systems of securing cold storage, one is by the use of ice, usually natural ice, and where a farm

is in a section of cold winters it is often produced on the farm. The other system is by the so-called ammonia or chemical process. Such a plant certainly would not be within economic limits for a small place. The usual method is for the farmer to ship his crop to a market center, where it can be placed in cold storage for about \$2.50 per ton per month. Unless material advance is made in potato prices it is a product which would hardly justify cold storage. With a double walled store house, and plenty of ventilation, using care in opening the house during the night and closing during the daytime, potatoes should be kept reasonably well, although it must be borne in mind that the spring or summer crop of potatoes in California is not as good a keeper as the fall-grown crop. If any reader of the Cultivator has had experience with a summer storage plant we will appreciate information along this line.

### Wire Worms on Beans

An inquirer in the Lima bean section wants to know best method of handling the pest of wire worms, which sometimes destroys the seed before it germinates and is also a serious pest of growing plants. This is a long question or one calling for a long answer, and the best suggestion is for every bean grower to secure a copy of the monthly bulletin by the state commission of horticulture. The issue of June, 1916, Vol. V, No. 6, on page 225 begins an extended article written by J. N. French, county horticultural inspector located at Oxnard, Ventura County. It discusses in several pages, with illustrations, this matter of wire worms. In a word we may sum up the article in the following conclusion: In working against the worms the potato catch crop method is recommended because it is cheap and can be worked on a large scale.

### Sick Hens

Could you please give me information as to what disease is among my hens? They get lame, tails droop, then after a few days, cannot stand, and necks stretch out or fall under their bodies. They live for several days in this condition. They have large yard, with barley for feed. — Subscriber, Lompoc.

Something is poisoning your hens. It may be mold spores from moldy food or scratching litter which have fastened themselves on the mucous membranes of throat, nasal passages or even intestines. It may be spoiled or decaying meat, and it may be their constant diet of barley, the hulls of which sometimes clog the digestive organs. Your first step must be to

find out which of these causes has been at work, and remove it. Meantime, a good dose of physic may relieve some of the sick hens. Give Epsom salts, a tablespoon for each hen, mixed in a small amount of wet mash, if the hen will eat. If you cannot induce them to eat, castor oil is better. Give two or three tablespoons to each affected bird. I gather from your letter that you are feeding nothing but barley. If this is the case you may expect all sorts of digestive trouble, for no hen can continue healthy without a variety, and the barley hulls make this a particularly trying diet. Better keep a good laying mash before the hens at least half the time, sprout or steam the barley before feeding, and make part of your scratch feed milo, kafir or Indian corn. Plenty of green feed is an immense help in preventing indigestion.—J. A. K.

### Rabbits out of Condition

Please advise what is the trouble with rabbits which eat heartily and seem to be hungry but remain very poor for months and finally die. They are fed green stuff and alfalfa hay and have access to plenty of fresh water.—Subscriber, Susanville.

This query was referred to C. P. Gilmore, who answers:

"This may be lack of vitality or spotted liver. The former is caused in many different ways, eg. too many young to the litter, breeding does too often or too young — should not be bred under seven months, allowing stud buck too many services—not over two a week should be allowed, improper feeding, inbreeding regardless of kinship, breeding animals unfit. Spotted liver is generally caused by the excess feeding of heavy greens such as cabbage, kale or green alfalfa. This and weak vitality go hand in hand. Would advise that you purchase some good book on the subject; it will be money well spent.

### Broom Corn Thresher

How can I make a suitable broom corn thresher or seeder; also a baler?—Subscriber, Calexico.

Illustrations of threshers and balers

are given in Farmers' Bulletin 174. This was printed in 1903 and if not out of print may be had by writing Department of Agriculture, Washington, D. C. Whether it is practicable to make these threshers for 15 or 20 acres of broom corn we would question. The Oklahoma college of agriculture also issues a bulletin on broom corn. Ask for Vol. 8, Bulletin 32; also Bulletin 68, "Dwarf Broom Corn." A more complete treatise on the subject is "Broom Corn Culture," by A. G. McCall, published by the Orange-Judd Company. The Cultivator will secure this book for subscribers at publisher's price.

## Legal Queries

Louis B. Stanton, attorney, 243 Wilcox Building, Los Angeles, will answer legal queries in this department.

Immediate mail replies cannot be given except where fee to Mr. Stanton is paid. When replies are wished in Cultivator address query to 115½ N. Broadway, Los Angeles.

### Willing All to Children

If a mother wills her deeded property to her children, can her husband come in for claims upon it? If so, how can said property be fixed that the children may inherit the entire property?—Subscriber.

If the property is the separate property of the mother she has entire power to will it to whomsoever she may desire, and the devisee will acquire good title. The nature of the claim of the husband is not stated and no advice upon that subject could be given.

### WORM REMEDY FOR HOGS

A hog conditioner and worm preventive may be made as follows: Slake one bushel of burned lime and eight pounds of copperas together. When cold add eight pounds of sulphur and mix with four pounds of salt and enough wood ashes to make three bushels of the mixture. Put in a box or on the feeding floor and keep available for the pigs.

### MOST LIKELY TRUE

Trombone of Village Band—What do we play next, Si?  
Si—Sousa's Grand March.  
Trombone—Gosh all hemlock! I jest played that!—Judge.

## BEAN THRESHERS THE TWO STANDARDS

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THE AMERICAN

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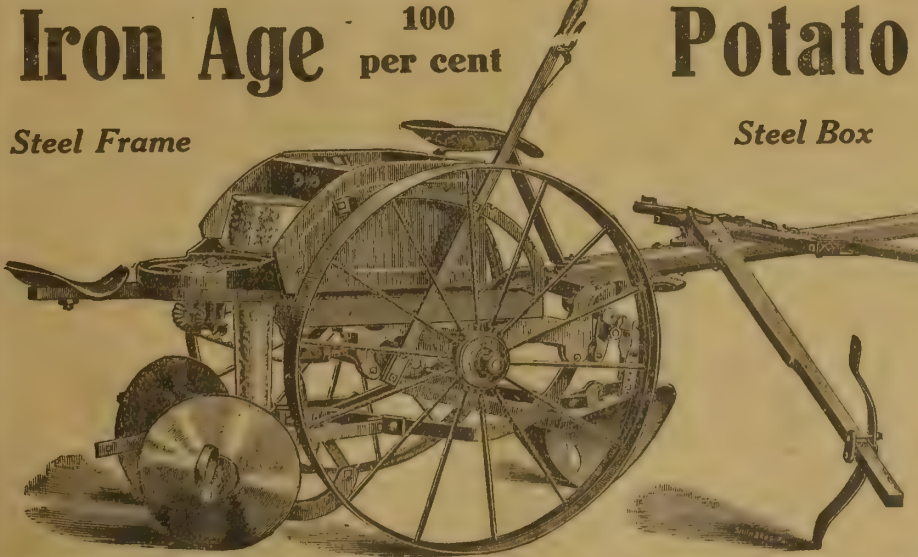
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No injury to seed, for pickers are not used.

Uniform depth of planting and covering.

Every seed piece is placed in the ground at the right distance apart and no two in the same place.

Straight line planting—seed is placed in a groove—easy to cultivate, spray and dig.

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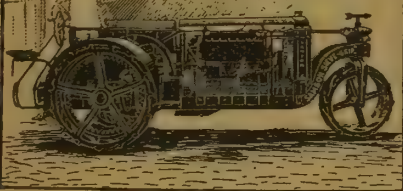
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## Soil and Water Analyses

Consultation on Agricultural Problems  
Mark Walker, B.S., 211 W. First St., Los Angeles

## Marketing Cantaloupes Under the Standardization Act

By F. W. Waite, Horticultural Commissioner Imperial County, Before Horticultural Commissioners' Convention at Modesto



THE act creating standardization of fresh fruits in this state, August 8, 1915, was put into effect on the cantaloupe crop of the Imperial Valley in the year 1916, being the first year after it became a law. As this season's crop is just beginning to move, I will give an outline of how we handled the inspection last year.

### Cooperation

It has been proven that where the law was enforced last year much good was done. Realizing that laws are of no effect unless enforced, I decided to use the authority vested in me and do my duty to the best of my ability. This being the first time a law was to be enforced on the packing and shipping of cantaloupes, there were many things to be considered, and in order to get all parties interested in and acquainted with the law, I decided to call a meeting of the shippers and distributors and give them an opportunity to state their side of the case. I wrote letters to all the distributors of cantaloupes, outlining my views, with the idea of getting all parties to meet in conference and agree to cooperate. The replies to this letter were very encouraging, and with the exception of one all were willing to cooperate. They expressed a desire to have a meeting to go over the requirements of the law and agree on plans of procedure. At the first meeting called by this department nearly all the distributors were represented. Each section of the law pertaining to cantaloupes was gone over carefully and free discussion was allowed until the subject was understood and an agreement reached.

### When to Pick

There were several reasons why it seemed necessary to have the shippers agree on the method of inspection. One of the main reasons is knowing a mature melon. The act reads it shall be mature. Old experienced melon men sometimes do not agree on a melon being mature and are often mistaken upon the examination of it, therefore it is a difficult subject and most important to the industry. In order to handle the "mature" subject it was agreed to pick all melons on the full slip; that is, when the stem parts from the melon freely with a slight pressure of the thumb, leaving a smooth cavity. This plan was used by most of the shippers throughout the entire season. It is true that in many cases reports came back from the East, "Melons overripe," yet the prices held good.

The most important fact about shipping melons too ripe is that by so doing one cannot deceive the public, and the loser is the grower, but a green melon is the one that does the damage, as it gets into the hands of the consumer and is very disappointing, thereby reducing the demand and causing a poor market. The main cause of picking green melons when not full slip is the fact that the stem is broken off and the ripeness depends upon the looks. The pickers are apt to get away from maturity and melons are

brought into the packing sheds too green. Picking and packing is done mostly by contract, and naturally no one wants to lose, consequently many melons are likely to be packed green. If there are plenty of pickers to keep up with the packers it is possible to continue on the full slip, but it is difficult to get pickers enough during the height of the season.

### Disposal of Rejected Melons

One of the next most important reasons for agreeing or cooperating is what to do with the melons that have been condemned on account of not being fit for shipment. The law says they shall not be shipped, but what shall be done with them? In the past there was trouble over the rejected melons which had been turned down by the inspector for the distributors. The growers would sell them to brokers on the street, who would ship them, causing damage to the market.

We agreed to hold them for 24 hours and then release to the grower. This plan was not successful, as the crates would be carried away in the night and some even attempted to ship by express—parties not connected with the industry. It was impossible to retain the rejected melons on the platform on account of lack of room. The plan finally agreed upon was to turn over all condemned melons to a transfer man, who fed them to hogs. It was agreed that the head inspector of each shipping company be appointed horticultural inspector and given authority to act under the state law. All the cost of inspection in 1916 was paid by the distributors and growers. The law was put into operation on May 7 by condemning and destroying seven crates of green melons. Orders were given the shippers that express shipments must be on the platform in time to be inspected before the arrival of the train or the same would be held over.

It was necessary to condemn many crates of melons in the beginning of the season until some of the growers had learned the requirements. There were nearly 9,000 crates condemned by the railroad platform inspectors, to say nothing of the number thrown out by the field inspector at the packing sheds.

### Enlarge Scope of Law

The law of 1916 has proven of great benefit, and I am glad that the amendment of 1917 has enlarged its scope and given inspectors more authority and allows closer inspection. I am in favor of enlarging it still more and taking in all the products of the farm offered for sale anywhere in the state or shipped out of the state. I am thankful for the improvement this year, but will be glad to have the facts more plainly stated as to the requirements and disposition of condemned products, also more complete definition of the word maturity in the shipment of cantaloupes, at the same time, allowing all products to be sold or shipped that are mature and fit for sale. I suggested to Mr. Ashley to add at the head of the bill, after "fresh fruits and all farm products herein

Many Citrus growers are materially cutting crop production costs by summer spraying with that combined insecticide and fungicide TRIUMPH and BORDEAUX combination, which when properly applied successfully controls fungus diseases and insect pests.

If directions are followed TRIUMPH and BORDEAUX will not spot the fruit and will stimulate the tree.

There is an ample supply of TRIUMPH and BORDEAUX available for immediate use at a fixed price.

Kill the young larvae now before they mature and do irreparable damage to your grove.

Send for prices and our book "Spraying Citrus Trees." Write Box O.

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MAKERS OF

**Universal Brand Orchard Spray**

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## MACHINERY

OF EVERY DESCRIPTION  
BOUGHT and SOLD  
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An automatic beet dump has been erected at Victorville, San Bernardino County.



mentioned," other products from time to time. I am pleased to note that tomatoes have been added. The great per cent of producers and shippers know that it pays to put up a good pack of uniformity and maturity, but the other per cent "butt in" and make it necessary to compel them to do likewise in order to keep a profitable market. For the growers or producers it is a matter of education which sometimes has to be paid for by dear experiences. In other words, the packers have to have a direct loss by having a product condemned and destroyed before they learn this lesson well.

Before the season opened this year I called a meeting of the distributors and went over the laws as amended, all present agreeing to pick on a full

slip and abide by the decision of this department. It is very gratifying to note that this year's laws state that melons shall be fully netted and of uniform size, firm and mature, free from bruises and practically free from aphids, honey dew or other defects. Even with the increased acreage, with closer inspection and shipping only first-class melons, the market will not be destroyed. Keeping all imperfect melons from being shipped makes the market demands stronger, besides saving the cost of shipping inferior stuff, which ruins the market and causes a loss to the industry.

I make the prediction that ere long all products offered for sale or shipped will come under standardization.

## Cereal Dust Explosions

Conclusions drawn from investigations conducted at the Pennsylvania State College, in cooperation with the Bureau of Chemistry of the United States Department of Agriculture and the Bureau of Mines of the United States Department of the Interior, are as follows:

"Hard substances, such as pieces of iron, nails and stones, while producing sparks in passing between the grinding disks of attrition mills or other forms of disk mills along with material being ground, produce no explosions, as the spark does not seem to possess sufficient intensity of heat or surface to cause ignition, and is almost instantly out as soon as emitted.

"Matches are not more dangerous than the metal or stone substances in the case of disk mills or millstones, because they are fired almost instantly when coming in contact with the plates at the eye and smothered out before issuing from the mill. None of the matches are ignited when issuing from the mill. With rolls it is possible for the match to become ignited while passing between the rolls and cause a fire or possible explosion, the match stick lodging and burning, furnishing sufficient flame and heat surface.

"The spark or arc produced by static electricity does not seem to possess sufficient heat to ignite or cause an explosion of material or cereal dust as ordinarily produced in

flour or cereal mills. Only an electric arc, a naked flame, as a torch or lamp or burning match, apparently gives sufficient surface contact and heat to cause ignition of dust and cause an explosion which may produce merely a flash or an explosion more or less violent.

"An initial explosion may propagate and cause a flame to travel quite a long distance through conveyors and spouts. A conveyor does not seem to offer any obstruction to the flash or flame traveling through it or along its length. A damper in the spout below the mill is quite effective in preventing the flame from passing into the spout or conveyor below, so far as it relates to the ordinary light explosion, but it is possible for the flame in some instances to pass by the damper with a heavier explosion, though the force of the explosion or flash is checked or confined to the immediate vicinity of the damper. Another damper following the first would undoubtedly prevent any flame from reaching the spout or conveyor.

"When a secondary explosion follows it is generally more violent or possesses more force than the first explosion and is of wider extent.

"Dust in motion, as agitated by the blowing fan or caused by the jarring down or the sudden fall or cave-in of flour or feed sticking around the side of bins, is more liable to cause an explosion when a naked light comes in contact with it than the dust quietly floating in a room or bin."

## Oiling the Harness

The harness should be oiled once or twice every year. It makes them look better, makes them soft and pliable, and they will wear better. Take the harness all apart and properly mend all broken and weak places. A box of No. 7 rivets comes handy, copper being preferred to iron, as they do not rot the leather. Then take a tub of soft water heated milk-warm, and put in it a cup of soft soap.

As the harness is taken apart and mended, the pieces are thrown into the tub and as soon as the dirt rubs off easily every part is scrubbed with a small, stiff brush and hung on a pole to drain and dry. By the time the last parts are washed the first ones are ready to be oiled.

If in warm weather a good sunny day should be selected, and if in cold weather a warm room. After washing, the leather ought to be oiled before drying, as the oil strikes in much better. Take one strap at a time and give it a good going over and wipe thoroughly. As the parts dry in the

course of an hour or so another coat is given in the same manner.

Let the harness lie over night in a warm place and then go over it again, working each strap through the hands, which makes it more pliable. Two days are required to allow the oil to dry properly, after which the harness should be gone over with a cloth to remove the surplus oil. A paint brush is a good thing with which to apply the oil. There are several good harness oils on the market, but if they cannot be secured, use No. 1 machine oil, adding about a tablespoon of lamp-black to each gallon.

The farmer who has a workshop even though it be only an old building, wherein is an improvised bench and vise, a forge and anvil and some small tools has an advantage, the worth of which can not easily be estimated. The equipment for the shop consists of tools the farmer needs. They are hammers, saws, files, planes, chisels, bits, drills, pliers, pincers, wrenches, bolts, nails, staples, straps, etc.

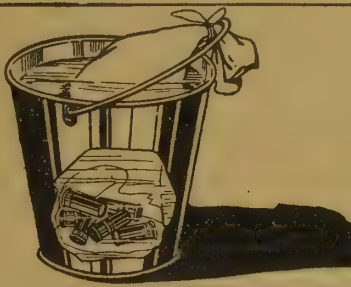
# Wetproof Steel Lined Shot Shells

## The test that really proves something

A sportsman on the Pacific Coast, in a spirit of "show

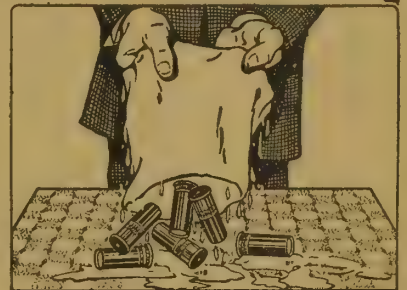
me," put a half dozen of the new Remington UMC Wetproof Shells into a bag and placed them, bag and all, in a pail of water for a three hours' soaking.

Then he rubbed and tumbled the bag and shells together—just the way wet shells would be rubbed around in the pocket of a hunting coat.



The shells were then dumped out onto an oil-cloth-covered table—unaffected by the soaking and rubbing, except for a slight fading of color.

Next he cut one of the shells through with a knife—and found both powder and shot perfectly dry.



Stiff pressure with the thumb showed that the crimp was still firm.

Comparison with a dry shell proved that the body had not swollen.

Then he worked the remaining five soaked shells through the magazine of a Pump Gun, and found them as quick and sure fire as

though they had never been near the water.

This is the severest test of wetproofing a shell has ever been through—and one that only these Remington UMC Wetproof Shells would stand.

They make your shooting independent of climate. They are the shells you want.

Sold by Sporting Goods Dealers in Your Community  
Clean and oil your gun with REM OIL, the combination  
Powder Solvent, Lubricant and Rust Preventive

THE REMINGTON ARMS UNION METALLIC  
CARTRIDGE CO., Inc.  
Largest Manufacturers of Firearms and Ammunition  
in the World  
Woolworth Building, New York



## END the Morning Glory PEST with Nonpareil

"We have given Nonpareil a very good trial and find that it destroys not only morning glory but also horse radish. We consider it a thoroughly satisfactory weed exterminator."  
—Luther Burbank.

If you want full profits from your crops you should use Nonpareil. It is easy to apply and economical to use—one gallon is sufficient to kill 250 plants. It does not injure the ground but acts as a tonic. It is the most successful weed killer known. Write today for interesting folder.

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# California Cultivator

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## The California Cultivator

A Journal of Horticulture, Agriculture and Live Stock

Rural Californian, Established 1877  
Combined with California Cultivator 1914  
Livestock and Dairy Journal, Established 1901, Combined with California Cultivator 1916

Published By

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Saturday, July 7, 1917

### OUR ADVERTISERS RELIABLE

We guarantee our subscribers against loss through dishonesty of any advertiser in the Cultivator. We do not attempt, however, to adjust trifling differences between subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within 30 days from date of the transaction, and the subscriber must have mentioned the Cultivator when writing the advertiser.

### THIS WEEK'S COVER

"California in Action" makes a most patriotic scene on the cover of this issue. This picture was taken with the Cultivator camera only a few days ago near Bassett in the eastern part of Los Angeles County.

We have seen no more thorough preparation of seed bed than is being made by the big tractor with the disks and harrow, all at one operation. The ground had been thoroughly stirred and is being fitted at one motion for the coming bean crop. Meantime the walnut trees are doing their share in growing thriftily in preparation for the great crop later.

California good roads are in evidence on the margin of the picture, over which a four horse load of hay is going to market.

California is no slacker.

### "SAMMIES"

Europe has referred to the English soldiers as "Tommies," and now come Uncle Sam's boys to take their place in the trenches, and naturally they become "Sammies." We promise that every one of these "Sammies" will prove true to the traditions of their Grand Old Uncle.

### EXEMPT THE FARMER

The National Farmers Congress, the National Grange, the National Dairy Union, the American Society of Equity, the National Organization Society, the Rural Credit League, and other organizations of farmers have united in a letter to the president calling attention to the lack of farm laborers and the needs of the harvest, ending in an appeal to exempt agricultural laborers.

All America has united in preaching to the farmer. He has been urged to plant early and plant late, and usual-

ly by the class whom he regards as sitting on the fence while he does the work. It has been fine and poetical to picture the farmer with his hoe beside the man with the gun as being equally patriotic, but now if he is to carry the hoe and the gun both he is to attempt the impossible.

We believe this appeal of the organizations of farmers is not only just but most patriotic.

### THE LIBERTY LOAN

Full report as to amount of subscriptions to the liberty loan is not yet made. Up to the end of June \$3,035,226,850 had been reported, and this was more than 50 per cent more than the total bond issue.

The best part of this oversubscription is that practically half of it was made by small subscribers. There were three subscriptions of \$25,000.000 or more, but the great mass of them were for \$10,000 or under. In fact, of the 4,000,000 people subscribing for these bonds 3,960,000, or 99 per cent, subscribed amounts ranging from \$50 to \$10,000.

The Official Bulletin of the government announces that no allotments



will be made beyond the \$2,000,000.000, but that all who have subscribed for sums under \$10,000 will receive their full allotment.

The federal reserve bank making the largest returns during this campaign was the one located at New York City. This reported \$1,186,788.400. The one located at San Francisco, which covers the Rocky Mountain section and the West, subscribed \$175,625,000.

### MORE EFFICIENCY

The state is to be greatly benefited by certain changes in the office of the state horticultural commission. Heretofore there has been one deputy commissioner and field investigator, and the field 700 miles in length made it something of a job to fill the position. Now there are to be three deputies, one in the northern end of the state—R. P. Cundiff has been appointed—and one for the southern end of the state—for this work it is announced Avery S. Hoyt, for several years in charge of the state quarantine work south of the Tehachapi, has been appointed. Geo. P. Weldon will continue as chief deputy.

One of the first duties which Mr. Hoyt will take up will be investigations as to citrus canker conditions and methods of handling this dread disease in Florida. So far as known citrus canker has not made entrance into California or west of the Rockies, but preparedness is the order of the day in the state quarantine work, and one of Mr. Hoyt's first problems will be one of the greatest requiring the attention of his office.

Mr. Hoyt's appointment to field work takes him from quarantine work in the Los Angeles office of which work he has had charge for many years. As deputy quarantine officer he will be succeeded by Lee A. Strong who has been quarantine inspector at Los Angeles harbor for the past three years. Prior to this service Mr. Strong served two years as deputy under Mr. Maskew at San Francisco and two years as Los Angeles County horticultural inspector.

Another appointment which has given greatest satisfaction to the citrus producers of the southern end of the state is that of C. P. Claussen, formerly with the federal department of agriculture, now appointed by Commissioner Hecke to direct the affairs of the new state insectary.

Commissioner Hecke is a Northern



California man, and some of the citrus growers felt that at the time of his appointment he might not have fullest appreciation of the problems confronting the citrus growers, but the feeling now is general that he is big enough to see from Shasta to San Diego. We believe the changes made are most wise.

### DEDICATED

The Oregon Farmer suggests that July 4 be dedicated to America's 10,000,000 who so loyally registered, offering their services to extend America's liberty to all the world. A good suggestion, they are worthy of the day, but why not dedicate the day to America's 100,000,000, for we think there never was a more patriotic response to any movement than has just been made by all America. We say "all America," for while the papers have been more or less filled with reports of slackers and of "peace-at-any-price" movements which are disloyal, it must be borne in mind that, like reports of crimes, these are made prominent in the news of the day, while the great mass of the people are quietly standing true.

The greatly increased farming operations, the liberty loan subscriptions, the 10,000,000 registrations, all go to show that the United States is not a nation of slackers.

By the way, as to the Fourth of July, we note news items referring to preparations for observing this day in almost every nation of the world. America's pledge to help extend liberty to all the world has been taken at its true face value, and the world proposes to unite in celebrating July Fourth as Liberty Day.

### Agricultural Notes

The island of Formosa has this year the largest sugar crop in her history.

There is a campaign in Italy to increase production of jams and marmalades.

It is estimated that The Netherlands will produce this year 270,000 tons of beet sugar.

The United States is the largest importer of cinchona bark (from which quinine is made).

Paraguay and Uruguay have recently placed embargoes on all shipments of flour and wheat.

Maximum prices for cattle requisitioned for army use have been fixed by the Italian government.

The college of agriculture of the University of Illinois has under cultivation 44 pieces of land in different sections of the state.

Citrus fruit growers of Transvaal, South Africa, are considering establishing a factory to make citric acid; also marmalade factories are being encouraged.

Yellowstone Park has been motorized. The old stage coaches have been replaced by seven and ten passenger cars and most of the restrictions on automobile travel removed.

Trade in old newspapers is well established with Hongkong and large orders are now being placed from Java and other points in the East Indies. The bale of 250 pounds is the preferred size.

A recently issued royal decree prohibits the use in Sweden of electricity and gas for signs or for advertisements out of doors. This because of shortage of coal imports due to the war.

Mt. McKinley in Alaska is 20,300 feet above sea level. Twenty-two hundred square miles of its range have been made into a national park. Perpetual snow clothes the upper 14,000 feet of the peak.

During the three months ending March 31, 1917, there were 83,652,907 pounds of bleached cotton fiber, including linters and hull fiber, consumed in the United States in the manufacture of guncotton and explosives of all kinds.

The wife of a private soldier in Canada with three children between the ages of 10 and 15 may receive either \$15 or \$20 from the assigned pay of her husband, \$20 separation allowance, and \$25 from the Canadian Patriotic Fund, or in all \$60 or \$65 a month.

The annual official postal guide will be on sale in July at 40 cents. This is cloth bound and contains three complete lists of post offices, one arranged alphabetically, one by states, and one by states and counties; with a large quantity of general information.

All motor traffic not necessary for national defense will be forbidden in France if the recommendation of the official gasoline saving committee is carried into effect. This committee has been appointed by the government to deal with the whole question of gasoline, kerosene and oil supplies throughout France.

In response to an inquiry from the National Wool Growers' Association, the Forest Service has announced that stock growers having National Forest grazing preferences will be permitted, if they enlist in the army or navy, to retain their preferences without use of the range during the period of enlistment.



# Agricultural News Notes of the Pacific Coast

## Northern California

The Santa Rosa cannery is running full capacity on cherries.

The irrigation bonds of the Anderson-Cottonwood district will be sold July 6.

The planting of grain sorghums has been great in all sections of Sacramento Valley.

Growers of 10,000 carloads of table grapes in the Hanford district are taking steps to form a cooperative association.

Four hundred acres of barley were destroyed by fire at Woodland last week, as were also many tons of hay in stacks.

A big basket picnic is planned for the Fourth of July for all of Butte County at the site of the Paradise Irrigation District dam.

The California Almond Growers' Exchange is enlarging its plant at Sacramento. An additional 70x130-foot space is being built.

The Central California Poultry Producers already has a capital of \$45,000 and the management is appealing to all poultrymen to affiliate.

The request of Dixon, Solano County, for a \$2,000 appropriation by the county for a county fair has been turned down by the supervisors.

Governor Stephens has signed a bill for the taking over by the state of the highway from Boulder Creek into California Redwood Park, in the Big Basin.

Glenn County rice growers have protested to the railroad commission against the proposed raise of water rates by the West Side Canal Company.

Grasshoppers have caused serious injury to many orchards in Butte County. In one place 15 acres of young orchard were completely destroyed.

Butte County reported estimates of the coming olive crop at 75 per cent of normal; this estimate was made, however, prior to the heat wave which covered the state.

Market Commissioner Weinstock is investigating as to the onion situation and endeavoring to secure fair return to growers who have been unable to sell at living prices.

Butte County rice growers propose to erect factories or packing houses for the processing or packing of rice in cartons or packages so as to popularize California products.

An agricultural survey of Alameda County has been made under direction of the farm bureau. The county was districted so that each auto joining in the canvass had only 25 farmers to visit.

The bill introduced into the legislature by Assemblyman Pettis of Mendocino to close the quail season in that district for two years was not signed by Governor Stephens. The quail season will open November 14.

State Horticultural Commissioner Hecke reports that about the middle of June fruit conditions had made a gain over the general condition of the month preceding. Apricots are evidently far ahead of last year's crop.

The California Olive Association, composed of some of the largest packing companies in the state, has established standard sizes and grades for the coming pack. The largest size is 45 to 55 per pound; these are graded as "Giants." The smallest of the seven different grades is "Standards," 120 to 135 per pound.

## Central California

Kings County reports apricot packing in full swing.

There is a movement to organize dairy producers of Fresno County.

The cheese factory at Salida, Stanislaus County, is running day and night.

Canners of Central California expect to begin on Tuscan Clings about the middle of July.

Tulare County high school boys are responding to the appeal for help in harvesting crops.

The Stockton Weekly Mail reports "local cherry growers robbed of \$13,000 by short weight."

Dinuba fruit growers have formed a valley fruit growers association with 7000 acres already signed up.

Combined harvesters and threshers are busy and many places are producing surprisingly large crops.

It has been estimated that California's output of canned products this season will aggregate \$200,000,000.

One Fresno boy has made a raid on jackrabbits during the past year and claims the record with 18,000 rabbits destroyed.

Lodi, center of the Tokay grape industry, reports some exceptionally satisfactory sales of the coming table grape crop.

The Pacific Pea Packing Company of Oakdale, Stanislaus County, has finished its run with a total of 1,500,000 cans of peas.

Cattlemen of the Porterville district estimate the cattle shipments from that section alone will total \$500,000 in value.

State Attorney General Webb holds that the school law will not stop pupils of the public schools from doing work on California ranches.

Central California organized peach growers have netted more than six cents per pound for more than 4,000,000 pounds of peaches.

With all the cry of food shortage some San Joaquin Valley growers are allowing onions to rot in the ground because of lack of market.

Grain growers are preparing to make an inroad on the squirrels of California in compliance with the new squirrel law which will go in effect July 26.

The Madera County council of defense is urging steps for the protection of warehouses and harvested crops from fire. The state forester is aiding in the campaign.

A series of rabbit drives is being planned in the Poplar district of Tulare County in order to save the bean crop which is suffering serious injury from the inroads of the pest.

The Dinuba Grape Growers' Association has completed work on the enlarged packing house and installed modern equipment, putting the plant in first class shape for the season's run.

Appraisers of the federal farm loan bank are verifying values in Tulare County. The Oakdale irrigation district will extend its ditches to 1000 acres of new lands which will be planted to beans.

Porterville reports that the bean crop produced in that section will be damaged to the extent of a half million dollars unless the jackrabbit pest is controlled. Rabbit drives are the order of the day.

## Southern California

Palo Verde cotton has sold as high as 24½ cents.

Imperial Valley is now second in dairy importance in California.

Imperial Valley cotton crop for 1916 has practically all been shipped.

Riverside County farm bureau is demonstrating vegetable canning.

Valencias are now being shipped from all Valencia orange sections.

Deciduous fruit canning season started in Pomona, Thursday, June 28.

After July 27 every real estate agent in the state will be compelled to furnish bonds.

In one day of last week 263 cars of melons were shipped from the Imperial Valley.

Fruit and vegetable producers are planning to meet the demands of the new net weight law.

The cantaloupe packing season at Brawley has attracted nearly 1000 extra Japanese laborers.

A combination of hot weather and spray for codling moth injured apples in the Beaumont section.

Grover Loftus has succeeded Walter E. Packard as president of the Imperial County farm bureau.

A scheme to drain a thousand acres of land along the Santa Ana River is being discussed at Riverside.

The Southern California Automobile Club is issuing a series of road bulletins of value to auto drivers.

Cool, foggy days following the recent hot spell saved many of the bean fields of the southern part of the state.

The first carload of cantaloupes sent from Imperial Valley to New York brought from \$6.00 to \$15 a crate.

Riverside fruit growers, unable to find local market, are joining San Bernardino in an effort to dispose of surplus crop.

Imperial Valley is discussing the coming cotton crop and harvest of other crops and devising means of securing labor.

The Orange County apricot crop will be good, but because of fewer orchards than formerly the total output will not be so heavy.

It is estimated that Imperial Valley needs 4500 men to help in cotton picking from the middle of September to the middle of February.

Imperial County prisoners have been used to put roads in good condition in districts where hundreds of loads of melons are to be delivered.

Imperial Valley's early vegetables brought many thousands of dollars, and the industry, especially the planting of lettuce, will be greatly increased another year.

Reports of experts who have examined trees infested with black, citricola and yellow scale, report a very large percentage of them killed by the heat of last week.

Owing to one of the principal dry yards in Pomona not operating this season, the chamber of commerce is contemplating operating it in order to save several hundred tons of low-grade cots.

The food conservation institute at Riverside, under direction of Miss Clarke of the state university, discussed from all angles preparation of food in such a way as to secure greatest return for least money.

## The Coast

Potatoes at Seattle are selling at \$25 per ton.

A favorite pure bred in Idaho is the Rambouillet.

Colorado bought \$17,000,000 worth of Liberty Loan bonds.

One horse breeder at Meridian, Idaho, recently sold 15 fillies for \$5000.

Seattle, Washington, reports exceptionally light supply of strawberries.

The Southeastern Idaho Fair Association has abandoned its fair at Blackfoot this season.

The Northwest district farm loan bank at Spokane reports over \$2,000,000 in loans approved.

A mammoth dam near Price, Utah, recently broke and caused immense damage for many miles.

The Eastern Idaho Grazing Association has sold its clip of 110,000 fleeces at 50¼ cents per pound.

The Inland Empire Dairy Association of Eastern Washington has established a paper of its own.

Stockmen of Arizona are watching the fight on the 15 per cent freight rate increase at Washington.

Many thousands of dollars are lost by the grain growers of the Northwest because of smut injury to grain.

Idaho sheep ranches are often provided with feed barns with good roof and sides built entirely of sagebrush.

Fruit growers at Walla Walla, Washington, are erecting immense dryers to handle all the surplus fruit output.

The Northwestern Fruit Growers' Association has made a strenuous fight against the 15 per cent freight increase.

A wool grower at Walla Walla, Washington, has just disposed of his 31,000 pound spring clip for nearly \$15,000.

Appeal is made to Arizona owners to keep posted on prevailing live stock prices and not sell too quickly, as has often been the case.

Experts in agriculture have observed wastes on Washington farms which they estimate to be at least \$25,000,000 annually.

Demonstrations of pit silo construction have been given by County Agricultural Agent Ballantyne of Graham County, Arizona.

O. G. Simpson, formerly professor of dairy manufacturers in Oregon College, has resigned to manage the Oregon Cooperative Dairy Exchange.

State officials of Washington have opened an employment agency and report that the office is swamped with applications by those desiring employment.

Cattlemen on the ranges of New Mexico are hiring Indians to grub loco weed which is proving even more destructive than usual this year. Twenty-five cents per hundred pounds is paid the Indian.

Miss Grace I. Tufts of Phoenix has been appointed assistant to Mrs. Salisbury, state leader in home economics of the Arizona university extension service. Miss Tufts will have headquarters at Phoenix.

The state tax commission of Arizona has called a meeting of county assessors and boards of supervisors at the court house at Nogales the week of July 23. The object of the conference is to secure information on property valuations.



## Get Rid of Worms!

Many animals, especially hogs, are troubled with worms. When your hogs are unthrifty, you hear a little cough now and then, suspect worms.

## Dr. Hess Stock Tonic

**Keeps Hogs Healthy**

**Expels Worms**

So sure am I that Dr. Hess Stock Tonic will keep your hogs healthy and expel the worms, that I have authorized my dealer in your town to supply you with enough Tonic for your hogs and, if it does not do all I claim, just return the empty packages and get your money back.

My Stock Tonic is not a feed, but a true conditioner and tonic, highly concentrated, which contains blood purifiers, laxatives and drugs which are powerful worm expellers. Feed in small quantities, watch your hogs improve.

**NEVER PEDDLED. SOLD ONLY BY DEALERS.**  
28,000 reliable dealers in U. S. handle it. Why pay the peddler twice my price?

**25-lb. Pail, \$2.25; 100-lb. Sack, \$7.00**

Smaller packages as low as 65c. Valuable stock book mailed free, if you write for it.

**DR. HESS & CLARK, Ashland, Ohio**

**Dr. Hess Poultry Pan-a-c-e-a**  
conditions fowls, makes hens lay and is a great help at moulting time. Valuable for chicks, for pullets starting to lay and for all grown fowls. Costs a penny for 10 fowls per day. 1½ lbs., 25c; 3 lbs., 50c; 7 lbs., \$1.00; 25-lb. pail, \$3.00. Guaranteed.

**Dr. Hess Instant Louse Killer**

A reliable lice killer, very quick acting. For use on poultry and stock. Use by dusting and sprinkling. Destroys bugs on cucumber vines, cabbage worms, slugs on roses. In handy sifting-top cans. 1 lb., 25c; 3 lbs., 60c. Guaranteed.



Write Dr. Hess about any sick animal or live stock trouble, enclosing 2c stamp. He will advise you free.

## The Draft Horse Situation in California

Written for California Cultivator By Prof. J. I. Thompson



THE breeding of horses in California is on the decline. To the casual observer it probably appears that there is something radically wrong here for the state stallion board report shows a decrease of about 25 per cent in the number of pure bred sires used in the past year. A casual survey of the situation should be worth while.

The first cause of this decline is that the class of farm labor grows worse from year to year so that ranchers find it increasingly expensive to work mares in foal. The rough, ignorant handling causes many cases of abortion and the loss of too many mares.

The second cause is the prevailing custom of working big teams of six, eight or ten, and even 32 on a combined harvester. Hitched in this manner a mule is much more efficient for he takes to this hitch more naturally and knows better how to look out for himself when the temperature goes extremely high. After harvesting is over many mule teams can be hired out for construction work, and it would be

the regions where the orchards, vineyards and groves are most numerous.

There are really only two large cities where many draft horses are needed, San Francisco and Los Angeles. Even here the drafter finds it hard to hold his own for there is never any snow, so trucks can run every day in the year. The hills of San Francisco might seem to be something of a drawback for trucks, but such is not actually the case for a peculiar reason. The fog often makes the streets extremely slippery, and since automobiles are so numerous there it is less hazardous to pilot a truck among them even on slippery pavement than it is a four-horse team hitched to a big, heavy dray wagon. The largest draying firms in San Francisco state that the trucks, except for the long hauls, are not so economical as the horses, yet an increasingly greater number can be counted each year, due in considerable part to the condition mentioned above. While the number of heavy drafters used in these two big cities is still considerable and probably always will be, the market is a comparatively limited one from the



Efficient Power  
Percherons are Dependable and Economical

folly to intrust good draft teams, especially mares, to the handlings of such teamsters as would there be encountered.

If the type of farming provided steady work for teams and drivers on the same ranch throughout the year the above condition would gradually disappear.

The other type of farming on vineyards or orchards also employs many mules for they are not only satisfactory at swinging around the vines, but work under the branches of the trees and close to the trunks more satisfactorily than horses. The average draft horse is too tall for orchard work, and while a farm chunks type will do the work satisfactorily, they seem to be rather scarce, with the result that mules often fill the places. Unless the type of hitch for ranch plowing changes from six or eight strung out to four abreast the big drafter would seem to have little chance of replacing the mules.

When more power is needed the tendency is to buy a tractor. Since the year's ranch work is done in a rush for about two month's time at seeding and two months' time at harvesting, there is no work for perhaps two-thirds of the stock during the other eight months. Here is where the tractor gets in strong. It can be run day and night for plowing and seeding and for hauling grain to the warehouse, and when not working it is not eating. Handy little orchard tractors are now used extensively in

rancher's view point. The demand just now is quite good for the big ones, but they are not to be found to any very great extent, due to causes which will be mentioned later.

Standard breeds and thoroughbreds were formerly very numerous here, and as the demand for these for racing declined ranchers employed many of them for raising mules. The produce is not especially heavy, but is handy and active and seems to suit the trade. It would seem that it might be profitable to use more heavy draft mares for mule production, and this is being done on the ranches where farming is somewhat intensive, and especially where alfalfa is grown.

There is one enormous factor, however, that materially reduces the price received by the producer for his horses, and that prevents the comparatively limited city demand being filled by California grown horses, and that factor is side bones. Whether this is due to the bringing in of stallions which sired colts with a predisposition to this unsoundness, or to the long dry summers when the heels and, in fact, the entire hoof contracts badly, or the hard roads which make it compulsory to keep all horses shod that do any road work, or to all three of these combined, it is difficult to state. The fact remains that side bones have taken the profit out of much of the draft horse production here and compelled city buyers to go east for much of their stock. Improper or insufficient feeding has



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**Will Bring You \$27.80  
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### The Old Way

Cream Used in Six Weeks,	\$16.80
Veal Calf Sells for	15.00
Loss	1.80

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Cream Saved in Six Weeks,	\$16.80
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These are figures you can depend on and we absolutely guarantee you satisfaction or money refunded. Ask your dealer or write

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on beef breeds of cattle in amounts from \$5000 up,  
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often resulted in lack of sufficient size to fill the city demand, but side-bones have the floor by at least four to one. Still a considerable number of ranchers have bought one or more pure bred mares and started in to breed draft horses under good farm conditions. Many of them have quit disgusted for the following reason: It seems that most of the stallions sold by dealers are never transferred from the dealer to the buyer. The owner of pure bred mares patronizes one of these stallions and often pays an increased fee because his mares are registered. When he attempts to register his colts he finds that his certificate of service is not acceptable to the registry association because the stallion still stands on their books in the name of the original seller. Registry associations of all breeds of all classes of stock can do an untold amount of good by compelling the

seller in all cases to furnish and record the transfer of the animal at time of sale. This is one thing that must be done before draft horse breeding on the average ranch in California will be on the ascendancy instead of the decline as at the present time. It is just possible too that the extremely heavy draft horse will never be so popular here as the medium weight drafter of from 1600 to 1800 pounds, possessing an abundance of quality and true snappy action. Such a horse can be grown under average conditions here and will furnish the keenest competition for the mule and the tractor. He may be at a slight disadvantage when the thermometer soars above 110 degrees, but he will more than make up for this in economy of repairs and reproductive ability when compared with the tractor and truck and the near machine, the mule.

## Breed More Horses

**T**HE COUNTRY needs more horses. There may be difficulties as outlined by Prof. Thompson in the article above, but so far as possible California should meet the demand. In the publication of the Percheron Society of America there are estimates of horse breeders and others. One breeder says:

"As I try to predict the future by what has happened in the past, I can't see how anyone dare say that we are likely to have an overproduction of good draft horses. I am told that the last census report shows that in 1910 we were producing less than ten colts for every 100 horses owned on farms, and it is a safe assumption that horse breeding has declined somewhat in the last seven years. With this war using horse flesh by the million dollars worth, coupled with the fact that there is already a shortage of good heavy horses, the kind which are so necessary in carrying on farm operations most economically, I am sure that farmers can do nothing better this spring than to breed every mare old enough to the best draft stallion available. A horse famine is bound to come unless conditions change. By the time our 1918 colts are old enough to go into the harness this war will likely

be over, and whenever it is, thousands of heavy draft horses will be needed to go to Europe to rejuvenate her agriculture. America, alone, is the only nation in the world with the kind of equine stock that will satisfy this demand. They who can see far enough ahead to appreciate this situation will reap the benefits."

A veteran dealer in horses voices his opinion as follows:

"From the information I have received from many other professional horse buyers, and from my own personal observation, I know that there is a decided shortage of heavy draft horses weighing 1600 pounds or over in working condition. The supply of these horses has never been equal to the demand, and the shortage is more acute now than ever before. Farm and city needs, export trade, and the requirements of the United States army are now drawing upon our available horse supplies at an unprecedented rate, and there is no question, in the judgment of the men best informed on horse production, but that we will encounter a greater shortage of horses and very much higher prices, especially for heavy draft horses, in the next five or ten years than we have known at any time during the last three decades."

## Horse Still Indispensable

The news bulletin of the Colorado agricultural extension service has this to say about the horse:

The very heavy advertising which has been done by our tractor manufacturers during the past few years has led a large number of farmers to think that the tractor is to take the place of the majority of horses on our farms. Unless the breeding of horses is continued and increased we shall, within four or five years, face a horse shortage which will place horse power beyond the average farmer's reach, and curtail our field operations to a remarkable extent.

Wm. Henderson, a prominent horse buyer of Illinois, says "That tractors have a place on our farms I do not deny, for nearly all of our best types of farms now require a power unit which can be used for grinding grain, baling hay, filling silos, grinding alfalfa, and for various other belt power purposes. Inasmuch as the work oftentimes is done upon different parts of the farm, it is an advantage to have a power unit in tractor form, but those

who believe that the tractor is destined to displace any considerable portion of the horses actually needed in field work will find that they have misjudged the situation, and not a few of them will pay dearly for their experience."

### WHAT A HEREFORD MAN SAYS

To the Hereford is due the credit for having not only revolutionized the range cattle business of the country, but the business of growing beef cattle on the farms as well. The transformation of the original Longhorn of the Southwest, which produced a 500-pound carcass at four years of age, into the modern Whiteface that produces a 700-pound carcass at 18 months of age, was the work of the Hereford. The transformation of the gaugling, raw-boned, slow-growing farm steer that could not be matured into palatable beef until it was three to four years old, into the short-legged, smooth, compact, early-maturing steer of today that can be made into prime beef as a yearling, was the work of

# HOT WEATHER

the season when a



## DE LAVAL SEPARATOR

saves most over  
any other separator  
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**I**T'S A GREAT MISTAKE for any dairy farmer without a separator or using an inferior machine to put off the purchase of a New De Laval Cream Separator in the summer months especially with butter-fat at the present unusually high price.

Great as are the advantages of the New De Laval over all other separators, as well as over any gravity setting system, at every season of the year, they are even greater during the mid-summer season than at any other time.

This is because hot weather conditions occasion greatest butter-fat losses with gravity setting and render it most difficult to maintain quality of product with any gravity system or unsanitary separator, while, moreover, the quantity of milk is usually greatest, and any loss in either quantity or quality of product means more.

Then there is the great saving in time and labor with the simple, easy running, easily cleaned, large capacity New De Laval machines over all other methods or separators, which naturally counts for more at this time of the year.

Hence the great mistake of putting off the purchase of a New De Laval Cream Separator in summer, whether you already have a poor machine or none at all, and every dairy farmer should keep in mind not only that a De Laval will pay for itself in a few months but may, if desired, be bought on such liberal terms as to actually save its own cost while being paid for.

Every claim thus made is subject to easy demonstration, and every De Laval local agent is glad of the opportunity to prove these claims to you, in your own dairy, without cost or obligation on your part.

Why not see the nearest De Laval agent at once? If you do not know him, write to the nearest office for new catalog or any desired information.

Every New De Laval is equipped with a Bell Speed Indicator.

## DE LAVAL DAIRY SUPPLY CO.

LARGEST DAIRY SUPPLY HOUSE ON THE PACIFIC COAST. Alpha Gasoline and Distillate Engines, Ideal Green Feed Silos, Acme Ensilage Cutters and Blowers, Irrigation Equipment, Centrifugal and Deep Well Pumps and Alpha Spraying Outfits. Send for special catalog.

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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER



## Santa Anita Rancho

Anoakia Breeding Farm



**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by imported Stallion Ibn Mahruss, head of our Arabian stud. Dams are the choicest thoroughbred mares of Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahruss, world renowned imported Stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kimbrey Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the very best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted Prince Gelsche Walker, and bulls from one World Record cow and two California State Record Cows. Write for details.

Correspondence Invited

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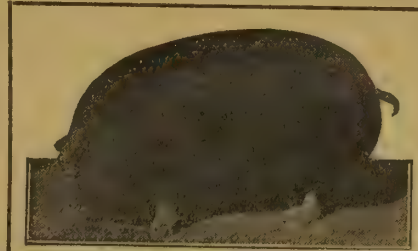
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Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain. 12 firsts, Junior Champion and Reserve Grand Champion Boar. Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

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## Shorthorn Bulls and Heifers

We have twenty bulls and ten heifers for sale at present. This is the best lot that we have ever had for sale. Mostly two year olds, registered, tuberculin tested and all reds in excellent condition and splendid individuals. Write for prices or better come and see them.

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Six miles from Sacramento

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DISEASES.

You can make all live-stock  
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## KRESO DIP No. 1

The Standardized, Reliable  
Dip and Disinfectant.

KRESO DIP No. 1 has been used at the large state fairs in the United States for the last ten years to prevent the spread of contagious disease. It has done it, and KRESO DIP No. 1 will do the same for you on the farm.

KRESO DIP No. 1 is reliable. It is easy to use. It is inexpensive.

FOR SALE BY ALL DRUGGISTS.

We will send you free a booklet on the treatment of mange, eczema or pitch mange, arthritis, sore mouth, etc.

We will send you free a booklet on how to build a hog wallow, which will keep hogs clean and healthy.

We will send you free a booklet on how to protect your hogs from lice and parasites and disease.

Write for them.

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Reduces Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Bolls, Swellings; Stops Lameness and allays pain. Heals Sores, Cuts, Bruises, Boot Chafes. It is a

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Does not blister or remove the hair and horse can be worked. Pleasant to use. \$2.00 a bottle, delivered. Describe your case for special instructions and Book 5 M Free.

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Registered young bulls from best families. Some of serviceable age.

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Masterpiece, Longfellow and Robin Hood Strains. Fine individuals of both sexes—we pay registration fee. Careful attention given to mail orders.

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**Berkshire Hogs—Milking Shorthorns**  
Breeding Stock For Sale  
G. A. Murphy - Perkins, Cal.

the Hereford. The effect of the Hereford upon the industry of beef production in this country has been two-fold—the improvement which the infusion of Hereford blood has wrought, and the improvement in other breeds of cattle made necessary by the competition of the easy keeping, early-maturing Hereford.

### HOG WALLOW

Written for California Cultivator  
By H. J. Baade

The accompanying picture is of the hog wallow which Mr. Tubbs has constructed on his ranch near Calistoga. He used cobblestones for the bottom and sides, using a mortar between these stones of 1 to 3 cement and sand. The tank is 14 inches deep on one end while on the other it tapers to nothing. It has a flush pipe at the



bottom and a faucet at the upper end where there is a trough into which water runs continuously, thus assuring the hogs fresh drinking water at all times. The overflow goes into the wallow, into which some disinfectant or oil is poured from time to time which will control the lice on the hogs. Mr. Tubbs finds that he is not bothered in the least with any insect parasites on his hogs since he has installed these hog wallows. He finds them entirely satisfactory.

Perhaps the readers of your paper would be interested in knowing of this very necessary addition to the equipment on the hog ranch.

## Shorthorns

### Paicines Ranch Company

Offers for summer and fall delivery both registered and unregistered weanling bull and heifer calves.

For prices and particulars apply to

**DAVID J. STOLLERY.**

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## JERSEYS

My Herd is all Register of Merit  
Stock—Averages as High in  
Butterfat as any Herd on  
the Coast

NOW IS THE TIME TO BUY JERSEYS  
**C. G. McFARLAND - Tulare, Cal.**

## Field Notes from the Live Stock Men

The Timken Ranch Company of El Centro has purchased the third prize senior yearling Duroc-Jersey boar at the National Swine Show. The price paid for this boar was \$90.

J. E. Peck of Brawley reports a splendid crop of Duroc-Jersey pigs by his boar Pacemaker, a son of the mighty Pathfinder, the largest boar of the breed.

The Vail Company of Temecula, one of the largest cattle companies in the state, has recently purchased 20 top Duroc-Jersey sows from Peters Lamson & walker. This company expects to go more extensively into the

J. M. Davis, owner of Twin Acres, is the owner of this fine youngster. This ranch won five first ribbons, two seconds and two cups at the show.

Hengerveld Pietertje, a senior four-year-old, belonging to Messrs. Gottshall and Magruder, has just completed a record of 25.3 pounds of butter in seven days on official test.

A. W. Morris & Sons, Woodland, have a remarkable lot of yearly records in the making, and will this season establish several families with great record for both milk and butter for three direct generations, among which will probably be the first three generations of cows to make above 1000 pounds butter in one year. A splendid lot of young things are coming on in the Morris herd at present, and the herd now numbers over 425 head of registered Holsteins. The feeding of pasteurized milk and careful sanitary methods employed in raising the young stock, have resulted in a growthy, vigorous, healthy lot of youngsters that will be real performers when they grow up.

Fred W. Kiesel, Sacramento, president of California Holstein-Friesian Association, is developing a splendid herd, and the first test season has brought out a string of creditable records in his herd. Some exceptionally promising heifers will freshen for the first time this fall and there will be a large class to go on official test. Mr. Kiesel's ranch on the river is really a 600 acre garden, such is the richness of the soil, and at this season a tremendous crop of alfalfa is being harvested, while a big crop of corn for silage is coming on and a banner bean crop is growing.

Roselawn Stock Farm, Woodland, is gradually increasing its splendid herd of registered Shorthorn breeding cows, although nowhere near in keeping with the demands for breeding stock made upon this popular herd. Their senior herd sire, Gibson's Goods, recently passed to bull heaven, leaving behind him a large group of offspring that is a credit to California Shorthorns. The junior herd sire, Ringleader, son of the great Ringmaster, is also siring a great bunch of calves with remarkably good top lines and general excellence and quality.

If Thornton Glide, owner of Hillcrest Stock Farm, Davis, elects to show registered Shorthorns at the California State Fair, or any other fair for that matter, this year, just watch the heifer classes. There will be some young things worth seeing, and if they do not reach the top there will be some classes worth going a long way to see.

Horses to bring the best possible price on the market should be in good condition, that is fair flesh and showing evidences of care and attention. Special attention should be given to feed and grooming. Each pound of flesh put on the thin horse means an increase in the selling price up to a certain limit.

Secretary Wayne Dinsmore of the Percheron Society of America writes that the society offers many valuable prizes and medals for 1917 fairs. Lists of classes and prizes may be secured by writing him at U. S. Yards, Chicago. The California state fair is one of those given complete recognition.

Go to the first cholera inoculation demonstration in your community. Learn how to administer the serum. Cholera may break out in your herd next week.

## WHY NOT?

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BUY A BULL, from one of our tested cows to head your herd?

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## Gotshall and Magruder

The Home of the State Champion Two Year Old

RIPON

CALIFORNIA



## Veterinary

Answers in this column by Dr. Wm. Petrie, 2714 South Harvard Blvd., Los Angeles, are without charge. For immediate mail answer remit \$1.00. In writing questions give full symptoms or particulars of injury of animal. Unsigned communications receive no attention.

### Horse With Cough

About four months ago horse seemed to take cold, right eye discharged and the cough was only occasional. Cough has been growing worse slowly and seems to be worst during the night. Some difficulty at times in swallowing and breathing. Feed rolled barley and bran and bean straw for roughness. Cough same, whether on dry feed or in pasture. It is not distemper, as there is no discharge at nose nor swollen glands. Cough is dry and hard, almost as if choking at times. —Subscriber, Encinitas.

Your description of cough would lead one to think it might be the heaves, but the difficulty in swallowing indicates a sore throat also. For the sore throat get four ounces of tincture of iron and once a day put half an ounce of it in a long neck bottle. Add a cup of water and drench him slowly with it. For the cough get these powders: Four ounces powdered belladonna leaves, four ounces powdered digitalis leaves, two ounces powdered nuxvomica, four ounces ground gentian, two drams arsenious acid and six ounces farina. Mix. Give a heaping teaspoon of the mixture morning and evening in some kind of ground feed.

### Skin Disease

I have a young horse that has had the itch for over a year. An old horse had same trouble, caused by mites getting on him, in the same stable about three years ago. It breaks out in small blisters and sometimes the hair comes off when the blisters break. It bothers him most in summer. Have used the usual skin remedies, but they do no good. —Subscriber, Buena Park.

Better treat him both internally and externally, and you will be pretty sure to reach the trouble. Get a pint of Fowler's solution of arsenic. Give half an ounce as a drench or on the feed once a day for a week, then increase the dose to one ounce a day for ten days and finish by giving half ounce doses while the pint of medicine lasts. For external treatment clip him all over, then once a day for a week wet the irritated parts with a solution of chloride of zinc, using one ounce to the gallon of water. It will do more good if warmed just before using. The stable should be thoroughly swept out and whitewashed, as well as the places in the corral where he rubs.

### Spanish Itch

I have a work mule that is troubled with what is known as "Spanish itch" in this section. The disease commences to show as soon as warm weather comes in the spring. In this case it appears on the head and neck and along the back to the base of the tail. The itching is so intense the corral fences do not last long under the vigorous rubbing. Have used kresol dip, but it does no good. Think he needs some internal remedy. In a recent issue of the Cultivator, Fowler's solution of arsenic was recommended as an external wash. Our druggist says it could be made cheaper by leaving out some of the chemicals and be just as effective. Please advise how much to get and how to use it. —Subscriber, Blythe.

If you will read the article you refer to in the Cultivator again you will find that the Fowler's solution of arsenic was recommended for internal use and should be given in one ounce doses once a day. It is

best to begin by giving half ounce doses once a day for a week and terminating the treatment in the same manner. Get one pint of it and it will last about three weeks. Use the arsenic treatment as above, and for external treatment for the mule I would advise trying a solution of chloride of zinc, two ounces to the gallon of water. Scrub the parts clean once with soap and warm water, and when dry apply enough of the solution to wet the parts. Repeat the lotion once a day. This will cure most skin diseases, but if it fails then try soaking the parts with a light grade of engine oil, such as you can get at any garage. Show this to your druggist so he will know just how to prepare the remedies for you and ask him for an ounce vial for a measure for the arsenic solution.

### How to Drench a Cow

A subscriber writes that one of his cows was ailing and he gave her a pound of salts and repeated it the next day, after which she improved some, but, thinking that another dose of the salts was needed, he gave it. The cow did not want the last dose, but her head was held up and the medicine forced down, after which she commenced breathing hard and died that night. Upon opening her he found a dark spot at the end of the lungs. He asks if it was the salts that did it.

Probably the head was held in such a manner that she could not swallow and part of the dose went down into the lungs. If the whole dose had gone into the lungs she would probably have died in a few minutes.

When drenching a cow the head should not be held too high, and there should be no pressure on the throat to prevent swallowing. Also the head should be held straight out in front of the body and not too much medicine poured into the mouth at one time. Usually cows are very easy to drench, but occasionally one will resist, and then care must be exercised or the medicine may be forced into the lungs. Once the medicine is in the lungs there is little or no remedy for it. The thumb and middle finger in the nostrils to serve as a bull ring will generally make them hold up the head and take the medicine with little or no resistance.

### Heifer Giving Milk

I have a heifer due to freshen next September that will be two years old in December. She has been brought to her milk by calves that I supposed were weaned. She is very fat and milks very freely. I am trying to dry her up by feeding her only alfalfa hay and keeping her in a corral by herself. I only milk her when the udder is full, which is about twice a week, but she still has to be milked. Is there more danger at time of freshening in this condition? —Subscriber, Modesto.

She was bred too young, but now that things are started keep them going. Do not dry her up; it may make more trouble. She will come fresh just as easy and there will be less danger of udder trouble if you keep the milk flow right up. All these things coming together when she is so young may stunt her growth a little, but she will probably make just as good a cow. Milk her at least once a day.

A creamery with equipment valued at about \$15,000 was burned at Chowchilla. The plant will be rebuilt.

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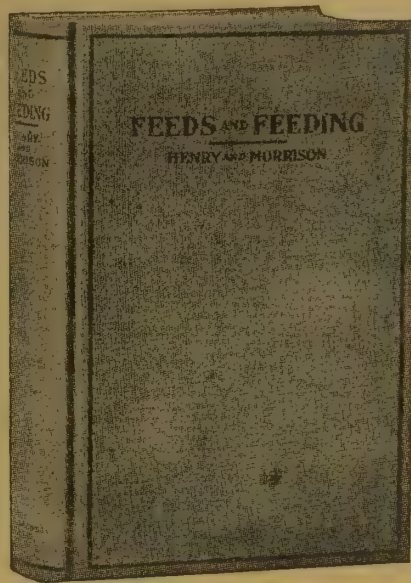
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## THE WAR'S CHALLENGE TO THE SIDE-LINE POULTRY-KEEPER

Continued from Page 3.

What we do know is that a shortage of food may confront us sooner than we dare to think and that then a little flock of hens, supplying eggs and meat for the family, will be a resource of almost priceless value. If it can be made to supply more than the family needs, it is of still greater value. Not every one can raise his own vegetables. Knowledge and experience are important factors in the garden game; birds, gophers, hot weather, cold weather, lack of water and poor soil are all to be reckoned with. But a person must be very ignorant or very stupid who cannot make half a dozen hens a financial success and a welcome asset in the home economy. Weather counts but

little with hens, and they will eat anything a cow, a dog or a human being can. Give them a tree to roost in, the refuse from the kitchen, a little grain and a chance to forage for what is lacking in the ration, and you will have some eggs. Give a comfortable roosting coop, a balanced ration and strict attention to cleanliness, and Mrs. Biddy will do her level best to fill the egg basket.

If the side-line poultry keeper is to do his part in helping out the nation's food supply, and incidentally his own, he must do three things which side-liners have not always been willing to do:

First, he must keep better stock. In the past too many have been satisfied with anything that would lay eggs, without regard to color or breed or breeding. The mixed, mongrel flocks in our back yards must go. A mongrel rarely lays as many eggs as a pure bred, and the second generation never does. Half a dozen hens of one pure breed, mated to a male with real breeding back of him, is a basis for the building up of a strain which shall be a real asset to the community. Should the time ever come to us, as it has already come to European countries, when the preservation of breeding stock is a serious problem, these little backyard flocks of pure bred birds will be of incalculable value.

Second, he must look more to meat quality in his birds. Our great need for the next few years is to be meat, and no meat save rabbits and pigeons can be so quickly raised as chickens. But the fowl that is worth while for meat must be one that reaches marketable size quickly and that when mature has a good plump breast and fairly heavy weight. These qualities are not always found in conjunction with high fecundity, but they may be. Some strains of heavy hens are quite as good layers as Leghorns; some, their admirers say, are better. This is not an argument against the Leghorns, but a reminder that we must look for and breed toward both eggs and meat in our fowls.

Third, he must study food conservation for his hens as well as for his family. What feed gives most nourishment for least money? What will make eggs and not make fat? How much does a hen need in order to produce the eggs required of her? What ought it to cost to produce a dozen eggs? These are vital questions which professional egg producers have been working on for years. It is time the side-liner took a hand at their solution.

Fourth, he must plan to raise more of the feed he uses. What one can raise depends, of course, on the amount of land he can command, but even the back-lotter can usually find

a place for a patch of milo or kafir, as well as for the rape and kale which his hens must have. The successful poultryman, commercial or side line, must raise more feed than he has ever raised before. The time may come when we shall no longer be permitted to feed hens grain which can be used for human food. Then the sorghums, of which milo is one, must be the main dependence of many poultry keepers. These grains may be raised on any vacant lot with little water, and it is up to us side-liners to learn without delay how to raise them, and then to raise all we can. This sounds easy, but it is not as easy as

it sounds. I planted a patch of milo this spring, and only a few stalks came up. Whether the birds stole the seed, or the ground was too dry, or the planting too shallow, or the seed poor, I do not know, but I am going to find out. It takes time to learn to raise even sorghums, which are said to be the most easily raised of all grains. No poultry keeper, whether he keeps a dozen hens or a couple of thousand, is properly equipped without a smattering, at least, of general agricultural knowledge. Which brings us right back to what J. H. Robinson said years ago, that the poultryman is only a farmer after all.

## Rabbits the Solution of Increasing Meat Production

By C. P. Gilmore, Western Secretary National Rabbit Association



WITH our country at war and our government calling on every one to produce food-stuffs, there is but one thing that can happen to the rabbit

industry of this country, and that one thing is something little short of a boom. Never before in the history of the industry has there been the demand for rabbit meat, and never before have there been such prices paid. Breeders all over the country report that they cannot fill the orders.

Secretary Houston of the department of agriculture declared recently that "Unquestionably the largest hope for a considerable increase in our meat supply lies; first, in sympathetic attention to the production of larger animals in the settled farming areas of the country, and second, in increasing attention to smaller animals.

The increasing attention to the smaller animals has been very evident during the past few years but with chicken wheat at five cents a pound, this leaves "Bre'r Rabbit" king of the field of small meat producers.

We maintain that rabbit meat is the cheapest to produce (pound for

pound) of any meat that we eat, and while I do not advise it, still if it comes to a show down rabbits can be raised on dry grass, good greens and water.

France is producing and selling through its municipal markets over 100,000,000 rabbits yearly. Before the war Belgium earned from her exportations of rabbit meat approximately \$12,000,000 yearly.

Prof. Pennant, a Norwegian sociologist, states that he thinks the rabbit is the solution of the meat question of his country. He points out that the rabbit will supply in many ways the poor man's food. The poor man can easily raise them; they are cheap to keep, and the propagating power is most extraordinary, he says.

As a present day meat producer I regard the rabbit (Belgian, New Zealand and Flemish breeds), as worthy to head the list. First, for delicate flavor and digestibility; second, cheapness of production; third, small amount of space required; fourth, small amount of time required; and fifth for the fact that they belong to the rich and poor alike.

## Produce Infertile Eggs!

Infertile eggs keep best and market best in summer heat. Fertile eggs spoil quickly in summer weather. Fertile eggs cost the farmer an enormous sum each year. Farmers lose millions of dollars annually from bad methods of producing and handling eggs. One-third of this loss is preventable, because it is due to the partial hatching of fertile eggs which have been allowed to become warm enough to begin to incubate.

The rooster makes the egg fertile. The fertile egg makes the blood ring. You can save the money now lost from blood rings by keeping the male bird from your flock after the hatching season is over. The rooster does not help the hens lay. He merely fertilizes the germ of the egg. The fertile germ in hot weather quickly becomes a blood ring, which spoils the egg for food and market. Summer heat has the same effect on fertile eggs as the hen or incubator.

Infertile eggs will not become blood rings. After the hatching season cook, sell, or pen your rooster. Your hens not running with a male bird will produce infertile eggs—quality eggs that keep best and market best.

### Rules for Handling Eggs on the Farm—

Heat is the great enemy of eggs, both fertile and infertile. Farmers are urged to follow these simple rules, which cost nothing but time and thought and will add dollars to the poultry yard returns:

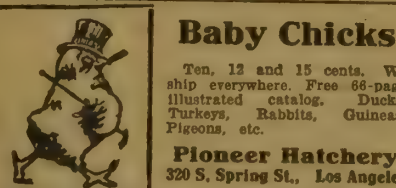
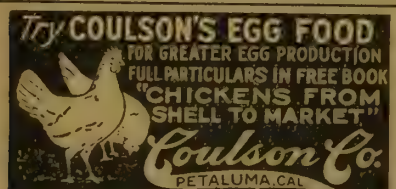
1. Keep the nests clean; provide one nest for every four hens.
2. Gather the eggs twice daily.
3. Keep the eggs in a cool, dry room or cellar.
4. Market the eggs at least twice a week.
5. Sell, kill, or confine all male birds as soon as the hatching season is over.



### The Best Feed on the Market

Has the highest protein at the lowest price, \$2.65 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or

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**For Sale**—15,000 "Sweet Root" Valencia orange trees, choice yearling high buds, very thrifty stock raised from seeds of largest seedling orange trees in California. E. W. Pyne, 4 miles N. E. Olive, Orange County. Phone Placentia, 2333.

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**For Sale**—Two-year sour seed bed stock, thrifty with good roots. Only 20,000. Price \$20 and \$25 f.o.b. Be quick if you expect to plant. C. W. Wilhite, Glendora, Cal. Phone 303.

**For Sale**—1000 Eureka lemon trees at 25c per tree. First class, free from scale; ½-inch and up must take them out this spring. Peter Arth, Redlands.

**Citrus Trees**—All kinds, any quantity. Butler's Morning Side Nursery, Lamanda Park, Cal.

**Citrus Nurseries**, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

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**For Sale**—1-year-old Sour Florida Seed bed stock. A. R. Klemm, Azusa, Cal.

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**Wanted**—Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' work to right parties. Address J. H. Yetter, Sales Department, 810 Santa Marina Building, 112 Market St. San Francisco, Cal.

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**Tepary Beans for Sale**—Twelve pounds will plant an acre. Will mature in 65 days from seeding. Seed very scarce. We have on hand a limited quantity which we offer, ten pound lots at \$2.50; hundred pounds \$20.00 F. O. B. Tucson. Tucson Seed Company, Dry Climate Seeds, Tucson, Arizona.

**Giant Winter Rhubarb**—Last chance to get extra fine subdivisions at special low prices; offer expires June 30. \$673.70 from ½-acre first season. Grand prize San Diego Exposition. Booklet free. W. A. LEE, Covina, Cal.

**Six Sacks Sudan Grass Seed**—Absolutely pure. For quick sale 40 cents per pound. Imperial Valley Seed House, El Centro.

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**Capri Figs ready now.** Place your order at once. Early and late varieties. Price \$6.00 per thousand. Quality good, satisfaction guaranteed. L. C. Collins, Smvrna Park, Ceres, Calif.

**Capri Figs Ready July 5th to August 10th.** Well colonized. Tribble Bros., Elk Grove, Calif.

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### FOR LEASE

**For Lease**—2500 acres good grain land in Merced County, close to railroad; will lease to responsible tenant for share of crops or cash. Address C. H. Evans, 536 Title Insurance Bldg., Los Angeles.

### FOR EXCHANGE

**For Exchange**—A 5-acre chicken ranch at Upland. 1200 White Leghorns. Chicken houses with cement floors. Good house, bath and toilet. Will take clear house Los Angeles or good nearby town. Mortgage \$2000, nearly three years to run. A big snap, but must be turned quick. A. W. Richards, Claremont, Cal.

### HOGS

**Chester Whites, the Billiken Brand**—Bred sows and gilts. Every rancher should carry at least one good brood sow; are you going to help out our future meat supply? I have the following to offer, first class in every respect and priced low: 2 young tested sows to farrow in July; 6 spring gilts to farrow in September; 18 fall gilts to farrow in October. Weaned pigs, both sexes, to be delivered during the month of June; 4 young boars ready for service. Write for prices and circulars. C. B. Cunningham, Mills, Cal.

**Grape-Wild Farm Berkshires**—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

**Large Yorkshires**—Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.

**Superba, World's Grand Champion Poland-China** boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

**Rancho Rubio Durocs.** Only a few September gilts left. One coking good fall boar by Orion Model, son of the last international grand champion. Place your orders now for weaned boar pigs. Best I ever raised. Elmer Lamb, Ceres, Cal.

**Wanted**—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

**Large Type Poland-Chinas.** Have ready for shipment three spring yearling boars, three fall pigs, spring pigs both sexes. Sired by Glenn Chief, a 1000-lb. boar, and out of prize winning sows. Cremer-Erikson & Co., Orland.

**Duroc-Jerseys**—Seven choice males, three months old, from litter of eleven. Guaranteed breeders. \$20 each with pedigree. W. M. Taylor, Rd. 1, San Bernardino, Cal.

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**Several new and slightly used engines** at a bargain. Best makes. 1 to 35 h.p. Arnott & Company, Wholesale Machinery and Implements, 112 South Los Angeles St., Los Angeles, Cal.

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**For Sale**—25 acres well fenced, good well, good barn and building. Selling below cost. Mail to gate, good road 2 miles east of Napa. Mrs. James G. Pullen, Route 3, Box 78, Napa, Cal.

**For Sale**—At a Bargain, ¼ acre in Civic Center, Atascadero, Calif.; lot 10, N. B. Paid \$1060. In order to get needed money quick will sell for \$530. Carl Storia, Paso Robles, Calif.

**624 Acre Stock Ranch** for sale at a sacrifice. Very reasonable terms. For particulars address J. F. Salcido, Lookout, Calif.

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**200-290-Egg Early Maturing Winter Laying** White Leghorns, White Wyandottes, Rocks, Reds, Anconas, JUNE SALE. Eggs 60 per cent off. Few pens all breeds, half price. 8-week chicks. C. Beeson, Pasadena, Cal.

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**Model Poultry Farm,** White Leghorn specialists. Baby chicks and hatching eggs from heavy laying stock, bred by us for thirteen years. Our prices are right. W. C. Smith, Prop., Corning, Cal.

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**"Eastman's Bred-to-Lay"** Barred Plymouth Rocks. Fairmead Poultry Farm, Fairmead, Cal.

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**If You Have Transportation and Irrigation problems or surveying,** consult J. H. Knapp, Civil Engineer, 220 I. W. Hellman Bldg., Los Angeles. F7810. 25 years' experience in West.

**Slacked Lime**—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road Pasadena.

**To Reduce the high cost of living,** send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

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**If You Raise or Handle Cattle, Sheep or turkeys,** you need a DOG. Our Collies are the best. Pups just weaned for sale. Address John G. Mee, Breeder of Bronze Turkeys and Embden Geese, St. Helena, Cal.

### A MOVE TO LARGER QUARTERS

The De Laval Dairy Supply Company has moved from the old location at Drumm and Sacramento Streets to a new, fire proof building at 61 Beale Street. The firm came to San Francisco 15 years ago and at the time of the big fire was completely burned out. There was nothing left but a good reputation for fair and honest dealing, which no fire, flood or famine can destroy. After the fire the company found a suitable location where they remained till the completion of the present building.

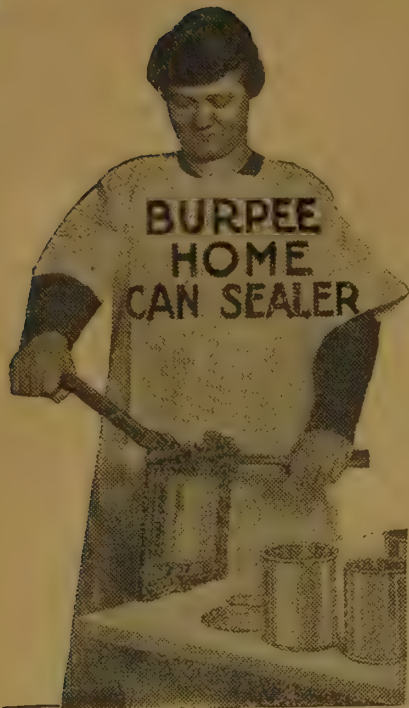
The company has always been in the front ranks in the battle for better dairying conditions; advocating better cows, better methods of handling the produce of the dairy and better business methods. Improved conditions prevail, not only in California, but along the entire coast, as a result of the efforts put forth by the De Laval Company. During the past two or three years they have been greatly cramped in the old quarters. The dairy business has grown tremendously; new machinery has been placed on the market; new dairies were started and old dairies increased their capacity to meet their individual demands.

The building into which the company has moved is new and of class A construction, is four stories high and includes a large storage basement. The top floor is used for the machine shop and engineering department. On the first floor is a complete stock display, and the second floor is utilized by the big office force.

The company handles dairy supplies of every kind, including Alpha engines, barn equipment, feed cutters, silos, spraying machines, and all other implements. There is nothing too big or nothing too small that the dairyman needs that cannot be supplied by the De Laval Company. Catalogues bearing upon particular phases of the dairy business will be sent upon request.

According to Mr. C. A. Crate, general sales manager, the dairy business bids fair to make great progress during the next ten years. The outlook is particularly encouraging, despite the present high cost of feed, and every dairyman is urged to bridge over the present season without getting rid of any of his cows. They will pay a big return in the near future, and those who sell their herds will have great difficulty in getting back to their present positions.





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Extra parts are always available without delay for standard advertised machinery. This class always found in the California Cultivator.

## Household Department

### GOD IS GUIDE

"The world is wide  
In time and tide  
And God is guide;  
Then do not hurry.

"The man is blest  
Who does his best  
And leaves the rest;  
Then do not worry."

### SAVING STRENGTH

Written for California Cultivator  
By A. B. C., Pasadena



YOU ask, "What does the saving of strength amount to?" The difference between profit and loss, not in dollars and cents alone, but in all things most vital and worth while.

The urgency of wartime is laying a stress on us all, voluntarily or otherwise. The measure of success or failure depends in a crisis on the margin we possess. To meet this we must take stock carefully, for no saving is too small to count. If it means radical changes of ideas and ideals, we have the advantage that never was a time so easy to get out of a rut. From the president to the humblest citizen we are realizing the ever-changing viewpoint of these rapidly moving days.

You also ask, "How is it attained?" and the following suggestions from practice in housework, laundry, cooking and hygiene are offered:

The first step is to discriminate between essentials and nonessentials, and it is a fine art these days to correct our values.

Cooperation is a necessity. The children's help is their right and our privilege, for training prevents later handicaps. Early training to clean shoes before entering the house and putting things in their places, etc., are habits too good for anyone to miss.

### Housework

Housework is eased and shortened by the use of labor-saving devices which are being added to from time to time, as the fireless cooker, bread mixer, food chopper, vacuum cleaner (\$5 hand power, practical and satisfactory and an electric is rented for housecleaning time), dustless mop for the floors which are all hardwood, painted, or linoleum covered; dustless dusters and a variety of cleaning brushes. Bon Ami is used for windows and mirrors and kerosene for laundry trays, bath, sink, lavatories, etc. Have a high stool to sit on for some of the stand-up work.

Newspapers would require a chapter to enumerate their strength-saving daily uses. Spread on work table, etc., saving litter and soil, and used dry or damp they quickly prepare the dishes for washing. But my greatest labor-saving device is a pencil and paper.

"Knowing what to do next" sounds the keynote to success. A schedule for the day's plans, shopping list, menus, packing list for traveling, camping outfits, etc. Some of these are started long ahead, growing as items come to mind. Confusion is avoided, inconveniences minimized, and the delight of checking off as keen as childhood joys.

Summer days find many things about the house that may be set away to advantage, giving a cooler appearance and lessening cleaning and dusting.

### Laundry

Laundry economy of strength is achieved largely by wearing clothing suitable for occasions, work clothes for work and the dainty apparel for leisure. White goods put on in cold suds (borax added) and brought slowly to boiling are nearly washed. Naptha soap rubbed on soiled parts of colored goods soaked 15 or 20 minutes practically wash themselves.

Ironing is restricted to just the "fancy articles," for more and more I am deciding this and that is better for having the sunshine folded into it from the clothesline. They make a neat appearance, too, having been hung evenly. The change from ironing when the baking is going on to the comfort of an electric iron is true economy. I should certainly try a self-heating iron if we did not have electricity.

### Cooking

Cooking is a field that affords opportunity for saving strength, at the same time gaining increased strength for the entire family, for the simpler methods of preparing food are invariably the more wholesome. The superiority of homemade bread repays the labor, but in the rush of deciduous fruit harvest a baking or two is skipped and we enjoy the crisp little "loaves" of shredded wheat. Purchased by the case they are in daily use. A hearty and enjoyable meal is English plum duff, which is a boiled, plain, light dumpling with raisins added and served with butter or lemon sauce. Without the raisins it may be served with gravy, fruit sauce or jam. This is easily prepared and a change from the meat and vegetable dinner.

A boiled or baked main dish of a combination of vegetables and rice with a little cooking oil blends the flavors into a savory result and much easier than separately cooking ingredients. Our ranch provides the full California list of delicious fruit used daily. Simply prepared custards, pudding of well cooked cereals with raisins, brown bread and steamed or baked breads with raisins, dates, etc., are preferred to pastries, rich cakes, fried crullers, etc., for home desserts and the lunch boxes.

### Hygiene

Hygiene relates to the saving of strength by preventive measures. Keeping the family well is preferred to nursing them back to health, and the responsibility of either rests with the house mother. Proper selection and preparation of food, the liberal use of fresh air and water and the right mental attitude are investments to compare well in loyalty to purchase of Liberty bonds.

Enjoy the stimulus of growing a new fruit, flower, or vegetable in the garden, the inspiration of good books and magazines and a fresh outside interest by helping someone less favored. If your "neighbor" does not need, a public institution such as the county hospital or children's training school offers opportunity. The postal zone of three pounds for seven cents for a gift of fruit or flowers is a privilege. The refreshment and uplift from music in the home should not be neglected and need not be denied when a "record" places the artistic ability at our pleasure. There is rest in the change to a piece of knitting for the Navy League or stitches for the Red Cross. Lighten the burden before the last straw—does this mean to sell the second cow or decrease the flock of poultry? At night when we pray let us leave our cares, so that sleep may bring its intended refreshment. The wise man of old taught us: "As a man thinketh in his heart, so is he."

Vacation is an important factor, the happiest being in inverse ratio to their cost. A roll of canvas on the running-board of a Ford is the open sesame to indescribable delights in mountains or by the sea. We do not shrink from spending and being spent for a true value—for we die into life.

Let us remember we are not facing increased burdens alone, but increased and undreamed of opportunities and privileges. Realizing this, may we welcome every opportunity to "save our strength" so that we women shall be prepared not to do our bit, but our best.

### SAVING STRENGTH

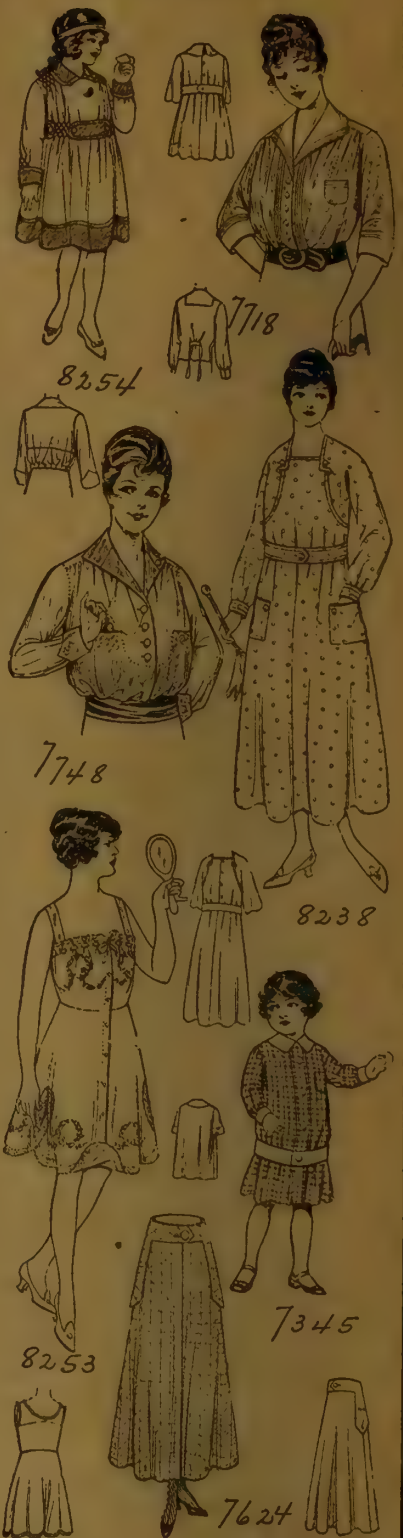
Written for California Cultivator  
By Mrs. A. C. Pickett, Riverside



NOTHING is more necessary to the making of an ideal home than a happy, clear-headed woman. Therefore anything to make her such is important. A tired, cross mother is more than apt to have a tired, cross family. The remark is often heard, "I know I need a rest during the day, but I am too busy to take it."

In my own experience I have found that the more I have to do the more I need this rest. For years I have been as busy as a woman well could be, but I have proven that my rest and short nap some time during the day pays. Much more can be accom-

## The Cultivator Patterns



8254—Children's Dress. Cut in sizes 4, 6, 8 and 10 years. The dress is cut in one piece and closes at the back.

7718—Ladies' Waist. Cut in sizes 36 to 44 inches bust measure. Any of the pretty silk materials can be used for this waist.

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8238—Ladies' Apron. Cut in sizes 36 to 44 inches bust measure. The apron has raglan sleeves in long or short length.

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### HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send ten cents in coin or (1 or 2c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department  
**California Cultivator**  
Los Angeles



plished and a happier household results. A comfortable position, comfortable and loose clothing, no shoes, out of hearing of the telephone, if possible, and a family understanding that "mother is resting" all help to obtain the relaxation and repose desired.

If there is a baby let its nap time be the mother's rest time. "Oh, but there are so many things to do while baby sleeps!" Yes, but the most profitable thing to do then is to rest.

My mother was the most uniformly cheerful woman I ever knew. She was the soul of hospitality and did much for those "without her gates." Her daily home tasks were not easy, nor was she very strong, but she made a study of her housekeeping, working intelligently, making her brain save both money and strength. She never stood when she could sit; she had a regular time for rest every day and if weary before a task was completed she would stop, lie flat down for a few minutes' rest, then resume the interrupted work. She was always the best of company for her family, making quite a game of the work allotted to the children. Her hearty laugh rang through the house, infecting the whole family, even the neighbors.

She appeared to enjoy her daily work, even that part which we are prone to name "drudgery." She claimed that as much outdoor work as possible had contributed to her good health. Every simple pleasure was magnified and every unpleasantness minimized.

"Efficiency is doing things the best, easiest and quickest way," regardless of Mrs. Grundy. This Mrs. Grundy interferes terribly with our conservation of strength. What will "they" say or think if our housekeeping is that awful thing, "slack"? Or if more than half of the washings are never ironed, if rose leaves strew the porches, if the children's clothing is very simple, if the meals are also very simple, etc. The old adage, "Whatever is worth doing is worth doing well," is sometimes dangerous advice to a housekeeper whose strength and time are limited. It is wiser not to do everything the best we know how. Let it be the best we can do under the circumstances. It is well for some to learn the "art of slighting."

Anything that helps to make and keep a house a home is not drudgery. Let us cut that word out of our thought, and let us make a courageous effort to eliminate from our program self pity, worry and hurry, those enemies to health, strength and happiness.

#### SOME WAYS TO SAVE STRENGTH

Written for California Cultivator  
By G. M. S., El Cajon

**O**NE of the ways I save my strength is in the manner of hanging my washing on the line to save a great deal of ironing.

I hang all skirts by the belt, doubled and perfectly straight; all shirts are hung by the shoulders, as well as shirtwaists. Everything, in fact, is hung as straight as it is possible, and then when taken in I am very careful not to wrinkle, but as far as possible fold everything as it goes into the basket. I never iron stockings, as I have seen so many frail women do, but fold flat and press into shape with my hands. Towels and everyday napkins are pressed with the hands in the same way. In fact, my everyday napkins are made of cotton crepe with a narrow fringe, and one set of them with lunch cloth, given me by a friend, has little designs in cross-stitch and is very much admired whenever I use them for company, as I frequently do.

Then another thing I do saves innumerable motions. I have a smooth board, which could be painted, only mine isn't at present, about 12 inches wide and two feet long; in fact, I have three of them and have driven in just far enough to hold firmly upright, some long slim nails, about three inches, I think. These I have driven three inches apart across the width and an inch and a half apart the other way. In these spaces I drain all the plates, saucers, platters and sauce dishes out of the hot rinse water. This saves not only strength but wear on dish towels, also the washing of the towels so often. By the time I have cutlery wiped and

other things cleared away the dishes are dry and I can put them in their proper places. If I am very busy and they are not quite dry I leave them till I set the table for the next meal. In case there are any flies around I throw a piece of white netting I have for the purpose over them. You will really be surprised to find how much time as well as strength is saved by these two methods.

#### SAVING STRENGTH

Written for California Cultivator  
By R. M.

**A**FTER the boy came mother's strength had to be saved in every way, and one she found most helpful was this: While nursing the baby rest his head on a pillow arranged in the chair beside you instead of holding his head on your arm. The difference is wonderful, and he is exactly as comfortable.

Another help is to always sit whenever possible. My kitchen stool is a great saver of tired feet.

This one "daddy" suggested: Wash the dishes but once each day instead of the usual three times. This would not be possible in a large family, and it goes quite contrary to my New England training, but it does save time and strength. And then sit while you are doing it even this once. And this last is even more contrary to all hard and fast laws of good housekeeping, but much help: I never wipe the china at all; simply stack in a wire drainer and scald, letting the sun do the rest. Then carry the drainer into the dining room just before the next meal and set the table from it, thus saving the putting away and getting out of the dishes—quite an item if one stops to think.

Some of these I don't do when there is company. I usually let them help enough so it is not necessary anyway, but in case they should get too wise I will only sign myself R. M.

#### CALLING THE CHILDREN

Written for California Cultivator  
By Mrs. E. M. Bradley, Hemet.

**M**Y pet economy is not one of dollars and cents, but a saving of steps and energy. In the country, where the children are free to wander over a good deal of space, I found I used many steps and wasted breath and voice when I wanted one or all of them. Sometimes in the midst of a noisy outdoor game I called many times before any of them heard me. Now I have a shrill tin whistle fastened to my dress, and each child has a signal. A series of short blasts means all, one blast is for the oldest, two for the second, and so on. I can summon them from the door, and the whistle never fails to attract their attention.

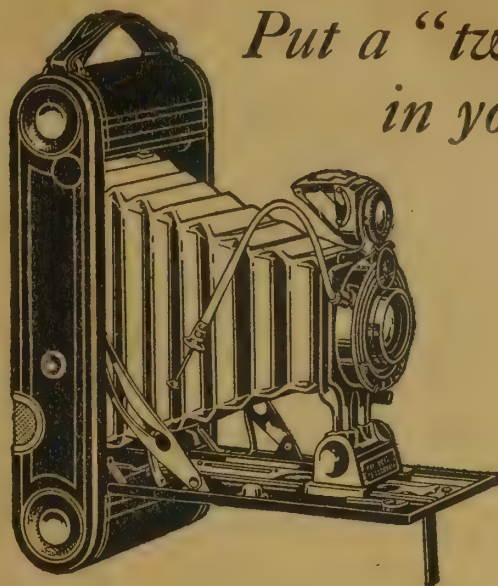
#### A FAST IS GOOD MEDICINE

Written for California Cultivator  
By Dora L. Mason

My greatest strength and labor-saver has been the conviction that to tempt a jaded appetite is worse than foolish; it is positively wrong. The ordinary person in ordinary health should do justice to an ordinary meal. Freak cravings and expensive tastes are taboo in my household. Highly complex concoctions and elaborately embellished desserts should never intrude upon the busy woman's time. The gospel of the dining room—a fast is as good as a physic. If appetite lags for a day or for a meal, why omit the next one, live on drafts of cool water and go on your way rejoicing.

#### SALAD DRESSINGS

Here is a good salad dressing that keeps: Take a half dozen eggs, beat well and add a half cup of mild vinegar, stirring it in gradually and put over hot water to cook. When smooth and thick the mixture will look like mayonnaise. If beaten with an egg whisk while cooking, the dressing is smoother. Put into a fruit jar and set in a cool place. When needed take out two or three tablespoons, add sugar, salt, red pepper, paprika, mustard and cream to thin. If making a fruit salad, omit the mustard and pepper. This is so easy to make and such a comfort to have that every farmer's wife should keep a jar on



Put a "two-C"  
in your pocket.

It fits.

## The 2C KODAK Jr.

For pictures of the somewhat elongated post-card shape, but just a trifle smaller,—2 7/8 x 4 7/8 inches. And this elongated shape in the picture makes possible a slim, thin camera, that fits the pocket.

The 2C Autographic Kodak Junior has a capacity of ten exposures without reloading, it has the Kodak Ball Bearing shutter with cable release, working at speeds of 1/25, 1/50 and 1/100 of a second and of course the usual "bulb" and time actions. The camera has brilliant reversible finder, two tripod sockets, black leather bellows, is covered with fine grain leather, is well made and beautifully finished. It is autographic, of course, and is extremely simple to use.

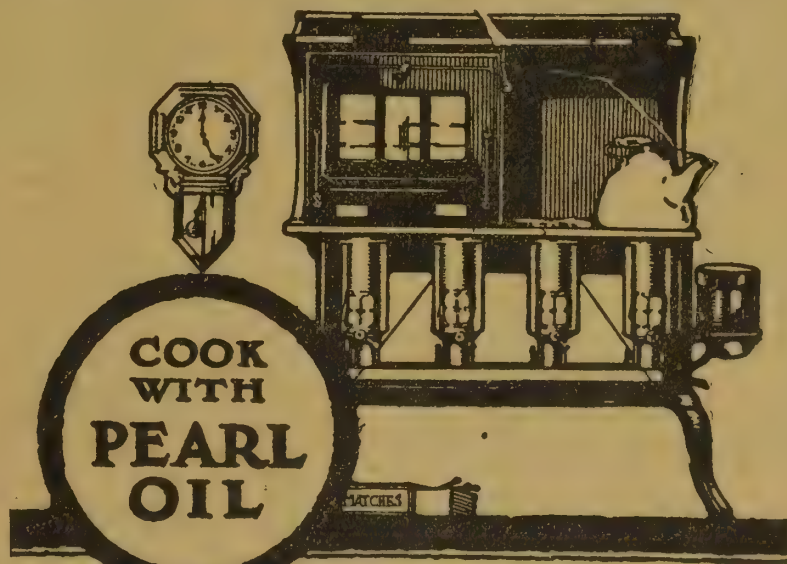
Furnished with a choice of lens equipment as listed below:

No. 2C Autographic Kodak Jr., meniscus achromatic lens,	\$12.00
Ditto, with Rapid Rectilinear lens,	14.00
Ditto, with Kodak Anastigmat lens, f. 7.7,	19.00

All Dealers.

EASTMAN KODAK COMPANY,

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## CONVENIENCE

All the convenience of gas. No waiting for the fire to burn up. Meals in a jiffy, and a cool kitchen all the time.

Bakes, broils, roasts, toasts. Better cooking because of the steady, evenly-distributed heat. More convenient than a wood or coal stove for all the year 'round cooking—and more economical.

The long blue chimneys prevent all smoke and smell.

In 1, 2, 3 and 4 burner sizes, with or without ovens. Also cabinet models. Ask your dealer today.

## NEW PERFECTION OIL COOK-STOVE

STANDARD OIL COMPANY  
(California)



hand.

For potato salad: Melt one tablespoon butter in an enameled saucepan and beat in one egg; mix one tablespoon sugar, one of flour, one teaspoon salt, one of pepper and one of ground mustard and add to the egg mixture; fill a pint cup half full of vinegar and fill with boiling water; after stirring the first mixture smooth, add the vinegar and water and heat, stirring constantly, until it thickens; when ready to use, thin with cream to taste. It will keep some time, and is excellent with cold boiled potatoes sliced thin or chopped, with raw onion and boiled eggs.

For lettuce or cabbage, shredded or chopped: Fill a cup half full of sugar

and cover with vinegar; stir until the vinegar takes up all the sugar it will hold (about half), then fill the cup with sweet cream, stir and use immediately.

For beets: In a pint enameled cup, heat one-half pint vinegar with one tablespoon of butter, one of sugar, one teaspoon of salt and one of pepper; stir until boiling hot and well mixed; if too sharp, reduce with hot water; use immediately.

#### FRENCH FRIED ONIONS

Peel onions, cut in one-fourth inch slices, and separate into rings. Dip in milk, drain and dip in flour. Fry in deep fat and sprinkle with salt. These are fine with beefsteak.

#### CUTTING BIAS STRIPS

Instead of laboriously cutting eight or ten bias strips and then sewing them together, try this method, says Beryl Dickson of the Colorado Agricultural College:

Get the large piece on the bias from selvage to selvage. Then simply mark the strips off with ruler and pencil or chalk. Sew selvages together, letting top of piece on one selvage come even with the first pencilled line on the other selvage. Cut on the continuous line thus formed. The result is one long, bias strip with joinings already made.

Many people do not know of the prepared bias tapes with turned edges that may be bought at almost any dry goods store. The tapes come in various widths, ranging from one-quarter inch to an inch or more. They may be had in lawn or cambric and in solid color or striped gingham and percales. They are much truer than those made at home and make neat finishes on wash garments.

#### CORN IN BREAD

##### Wheat and Corn Bread

Enough for four loaves—Two and a quarter pounds or two and a quarter scant quarts sifted bread flour, three-quarters of pound or two and two-thirds cups corn meal, two cakes compressed yeast, three level tablespoons sugar, one and one-half level tablespoons salt, about one quart liquid (water, milk or equal parts milk and water), three level tablespoons shortening if desired.

If milk is used it should be scalded and then cooled until lukewarm. Less yeast may be used, but more time for rising will then be required.

Make a sponge with two pounds of white flour, the yeast, salt, sugar and the lukewarm liquid. Cover and set in a moderately warm place to rise, where it will be free from drafts and where the temperature will be between 80 degrees and 88 degrees Fahrenheit. When the sponge has become very light, which should occur within two hours, beat it up thoroughly, add the softened shortening, if this is to be used, and gradually work in the remainder of the wheat flour which has been sifted with the corn meal. Knead the mixture until a smooth and elastic dough has been formed which is fairly soft, but not sticky. If the dough is too stiff or too soft, add a little more water or flour as required, kneading well after each addition. Cover and set back to rise again until double in volume, which will require from one to two hours. Knead lightly, divide into three or four approximately equal portions, reserving a small ball of dough for an "indicator." Place this ball of dough in a small jelly glass having straight sides, which has been slightly warmed. Note the volume of dough in the tumbler and mark the glass at twice this volume.

Mold the loaves and place in slightly warmed and greased pans. Place these, together with the glass containing the "indicator," in the same warm place and let rise until the "indicator" shows that it has just doubled in volume. Then place the loaves in the oven, which should be at a good steady heat (400 degrees to 425 degrees Fahrenheit), and bake 45 to 50 minutes.

##### Wheat and Corn Bread No. 2

Same proportions as for No. 1 except the liquid. The corn meal in this method is cooked.

Put two and two-thirds cups (three-quarters pound) of corn meal into double boiler. Add to the meal three and one-half cups of cold water; mix thoroughly and bring to boiling point, stirring frequently. Allow meal to steam at least ten minutes, then cool until lukewarm. To this scalded and cooled meal add salt, sugar, one cup of flour and the yeast rubbed smooth and mixed with two cups of lukewarm water. Mix thoroughly, cover and set in moderately warm place to rise as directed in method No. 1. When this batter (or sponge) has become very light, which will require about two hours, beat thoroughly, add softened shortening, if it is to be used, and the remainder of the white flour (two pounds or quarts). Knead thoroughly until it is smooth and elastic. Should the dough be either too stiff or too soft add water or flour, a little at a

time, working it in thoroughly, until the dough is of the proper consistency. Cover and set back in its warm place to rise until double in bulk. Then mold into loaves and finish as directed under method No. 1.

Health and happiness are essential to contented living and to be contented and happy should be more desired than to acquire success and wealth.

## The Iceless Cooler

(Stephenson Patent)  
NO ICE USED



Requires no ice and will keep your butter, meat and vegetables COOL AND SWEET. Has ample room for all requirements of a large family. (Special sizes made to order). Write for particulars and prices.

L. ANDERSON CO., MFRS., Martinez, Cal.



No. 1 No. 2

#### Attractive Gingham

### Frocks at \$1.95

- "DOTTY DIMPLE" dresses—models which women will find practical for wear around home.
- Made of fine gingham in plain shades, stripes and plaids of nearly every color and color combination.
- We picture two of three styles. No. 1, in pretty plaid, has wide girdle of white galatea supported by shoulder straps of gingham, and big novelty pockets. Open front style.
- No. 2, a V-neck slipover model, is in plain colors and stripes, with collar, girdle and V-shape patch pockets of contrasting color.
- A third has vestee of white pique. Some of the dresses have embroidery on collar and cuffs.
- All cut full and well made. In sizes 26 to 44.
- We pay parcel postage on these dresses.
- You'll find it satisfactory to buy from The Broadway Department Store by mail. We guarantee every purchase and will cheerfully exchange sizes and adjust errors.
- Experienced shoppers will give your order the same careful attention which you yourself would receive if you came to the store.
- Write for quotations on Women's Overalls, Khaki, Outing Apparel, or, in fact, for anything you may require in dry goods or household needs.
- Ask for information regarding our big July Furniture Sale.

ARTHUR LETTIS  
**The Broadway Department Store**  
LOS ANGELES, CALIFORNIA

## Save 1-2 on Fuel



**CHEAPEST HEAT YOU CAN BUY**  
The Stewert Oil Burner burns distillate costing only 6 1/2 cents per gallon in cook stoves, heaters, furnaces, pasteurizers, boilers, etc. Absolutely safe, odorless, very convenient and low priced. **MAKES HEAT AT HALF WHAT WOOD AND COAL COSTS.** Install it yourself. Write for circular and prices on different sizes, address Stewert Oil Burner Co., 710 North Main St., Los Angeles.

## ANNUAL JULY Blanket Sale

For lack of space, detailed prices cannot be quoted upon odds and ends, sample, soiled and single blankets; the following are the reductions on our regular lines. In the lot were a number of blankets with slight imperfections, which we retained, where such imperfections did not interfere with warmth and service.

### White, Plaid and Colored Blankets

\$3.75	\$3.10	\$4.50	\$3.65
\$6.50	\$4.90	\$7.50	\$5.90
\$8.00	\$6.90	\$9.00	\$7.90
\$10.00	\$7.85	\$12.00	\$9.75
\$13.50	\$11.15	\$15.00	\$12.25
\$17.50	\$13.50	\$18.50	\$14.75
\$22.50	\$16.50	\$23.50	\$17.00
\$25.00	\$18.50	\$35.00	\$27.50

## Coulter Dry Goods Co.

215-229 So. Broadway 224-228 So. Hill St.  
LOS ANGELES, CAL.

Make Coulter's Your Headquarters for Shopping  
When in Los Angeles for the Week-end Trip.

## Hot Weather Coming — Also Ants

# KELLOGG'S ANT PASTE

### MAKES ANTS DISAPPEAR



The season is approaching when ant troubles are the worst. Don't suffer longer when a 25c bottle of Kellogg's Ant Paste will drive every ant out of your place in 24 hours. Insist on the original—Kellogg's—with the rattle-cap package.

25¢ AT ALL DRUGGISTS



## THE RETREAT OF THE ANTS

## Get the Light and Power You Need

from your own generating plant

The UNI-ELECTRIC lighting system will put electric light in every room in your house, will run your sewing machine, electric iron, vacuum cleaner, churn, washing machine, etc.

It Is Economical and Efficient—Always Ready

Operates with a silent gasoline engine of high speed, generator and automatic governor. Uses standard globes and fixtures. Is easy to install.

Can be used for one or more houses, barns, sheds, work shop and any place where you need light and power.

Write today for illustrated catalogue to

**Karl A. Hedberg**

104-106 Clay Street,

San Francisco, Cal.





Los Angeles Market

LOS ANGELES, July 3, 1917.

BUTTER

Wholesale prices:  
Rets. five days ending July 2, 287,970  
California extra creamery ..... 37  
Extr. Cry. Exch. past wk.  
June ..... 27 28 29 30 Jly.2  
'17 ..... 87 87 87 87 87

CHEESE

Brokers' prices:  
California fresh, lb. .... 24  
Oregon Longhorn ..... 27 1/2  
Tillamook Trip. .... 26

EGGS

Exchange quotations:  
Rets. five days ending July 2, 3,370  
Fresh extras ..... 34 1/2  
Case count ..... 33 1/2  
Pullet ..... 31  
Fresh Ranch Exch. past wk.  
June ..... 27 28 29 30 Jly.2  
'17 ..... 33 34 34 1/2 34 1/2 34 1/2

POULTRY

We quote from growers:  
Broilers ..... 18@20  
Fryers ..... 22  
Hens—Leghorns 10, Heavy Col'd ..... 20  
Roasters ..... 25  
Ducks, lb. .... 15@17  
Squabs, doz. .... 3.00@4.00  
Roosters, old ..... 10  
Turkeys ..... 21@24

LIVE STOCK

We quote cwt. f.o.b. L. A.  
Cattle—  
Beef steers, av. 1000 to 1100 lbs. .... 9.00  
Heifers, good ..... 7.00  
Cows, good ..... 6.50@7.00  
Fair ..... 6.00@6.50  
HOGS—  
Av. 125 lbs. .... 12.50  
Av. 150 lbs. .... 13.50  
Av. 175-200 lbs. .... 14.00@14.50  
Rough, docked 20 lbs.; piggy sows, 40  
lbs., stags, 40 per cent.  
Prime wethers ..... 9.50@10.00  
Ewes ..... 9.00@9.50  
Lams ..... 13.00  
Yearlings ..... 10.00@10.50

POTATOES

Wholesale selling price:  
New, lug ..... 1.20@1.25

ONIONS

Wholesale selling price:  
Crystal Wax, cr. .... 1.20@1.35  
Bermuda, cwt. .... 1.75  
Pickling, cr. .... 2.00

VEGETABLES

Wholesale prices:  
Artichokes, doz. .... 50@75  
Beans—Wax ..... 6@6 1/2  
Limas, lb. .... 9  
Ky. Wonder ..... 5 1/2@6  
Beets, sk. .... 2.00  
Cabbage, lb. .... 1 1/2  
Carrots, sk. .... 2.50  
Cauliflower, doz. .... 1.00  
Celery, doz. .... 75@1.35  
Corn, lug ..... 1.00  
Cucumbers, lug ..... 75@80  
Egg Plant, lb. .... 18@20  
Horseradish, rt. lb. .... 16@18  
Lettuce, doz. .... 30  
Leeks, doz. .... 30  
Mint ..... 40  
Onions, green, doz. .... 25  
Okra, lb. .... 12@15  
Peas, lb., Telephone ..... 6@6 1/2  
Peppers, Chili, lb., 25, Bell ..... 15@20  
Parsnips, doz. .... 50  
Parsley, doz. .... 20  
Radishes ..... 17 1/2  
Rhubarb—Strawberry ..... 1.25  
Romaine, doz. .... 45  
Spinach, doz. .... 17 1/2@20  
Squash, Summer, cr. .... 75  
Turnips, doz. .... 35  
Tomatoes, cr. .... 1.30@1.50

FRUITS

Wholesale prices:  
Apples—  
Newtown Pippin, Yellow ..... 3.00  
White Astrachan, lug ..... 1.40  
Avocados, doz. .... 6.00@12.00  
Apricots, lb. .... 3@4  
Bananas, lb. .... 5 1/2@6 1/2  
Cantaloupes—  
Standard ..... 1.65@1.90  
Pony ..... 1.50@1.75  
Special ..... 65@75  
Honey Dew ..... 1.95@2.00  
Cherries, lb. .... 10@11  
Crab Apples, lug ..... 1.25  
Currants, cr. .... 1.50  
Figs, box ..... 75  
Loganberries, bskt. .... 5@6  
Loquats, lb. .... 7 1/2  
Peaches, lug ..... 1.50@2.00  
Plums, lb. .... 4 1/2@5  
Blackberries, basket ..... 6  
Raspberries, basket ..... 7@8  
Gooseberries, lb. .... 10  
Strawberries, basket ..... 6  
Pineapples, lb. .... 8  
Watermelon, lb. .... 2 1/2@3

CITRUS

Lemons ..... 4.00@4.75  
Juice ..... 2.25  
Grapefruit ..... 3.00@3.25  
Limes, basket ..... 1.00  
Valencias ..... 3.00@3.75

HONEY

Wholesale prices:  
Extr. White 11; W.W. .... 12 1/2  
Comb., case, W. 3.75; W.W. case ..... 4.00

NUTS

Peanuts, raw ..... 12  
Pine Nuts ..... 20  
Pecans ..... 19

BEANS

Wholesale Prices:  
Lady Washington ..... 13.50  
Limas ..... 13.50  
Pinks ..... 11.00  
Manchurian Reds ..... 11.00  
Baby Mex. .... 9.00  
Garbanzos ..... 9.00@10.00  
Small White ..... 13.50  
Blackeyes ..... 8.00  
Tepary ..... 7.00  
Lentils ..... 18.00

HAY  
Quotations by Nichols-Loomis Com-  
pany. Wholesale prices to grower f.o.b.  
L. A. carlots.  
Tame Oat ..... 17.00@19.00  
Volunteer Oat ..... 13.00@15.00  
Wheat ..... 13.00@16.00  
Barley ..... 15.00@18.00  
Alfalfa ..... 14.00@17.00  
Straw ..... 8.00

GRAIN AND FEEDSTUFFS

Wholesale cwt. f.o.b. L. A.  
Alfalfa Meal ..... 1.65  
Alfalfa Molasses ..... 1.75  
Barley, Rolled ..... 2.45  
Barley, Recleaned, Whole ..... 2.50  
Barley, Hulled ..... 2.95  
Beet Pulp ..... 1.80  
Bran, Heavy ..... 2.95  
Cocoanut Meal ..... 2.30  
Cottonseed Meal ..... 2.50  
Corn, Yellow ..... 3.90  
Corn, White ..... 4.00  
Corn, Cracked ..... 3.95  
Corn, Feed Meal ..... 4.00  
Corn, Egyptian ..... 3.90  
Middlings ..... 2.85  
Milo ..... 3.90  
Oat Chop ..... 1.90  
Oats, White ..... 2.70  
Oats, Rolled White ..... 2.75  
Oats, Hulled ..... 4.70  
Oats, Rolled Chicken Groats ..... 4.70  
Oatcake Meal ..... 3.30  
Wheat, No. 1 ..... 4.10@4.15  
Wheat, Cracked, No. 1 ..... 4.50  
Rye ..... 4.10  
Blood Meal ..... 5.10@5.20  
Bone, Green ..... 2.65@2.75  
Bone, Dry ..... 2.85@2.95  
Charcoal, 50-lb. sk. .... 2.55@2.65  
Clam Shell ..... 70@95  
Grit, Granite ..... 65@75  
Oyster Shell ..... 1.25@1.35  
Sunflower Seed ..... 4.10@4.20  
Soya Bean Meal ..... 3.30@3.40  
Scratch Feed ..... 3.80@3.90

San Francisco Markets

SAN FRANCISCO, July 2, 1917.

BUTTER

Dairy Exchange quotations, lb.:  
Rets., five days ending June 30, 402,400  
lbs.  
Fresh extras ..... 35 1/2  
Prime firsts ..... 35

CHEESE

Dairy Exchange quotations:  
Cal. Flats ..... 19 1/2 Y. Am. .... 24

EGGS

Rets., five days ending June 30, 16,703  
cs.  
Dairy Exchange quotations:  
Fresh extras ..... 32  
Firsts ..... 31  
Select Pullets ..... 29  
Firsts ..... 28

POULTRY

We quote from producers, lb.  
Hens, large, 23@25, Leghorns ..... 17@18  
Small Colored ..... 20@22  
Fryers, lb. .... 26@28  
Broilers ..... 22@26  
Roosters ..... 30@33  
Squabs, doz. .... 2.00@3.50  
Ducks ..... 16@18  
Geese ..... 19@20  
Belgian Hares, live 11@12; dr. .... 15@16

LIVE STOCK

Prices gross weight:  
Cattle:  
The following prices are for grass fed  
stock. Hay fed bring 1/2 to 3/4 c more.  
Steers, lb., 6 1/2@8 1/4; cows and heifers,  
4@7; calves, 7@9 1/2  
Sheep:  
Wethers, 11; shorn, 1 1/2@2c less; ewes,  
10; lamb, lb., 12@12 1/2.  
Hogs:  
Hard grain fed, wt. 100 to 150 lbs., 13;  
150 to 300 lbs., 14 1/4@15; 300 to 400 lbs.,  
14 1/4@14 1/2.

POTATOES

Wholesale selling prices at wharf:  
Burbank, old, cwt. .... 2.50@2.75  
New, lb. .... 2@2 1/2

ONIONS

Wholesale selling price on wharf:  
New Red, sk. .... 85@90  
Silverskin ..... 85@110  
New Green, bx. .... 50@75  
Garlic, lb., New ..... 2 1/2@4

VEGETABLES

Wholesale selling price:  
Asparagus, Fy. Wh. lb. .... 6@7  
Beans, String, lb., 9@10; Limas ..... 6@9  
Ky. Wonder ..... 5@6  
Corn, Green, doz. .... 1.50@1.75  
Brentwood, 30@40; Winter, sk. 1.50@1.75  
Cucumbers, lug ..... 60@75  
Okra, lb. .... 12 1/2@15  
Egg Plant, lb. .... 1.75@2.00  
Peas, Halfmoon, sk. .... 1.75@2.00  
Peppers, Bell, 15@20; Chili ..... 1.25@1.50  
Squash, Summer, bx. .... 50@60  
Italian, bx. .... 65@75  
Tomatoes, bx.:  
Merced ..... 1.00@1.25  
Southern

FRESH FRUIT

Wholesale selling price:  
Apples—  
New, Green ..... 80@85  
Red Astrachan ..... 40@50  
Gravenstein, bx. .... 2.00  
Apricots, crate ..... 90@1.25  
Bananas, bunch ..... 1.25@2.50  
Cantaloupes—  
Standard ..... 1.25@1.75  
Pony ..... 1.00@1.25  
Honey Dew ..... 2.00@2.25  
Cherries, dr. .... 75@1.00  
Black, lb. .... 5@9  
Bings ..... 9@10  
Royal Anne ..... 6@8  
Figs, Mission, bx. .... 75@1.00  
Currants, chest ..... 8.50@5.00  
Strawberries, chest ..... 4.50@7.00  
Peaches, cr. .... 75@1.00  
Pears, bx.  
Dearborn & Lawson ..... 75@1.00  
Plums, Tragedy and Santa Rosa,  
cr. .... 1.00@1.25

Clyman and Climax, cr. .... 90@1.00  
Blackberries, chest ..... 4.50@5.00  
Gooseberries, lb. .... 5@10  
Loganberries, chest ..... 4.00@5.50  
Pineapples, doz. .... 3.00@4.00  
Raspberries, chest ..... 5.00@7.00  
Watermelons, lb. .... 2 1/2@3 1/2

CITRUS FRUIT

Wholesale selling price:  
Lemons ..... 3.50@6.00  
Lemonettes ..... 1.50@2.50  
Limes, Mex., cs. .... 4.50@5.50  
Grapefruit ..... 2.50@4.00

BEANS

Jobbers' prices, cwt. recleaned:  
Limas ..... 12.50@13.50  
Bayous ..... 9.50@10.25  
Garbanzos ..... 6.25@6.50  
Small White ..... 14.00@15.00  
Mexican Red ..... 10.00@11.00  
Large White ..... 14.00@15.00  
Pinks ..... 10.00@10.25  
Black Eyes ..... 9.00@9.50  
Cranberry ..... 10@11.00

NUTS

Peanuts, Jap, 7@7 1/2; Eastern ..... 7 1/2  
Pecans ..... 19@20  
Pine Nuts ..... 15@17

HONEY

Jobbers' prices:  
Comb, lb., W.W., 13@15; A., 8@10c;  
Lt. A. .... 11@12  
Ex. Fy. W. lb. .... 13c; Lt. A. .... 11  
Beeswax, lb. .... 38

RICE

Price to growers:  
Cal. Rough cwt. .... 3.00@3.25  
Lower Grades ..... 2.00@2.75

HAY

Under date of June 30 Scott, Magner  
& Miller say:

Receipts past week 1997 tons, last week  
1511 tons. Entire receipts have been of  
new crop, old hay having been absolutely  
cleaned up. Most of the hay which has  
arrived to date has been from small pur-  
chases made by dealers who were com-  
pelled to go into the country and start  
some of the new hay moving on account  
of the scarcity and high prices of the old  
crop. Farmers have been holding at  
prices far in excess of normal. Alfalfa  
shows practically no change with re-  
ceipts small. Straw is being offered from  
many outside sections but demand is  
light. Prices quoted below are on new  
hay only.

We quote today wholesale prices in  
carload lots as appear from dealers'  
transfers upon the market. For prices  
to consumers, charges of cartage, com-  
mission and handling expenses must be  
added.

We quote today wholesale prices in  
carload lots as appear from dealers'  
transfers upon the market. For prices  
to consumers charges of cartage, com-  
mission and handling expenses must be  
added.

Wheat, Fy, lt. bales ..... 20.00@21.00  
Wheat or Wh. and Oat, No. 1.19.00@19.50  
Wheat or Wh. and Oat, No. 2.17.50@18.00  
Oats, Choice Tame ..... 19.00  
Other Tame ..... 16.00@18.00  
Wild Oat ..... 14.00@16.00  
Barley ..... 15.00@16.50  
Alfalfa, first cutting ..... 14.00@15.50  
Stock Hay, new ..... 10.50@12.00  
No. 1 Barley Straw, Baled ..... 1.00@1.10

GRAIN

Grain Exchange prices, cti.  
Wheat—Bluestem ..... 4.20@4.25  
Corn, California Yellow ..... 3.25@3.40  
Corn, Eastern Yellow ..... 3.25@3.30  
Corn, Egyptian White ..... 3.60@3.65  
Oats, White Feed ..... 2.30@2.35  
Barley, Feed ..... 2.10@2.20

FEEDSTUFF

Wholesale prices per ton:  
Bran ..... 37.00@38.00  
Cornmeal ..... 73.00@74.00  
Cracked Corn ..... 73.00@74.00  
Middlings ..... 48.00@49.00  
Alfalfa Meal, carlots ..... 33.00@38.50  
Shorts ..... 41.00@42.00  
Rolled Barley ..... 44.00@45.00

SEEDS

Prices in round lots, lb.:  
Millet, recleaned ..... 3 1/4@4  
Alfalfa ..... 20@21  
Flax ..... 5@6

Citrus Fruit Market

LOS ANGELES, July 3, 1917.

Valencias are commanding exception-  
ally long prices in all markets. Lemons  
are in keen demand.

Shipments

Shipments of oranges from Southern  
California since November 1, 1916, 31,871  
cars; lemons, 6,044; total, 37,915; to same  
date last season, oranges 25,249; lemons,  
4,863; total, 30,112. From Central Cali-  
fornia to date this season oranges, 4755;  
lemons, 154; total, 4909; to same date last  
season, oranges 5390; lemons, 146; total,  
5536. From Northern California to date  
this season, oranges, 845; to same date  
last season, oranges, 610; lemons, 1.

FROM THE AUCTION

June 27  
New York: 37 oranges, 2 lem., Val.,  
\$2.75@4.70; Sweets, \$2.85@3.00; St. Mich-  
aels, \$2.50@3.35.  
Boston: 28 cars. Val., \$3.30@4.75;  
lem., \$4.35@5.70.  
Philadelphia: 11 cars. Val., \$2.55@  
4.95; lem., \$3.40.

June 28

New York: 40 oranges. Val., \$2.35@  
4.64; Sweets, \$2.45@3.35.  
Pittsburg: 5 cars. Val., \$3.15@3.90.

June 29

New York: 26 oranges, 1 lem. Val.,  
\$3.25@4.50; lem., \$3.70@5.05.  
St. Louis: 10 cars. Val., \$3.05@2.95;  
lem., \$4.95@6.15.  
Boston: 21 cars. Val., \$1.95@4.50;  
Seedlings, \$1.50@2.25; lem., \$3.05@5.80.

July 2

New York: 47 oranges, 3 lem. Val.,  
\$2.25@4.55; Nav., \$1.75@3.35; Sweets,  
\$2.40@3.70; lem., \$5.50@5.95.  
St. Louis: 12 cars. Lem., \$3.35@3.95;  
Seeds, \$1.70@2.40; lem., \$4.35@5.80.  
Philadelphia: 13 cars. Val., \$2.10@  
4.50; Sweets, \$1.75@3.75; Nav., \$2.10@  
3.00; lem., \$4.00@4.95.  
Boston: Val., \$2.10@4.80; Nav., \$1.60@  
3.10; Sweets, \$2.05@3.10; lem., \$1.80@5.85.

ABOUT CANNING AND DRYING OF  
FRUITS, VEGETABLES AND  
MEATS

A survey of the index on pages 726,  
727 of last week's issue will show that  
during the past six months the Cul-  
tivator has given a valuable fund of  
information as to canning, preserving  
and drying of almost everything  
which can be canned or dried. In  
fact, the list shows many things  
which may be cured and canned  
fore considered.

We repeat here some of the titles  
appearing in the index: Canning  
Meats, page 499; Home Canning, 500;  
Canning, 524; Home Canned Vegeta-  
bles, 524; Corn, Beans and Tomatoes,  
525; Canning in Tin, 525; Canning  
Vegetables Pays, 525; Preservation of  
Vegetables Without Canning, 534;  
Canning, Beans, Cucumbers and Sal-  
mon, 548; Home Canning, 605; The  
Home Evaporator, 588; Canning  
Fruits Without Sugar, 639; Drying  
Winter Vegetables, 638; Stop Food  
Waste by Drying; 684; Fruit Juices  
for Jelly Making Kept Without Sugar,  
685; Hints on Canning, 700; Sulphur-  
ing Fruit, 689; Using Old Cans, 683,  
713.

YOUR HOME ELECTRIC PLANT

Because you live away from a power  
line there is no reason why you should  
not have just as good a light in your  
home as your city friend has in his. An  
electric plant of your own may be placed  
on your premises at any convenient lo-  
cation and you can generate electricity  
for lighting every room in your house,  
for running your vacuum cleaner, your  
sewing machine and any other machine  
that may be desired. What more could  
one ask? It is the acme of perfection,  
the ideal way of having those things  
which make for a more comfortable  
home and more convenience in the dis-  
tribution of power. You can stretch the  
line anywhere instead of taking a heavy  
engine about. It means the elimination  
of lost motion.

This system is known as the uni-lec-  
tric system. It uses no batteries and has  
no complicated switchboard. There are  
no belts or pulleys and no chains or  
sprockets. It delivers a standard cur-  
rent of 110 volts, the current that is  
most commonly used in all city lighting.  
Every electrical fixture and appliance  
that you buy will be fitted for 110 volts,  
unless otherwise ordered. The system  
uses standard electric lamp bulbs and  
will generate enough electricity right  
along to light your entire house and at  
the same time run your machines and  
cook your dinner. There is ample pow-  
er for every purpose at all times. If  
you are interested in the machine you  
can write to Mr. Karl Hedberg, 104-6  
Clay Street, San Francisco. Full infor-  
mation will be sent and you can consider  
whether or not it meets with your re-  
quirements. It should be considered  
worth investigating.

In response to the increasing demand  
for farm machinery and the possible  
shortage of some lines, Dixon & Gris-  
wold of 146-48 N. Los Angeles Street,  
Los Angeles, have taken over an addi-  
tional warehouse with a floor space of  
50,000 square feet. This extra room will  
enable them to take care of their big  
shipments constantly arriving and insure  
the farmers immediate delivery of all  
classes of farm machinery upon receipt  
of order.

WEATHER CONDITIONS

For the Week Ending June 30, 1917

	Rainfall		Temp.	
	Wk.	Season, Norm.	Max.	Min.
Eureka	.00	31.36	46.05	84
Red Bluff	.00	19.25	25.03	100
Sacramento	.00	12.95	20.09	98
San Francisco	.00	15.78	22.27	78
San Jose	.00	12.63	16.79	90
Fresno	.00	7.25	9.98	98
San Luis Obispo	.00	23.03	20.51	84
Los Angeles	.00	15.26	15.64	80
San Diego	.00	10.18	10.01	74

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LOS ANGELES

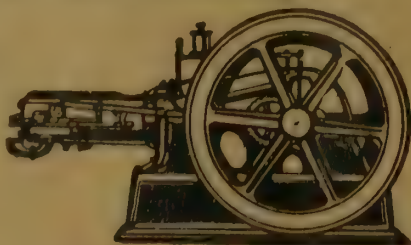
SAN FRANCISCO

VISALIA

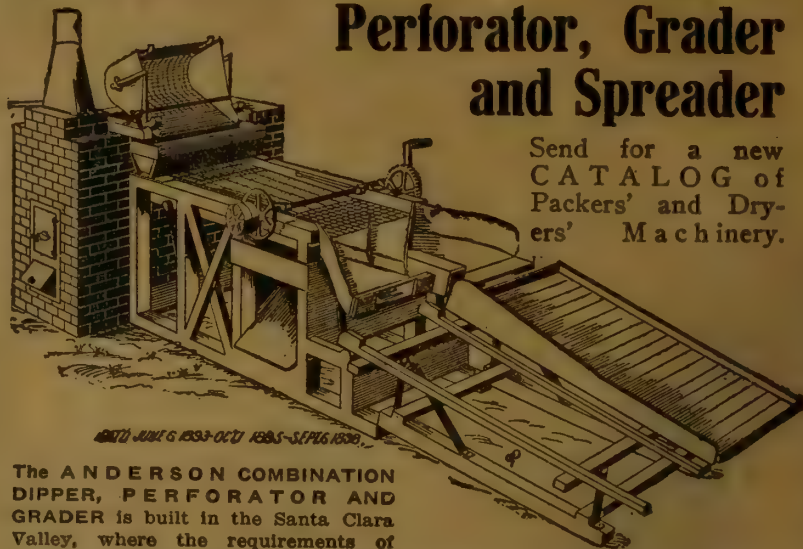
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SEND FOR 1917 CATALOG.

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An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

July 14, 1917

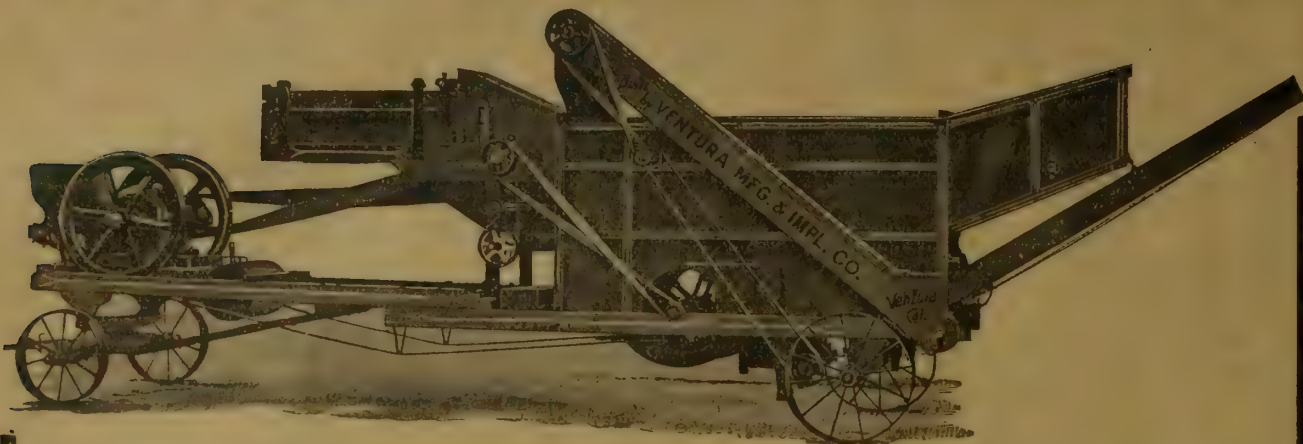
SAN FRANCISCO



Sunshine and Shadow



# Every Bean Farmer is Interested in this



There was a time when the bean growers of California tramped out their valuable bean crop on a threshing floor. Through years of patient toiling and the application of scientific principles William Hamilton, mechanic and inventor, patented and manufactured the Ventura Bean Thresher. The production of this machine has been to the bean industry what the reaper was to wheat. For twenty-one years our threshers have given universally satisfactory service. Beginning with one machine we now offer six sizes.

## The Ventura Bean Thresher Junior No. 2

Is now offered for the farmer who desires to do his own work in his own time. The Junior No. 2 also is large enough for a neighborhood thresher to supply the needs of several farmers with relatively small bean acreage who may be unable to wait for service from the big machines. The Junior No. 2 is the best machine in the various types now on the market. It has its own power (also without power), is substantially built, and has all the successful construction that has made our larger machines supreme in the bean threshing line. The price is within the reach of all bean farmers. It can be operated with a minimum of ten men and possessing a thresher like this you can thresh when the best opportunity is offered. Capacity 150 to 300 sacks per day. You cannot afford to take chances on bean crop losses when prices are so good when you can save your crop with a machine like this. There is a greatly increased bean acreage this year and a shortage of materials. Orders will be filled in the order received. Place your order early or you will be disappointed.

Ask your nearest dealer or write to us about it now. Free catalogue on request. We manufacture a full line of bean and beet tools.

**THE VENTURA IMPLEMENT AND MANUFACTURING COMPANY**

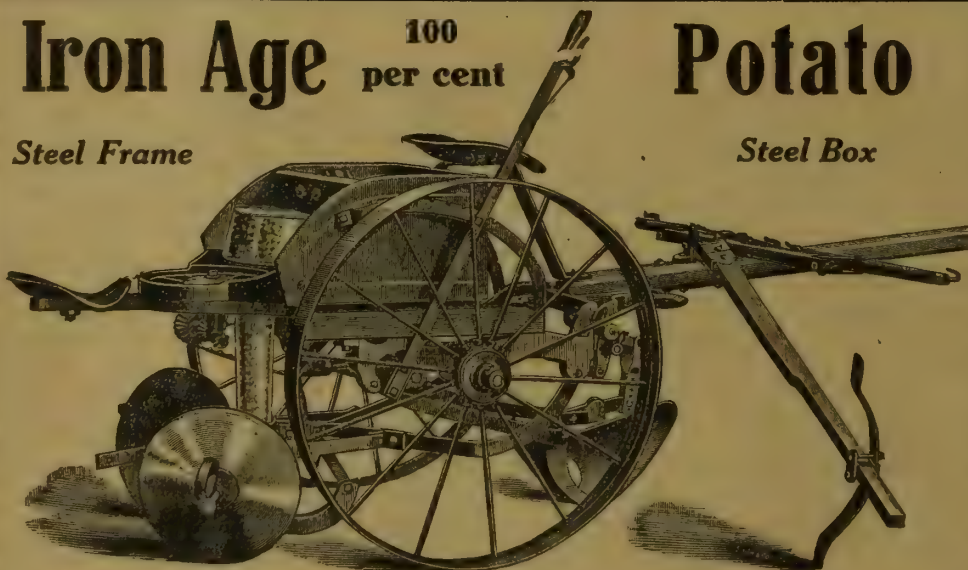
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No injury to seed, for pickers are not used.

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**It is not too Late to Plant Teague**

## Citrus Trees

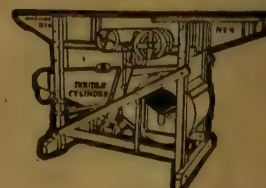
Provided the young trees can be liberally irrigated at the time of planting and at regular intervals thereafter during the summer and fall. We can supply first-class trees in the leading commercial sorts at prices that will interest you—quality considered... correspondence solicited... Consultation on citrus planting by appointment... Write for prices.

**The R. M. TEAGUE CITRUS NURSERIES**

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## Owens Bean Threshers

**small and large, 5 sizes**



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Here is a successful Bean Thresher for the farmer who has only a small bean crop. While small it does the very best work. Will thresh any kind of beans, without splitting the seed. Besides paying for itself, this thresher will be a splendid source of profit. Made by the largest manufacturer of Bean cleaning machinery in the World. We also sell five other sizes including the large 36x54 Owens Standard Thresher. All these threshers are thoroughly tested and proved for California crops. This is the best year to buy and operate a bean thresher. Descriptive catalogue sent on request.

**The California Implement Co.**

**122 No. Los Angeles St., Los Angeles, Cal.**



# California Cultivator

Vol. XLIX No. 2

LOS ANGELES: July 14, 1917

One Dollar Yearly

## Spraying Citrus Orchards With Oil

Written for California Cultivator Readers by Ralph de Ong. Hints of Great Value Which May Prevent Much Injury and Which Should Prove Effective

**T**HE SPRAYING of citrus trees for the control of scale insects is sometimes advisable for young trees, very small plantings or when cyanide is unobtainable for fumigation purposes. Under normal conditions, however, it should not be substituted for fumigation, as it is very difficult to make an application by spraying that will be comparable to the former method. Besides much damage has resulted to the tree and fruit from the use of petroleum oils, especially the heavier distillates.

An investigation of the use of oil on citrus trees has been in progress for two years by Prof. Geo. P. Gray and the author, of the California experiment station, some of the results of which are given below. There are two groups of petroleum oils which are used on citrus trees:

Distillates—light and heavy oils unrefined, which are secured by a process of distillation from crude oil.

Kerosene—A very light, more or less refined oil, also obtained by distillation from crude oil.

These are classified according to specific gravity, given in terms of the Baume scale and the flash point of

the oil. The latter is the degree of temperature at which enough inflammable vapor is given off to burn with a slight explosive effect. Distillate oil is a term generally applied to unrefined, medium heavy oils, with a Baume test of 20 degrees to 36 degrees and of a yellowish or reddish color. The term "distillate" may be properly applied to any product derived from the distillation of crude oil but the commercial use of the term refers to oils of the above type. The kerosene type of oil has usually been refined to a certain extent by the use of sulphuric acid. It is of a whitish color, flashing at 98 degrees to 104 degrees Fahrenheit with a Baume test of 38 degrees to 42 degrees.

The above oils are commonly applied in the form of emulsions, a combination of water, soap and oil, which, when agitated violently, causes the oil to break up into very small globules which remain suspended in the water for a varying length of time, allowing the oil to be applied at any dilution desired, thus reducing to a minimum the possibility of danger to the plant. A commercial preparation known as "miscible oil" furnishes a convenient method of preparing oil

sprays, being a very concentrated solution of soap and oil which simply requires the addition of water to prepare for use. The principal objection to these is that the buyer does not know the character of the oil or soap used and in the past there has been considerable defoliation and spotting of fruit from the use of miscible oils, (miscible oils are commonly made with cresol soap), as well as home made emulsions. Care must be exercised, not only in the choice of an oil to be used on any kind of foliage, but also the amount of soap. Usually a fish oil or laundry soap is safer to foliage than an emulsion made by the use of cresol soap.

Oils vary in their action on insects just as on plants, the heavier ones, such as 16 degrees to 20 degrees, Baume, will usually control scale insects at percentages of one and two per cent, but even at this strength the leaves and fruit are frequently spotted or will turn yellow, with a tendency to stunt the entire tree, new growth sometimes being checked.

The lighter grades of distillates, 28 degrees to 34 degrees Baume, commonly called "stove distillates," are used at percentages of three to five

per cent. In cool, moist climates these are often free from danger, especially the lighter oils, but in hot dry weather, partial or complete defoliation of the tree may follow their use, accompanied with spotting of the fruit. The heavier types, 28 degrees to 32 degrees Baume, will sometimes stunt the bearing wood on the surface of the tree, with a resulting growth of water sprouts through the center of the tree.

Kerosene oils are the only ones used without injury to the tree or fruit in a large series of experiments at Riverside and Berkeley. The oils tested from 39 degrees to 42 degrees Baume, with a flash test of 99 degrees to 104 degrees Fahrenheit. The kerosene emulsions were of a 20 per cent strength, that is 20 gallons of oil in 100 gallons of spray; which is at least twice as strong as necessary for the control of scale, the usual commercial practice being seven and one-half to 10 per cent strengths. These sprays were applied during a wide range of climatic and soil conditions, without any injury to the tree, unless the oil reached the roots. In the use of any kind of oil on citrus trees it is always

Continued on Page 28.

## Efficiency of the Tractor

A Few Suggestions as to Value of the Horse which Eats no Oats When Not in Service.  
Use of This Efficient Servant Will Increase as Farmers Understand Its Value

**T**O FORSEE is to rule" a philosopher once said. And certainly the truth of his words will be tested in the coming months, when America's ability to foresee the needs of the country and meet these needs efficiently, will mean so much to America in successfully waging the war with Germany.

We have all read President Wilson's utterances regarding the important place the farmer must occupy in the great world war. Feeding a world at war is a serious business, because it means farm production of food stuffs must be increased beyond a point never even dreamed of in the past. The ways and means for doing this will mark a new epoch in farming, as distinct from present farming methods as the epoch brought about by the reaper and other modern farm implements.

The urgency of the present food situation assures us that the tractor problem on small farms will be solved quickly; that developments in tractor farming will be so rapid as to astound the world; that types of tractors will soon be in use which will not only prove profitable on small farms, but almost indispensable even to small renters.

If one has only a small farm he may



A Good Straight Furrow

In straight field work the tractor is becoming almost indispensable. It is also being adapted to orchard and other more complicated situations. The tractor will be used more and more.

not find a tractor a profitable investment. It's probably because small acreage will not justify maintaining both horses and a tractor. The amount of money tied up would be too large and the up-keep too heavy. Therefore, a tractor to be profitable must do a large enough percentage of the things which horses now do, so that one can eliminate at least 75 per cent of horses.

What would it mean if one could get a tractor which would not only do 75 per cent but 100 per cent of the

things that horses now do, besides doing many belt-work jobs which horses can't do? It would simply mean that every farmer would find such a tractor indispensable. One would be able to plow deeper and earlier, thus preparing a seed bed of a character and at a time when it would absorb the rainy season moisture, and store it for bigger, faster growth, in crops and as a safe-guard against droughts.

One would disk, harrow, drill and do the harvesting quicker and easier than ever before, even with several

horses and a lot of hired help. It would be possible to cultivate seven times instead of four times, and a big corn crop would be assured regardless of the weather.

In short we would do our share to meet the world need for more food-stuffs. Besides all would work easier and quicker; have more leisure time; more pleasures; the chores would be done earlier; in fact, much of the drudgery of farm work would be eliminated and there would be less trouble keeping boys on the farm.

Would a tractor like this, of moderate price, built so one man could operate it easier than a team, pay on a small farm? A tractor that would eat only when at work?

Of course it would pay! And when such a tractor is offered for sale by a reliable maker the demand for it will be so great that it will require tractor factories larger than any automobile factories ever built to supply the demand for it.

Now that America "foresees" the need, let her engineers and manufacturers produce the type of tractor which will make possible universal use of the tractor on the farms of America. If they are able to do it—and it is confidently believed that they will do it—then America will not have entered the war in vain, and democracy will "rule" the world.





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Cultivator Pub. Co.

115 N. Broadway  
Los Angeles, Cal

### SPRAY WITH OIL

Continued from page 27

best to prevent the spray from coming in contact with the root system. If it should run down the trunk in any quantity and soak the soil around the crown, it is well to draw the saturated soil away with a hoe.

The formula for kerosene emulsion to be used on citrus trees is:  $7\frac{1}{2}$ -10 gallons kerosene,  $3\frac{3}{4}$ -5 pounds soap, to make 100 gallons of spray.

The smaller amount of oil will be effective against newly hatched scale. As they grow older the larger amount of oil should be used.

The quantity of soap will also vary with the hardness of the water, soft water requiring considerably less than hard water. If the latter is used one or two pounds of caustic soda or lye should be used to soften the water. To prepare the emulsion dissolve the soap in hot water, and while still warm add the kerosene and an equal amount of water. Agitate the mixture violently or pump it onto itself until a milk white liquid results, then dilute for spraying.

Work is still being continued in endeavoring to find a safe oil or to determine the element in the oil which is dangerous to foliage and, if possible, to eliminate it. It has been suggested by Prof. Gray that the treatment of petroleum oil with sulphuric acid might remove the dangerous element, this treatment being the chief refining process for kerosene, which proved to be by far the safest oil of any used. Should this process prove successful in removing the dangerous element, it would be a simple matter for any refinery to prepare oil for

spray purposes which would be safe for foliage use.

The time of application is another important one in scale control, for the adult female scale is very much more difficult to control with insecticides than the newly hatched scale. Work should be postponed until all or the greater part of the hatch of young scale is complete for the season. In some of the citrus regions the black and citricola scale finish hatching the very last of July or the first part of August. In other regions the hatch may not be complete until September. The hatch of the red scale is distributed over so much longer period that it is difficult to set a date when the majority of the young scale will have emerged. But all spraying should be done after the young scale have appeared or at least a large part of them, for those which are unhatched at the time of the spray will probably emerge later. It is often necessary to make two applications of an oil spray, one about the close of the hatching season and another later in the fall, when a special effort can be made to reach those that escaped the first spray.

In all work great care should be taken to cover both sides of every leaf on the tree, which is of course very difficult to do on a citrus tree. The extreme care which is necessary to make a success in citrus spraying is the greatest hindrance to its value, for if two applications are necessary the expense will be about the same as for fumigation, while the latter is nearly always more efficient. But when cyanide is unobtainable, or for small trees, a carefully chosen oil can be substituted with at least no greater danger than is found in fumigation.

## No Alkali from Nitrate

By R. R. Snowden, Analytical Chemist



HERE is data which may interest you as scientific agricultural information, since they are accurate results of actual observation and experiment.

You may use them as you like.

No. 1 is the soil of a thrifty and profitable lemon grove in the Montrose section, upon which 800 pounds nitrate of soda per acre has been used per annum for the last eight years—(6400 pounds per acre total).

No. 2 is the soil of an apricot grove adjoining and of the same contour and character as the lemon grove, which has received no additions, either as fertilizers or irrigation water.

Tract No. 1, a lemon grove, showed no alkali carbonate; neither did the apricot grove, tract No. 2.

The analysis showed Tract No. 1 to contain 3720 pounds alkali bicarbonate as sodium bicarbonate in one acre three feet depth. Tract No. 2, the apricot, contained 2194 pounds, a difference of 1526 pounds.

Analysis showed no content whatever of alkali sulphate in either tract.

Of alkali chloride as sodium chloride it showed a content of 1380 pounds in tract No. 1, three feet depth, while the apricot grove, Tract No. 2, contained 703 pounds, a difference of 677 pounds.

It would appear that were the alkali bicarbonate in the lemon soil derived from the nitrate of soda the proportion of this to the chlorine would be larger in the lemon than in the apricot soil; but the reverse is the case.

The 2194 pounds of alkali bicarbonate and the 703 pounds alkali chloride in the apricot soil could only have come from soil decomposition; therefore, assuming like amounts from the same source in the lemon soil the excesses over these figures in the latter soil might well have come from the irrigation water, and not from the nitrate, as the above will show. The nitrate was always associated with sulphate of lime in superphosphate, which converted the whole of the soda into sulphate. There is now no sulphate, this having gone with the soda.

## Avocado Appreciation



NOTWITHSTANDING, appeal made by members of the California Avocado Association that the beastly (not slang) "alligator pear" be eliminated from market reports, both Los Angeles and San Francisco dailies continue use of the misnomer. "Why?" No one knows. Meantime avocado growers are hoping and talking a bit for a more enlightened policy.

Thomas H. Shedden, the Monrovia

avocado grower, president of the association, writes:

"When I read in the issue of the 2nd inst. a short, but excellent article entitled, 'No More Alligators,' in admiration of it I said, 'Multum in parvo,' and eventually filed the copy away with feelings of satisfaction towards the Cultivator, as I do each week.

"I have brought this copy out again by reason of having received a number of written, as well as oral commendations of that little article.

"The receipt of them prompts me



to mention this appreciation which is due you, and which comes to you in this roundabout way. One writer, an able man of the southland, gives high praise, but in entirely good spirit, calls attention to the extraneous word 'Growers' therein attached to the title of the organization which is simply, 'The California Avocado Association.' "These pioneers in the young industry which will soon mean much to California, are appreciative of every good word said of the avocado and of every man who 'Despises not the day of small things'; and as manhood's years ever remembers the kindly words and acts received in child life, so, as the avocado becomes truly great in California, and beloved by all, may those who have helped it be not forgotten."

OLIVE PRUNINGS FOR FERTILIZING

An exchange quoted in the Olive Journal tells of a use found by R. C. Merryman for the prunings from his olive trees, which had previously been burned to get them out of the way of cultivation. This account goes on to say:

One day while Mr. Merryman was inspecting his olive groves the idea dawned upon him that good material was being wasted when the olive tree prunings were burnt to clear the ground of their brush.

"What's the matter with cutting up those prunings in some sort of a chopper and strew the cuttings on the ground in the orchard and plow them under for fertilizer? This should add organic matter to the soil and keep the soil friable that it may conserve the maximum quantity of water when irrigated."

After this consultation with his manager orders were given to build a cutting machine of odds and ends in the waste pile of the blacksmith's quarters.

A six-horse-power engine was mounted on a light orchard truck, the pulley of which was belted to a large ordinary alfalfa cutter. When the olive prunings are fed over a short platform at the back of the rig the cuttings fall under the machine and are raked into a pile on one side.

This was another of Mr. Merryman's "waste-saving" ideas, which, after a year operating, he terms "a very splendid" investment.

A PERFECTLY GOOD PASS

We are all a little sensitive about having our name spelled correctly but when a name is taken from one's penmanship for that of an entirely different individual he has occasion to feel peeved. We have the following letter from Mr. E. T. Sederholm of Pomona:

"They tell a story about the president of the Erie railroad, who was a very bad writer, and who once upon a time wrote a letter in his own handwriting, declining the granting of a pass over his lines. For two long years the recipient of the letter used it for a pass, and it was good everywhere.

"I did not know my handwriting was as bad as that, yet so it would appear, seeing that you have made my name out to be G. T. Henderson, as a signer of the Pomona Smudgepot test report. It is 'E. T. Sederholm,' and I thought that this time I had better put it in type."

As bad as the break was Mr. Sederholm shows that he can still be good natured and we appreciate his correction.

OLIVE STANDARD

The California Olive Association has adopted the following standards for the coming season's olive pack:

Olives per lb.	Grade
120 to 135.....	Standard
105 to 120.....	Medium
90 to 105.....	Large
75 to 90.....	Extra Large
65 to 75.....	Mammoth
55 to 65.....	Colossal
45 to 55.....	Giant

PORTO RICO FRUIT

A new brand of fruits, advertised by its growers, soon will make its bow to the American public. The Porto Rico exchange has made definite arrangements for advertising the island fruit, beginning with the next citrus crop. A number of fruits will be advertised under the same general brand; grapefruit, oranges and pineapples. A standard quality will be set for fruit to be packed under the advertised brand. The advertising fund for the first year will be raised by an assessment of 10 cents a box on all fruit shipped by growers who have contracted to ship their fruit through the organization. This will provide an advertising appropriation of about \$25,000 the first year.

A most exhaustive study of "Certain Effects Under Irrigation of Copper Compounds Upon Crops" is shown in

University of California Publications in Agricultural Sciences, Vol. III, No. 12. The investigations were made by Prof. R. H. Forbes of the University of Arizona. The report has to do largely with copper in certain mining districts, or rather in irrigated districts

near them; also with experimental work done with various copper compounds, a general discussion as to accumulations of copper, possible effects upon health, effects on aerial vegetation, on root systems, pathological effects, etc. It is a strictly technical report with several plates.

State Horticultural Commissioner Law

By Horticultural Commissioner G. H. Hecke Before Commissioners' Convention at Modesto



THE ACT relating to the state commissioner of horticulture provides for a commissioner to be appointed by the governor, and defines his duties, which are, in brief, to promote and protect the plant industry of the state. He is charged with the enforcement of the horticultural statutes which are enacted for the purpose of preventing the introduction and spread

of injurious insect or animal pests, plant diseases and noxious weeds, and with the introduction and distribution of such parasitic and predaceous insects as are useful in reducing the cost of crop production. He must require reports from the county horticultural commissioners and must distribute to them, and to such other persons as he may deem proper, such printed information as he considers

# Fifty One Years

Back of the Moline Universal Tractor is one of America's oldest, strongest, most reliable farm implement makers, with over 51 years of successful manufacturing experience.

You can rest assured that a farm implement with the name **MOLINE PLOW CO.** on it will not disappoint you in field performance. The **MOLINE TWO-WHEEL UNIVERSAL TRACTOR** is no exception. It is proving itself to be the most popular and practical tractor ever put out because it fits more completely the needs of the great majority of farmers. Read below why you should choose it, whether your farm is large or small.

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- 2nd.—It is a **REAL** one-man, all-purpose tractor. The operator rides the tool, not the tractor—rides where he can watch his work carefully.
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- 4th.—It is the **Original Two-Wheel Tractor**. Both wheels are drive wheels. All its weight is traction weight. Means greater traction and draw-bar pull. Eliminates almost a ton of dead weight.
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Write today for **FREE CATALOG FOLDER** and see for yourself how the **MOLINE UNIVERSAL** will solve the power and help problem on your farm.

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adapted to the advancement of the horticultural industry of California. He is authorized to establish quarantines, with the approval of the governor, at or within the boundaries of the state for the protection of the horticultural industry against the introduction of pests. He is given exclusive authority to establish horticultural quarantines within the boundaries of the state, this provision abolishes the old system of quarantine by county ordinances.

In case of the discovery of any infectious plant diseases, insect, animal or weed pest within the state dangerous to the horticultural industry, or upon information that there is a probability of the introduction of such, he is authorized to investigate the same and to issue such regulations as may be necessary to circumscribe, exterminate, eradicate or control the same.

He must notify the quarantine guar-

dian or horticultural commissioner in the county where such pest or disease is discovered, as to the specific method of treatment in each case, and such recommendations must be made a part of the notice served by the county horticultural commissioner on the person owning or having charge of the infested or infected property.

The statute requires every nurseryman, person, firm or organization who deals in nursery stock, trees, plants, shrubs or vines for planting or propagating purposes within the state to register with the state horticultural commissioner and to pay a fee of one dollar for such registration for the period of one year. The state commissioner of horticulture must issue to each applicant a special license number, and all shipments by such licensee shall have this number affixed to each package of nursery stock, etc. Agents or salesmen acting for a

nursery or organization are required to use the license number signed to the nursery or organization by which they are employed. Any nurseryman or organization outside of the state, wishing to ship nursery stock, etc., into the state, must apply to the state commissioner of horticulture for a permit, filing with his application a statement of location of his place of business and an official certificate of inspection of his premises signed by his state inspector. These permits shall have a special number which shall be placed upon each package shipped into California. No charge shall be made for these permits. The state commissioner of horticulture may refuse such permit, if in his judgment to issue same would endanger the horticultural interests of the state.

Wilful refusal to comply with orders lawfully made under this act shall be deemed a misdemeanor and upon conviction a fine not to exceed five hundred dollars may be imposed.

## New Grading on Budded Walnuts



FROM the latest report of the California Walnut Growers Association we note the following as to "Budded Walnuts":

"The Association has always maintained a policy of giving its customers what they pay for and of keeping its gradings in line with the consumer requirements. Thus it was the first to make definite guarantees of size, cracking standards, price and weight shrinkage. We have always striven to make the Diamond Brand the best walnut on the market, believing that only by maintaining highest quality standards could our business be satisfactorily and profitably developed. When the California Budded Walnut was first placed on the market, among the chief points of appeal to the trade and the consumer were its large size and uniform appearance. The size feature was due primarily to the fact that Budded Walnuts are of comparatively recent development and when first marketed were all produced from young trees. As these trees became older and larger and bore more heavily, the size of the individual nut gradually decreased until during the last season or two quite a number of the oldest budded groves have reached the full bearing stage and the average size of the Budded Walnut has consequently become smaller. This situation has caused some complaint on the part of our trade. Thus in order to entirely satisfy our customers who use Budded Walnuts we have adopted a new sized grader for Budded Walnuts with openings one and nine-sixty-fourth inches square. This grader will therefore remove all of the smaller Budded Walnuts which will be placed in a separate grade and will change the guaranteed minimum size of the Fancy Budded nut from one and one-sixteenth inches in diameter to one and one-eighth inches in diameter. Thus the regular Diamond Brand Fancy Budded Walnut will hereafter be larger and more uniform in size than ever before and those jobbers now having signed contracts specifying the minimum size of the Fancy Budded at one and one-sixteenth are hereby authorized to change their contract, increasing the guaranteed minimum size to one and one-eighth inches. This higher grading while further limiting our supply of Budded will certainly put the Diamond Brand Budded Walnut in a class by itself and that class will be absolutely the finest walnut on the market. And notwithstanding this fancy grade it is not expected that the differential in price between the Fancy Budded and the Soft Shells will be increased.

### Standard Budded

The Budded Walnuts which pass through the larger openings of the new grader will not be marketed under the Diamond Brand but will be sold under the Golden State Brand. The grade will be known as Standard Budded whilst the Diamond Brand goods will be classed as Fancy Budded. Before packing, the Golden State Brand Standard Budded will be run over the regular No. 1 Soft Shell grader which will again remove the smaller nuts from the standard buds. The result will be a Budded Walnut of a uniform size, averaging a trifle smaller than the average delivery of No. 1 Soft Shells. We offer a limited supply of these Golden State Brand Standard Budded Walnuts at one cent a pound premium over the regular No. 1 Soft Shells. For eating quality

# PLANT Sudan Hay NOW and profit by nation's hay shortage!

"THE country will be long on Egyptian corn and Milo Maize, and short on hay." This is the report that has come in from all sections. Keen, wide-awake ranchers are going to profit by this national hay shortage. They are planting that marvelous grower that rivals Jack's famous beanstalk—Sudan Grass. It grows rapidly during the warm season—matures in 40 to 60 days—yields eight to ten tons per acre per season with irrigation. The following cuttings mature in 35 to 40 days:

Sudan hay is recommended by agricultural experiment stations the nation over. Attains a height of five to six feet in 40 days. It is sweet and nutritious and is liked by all classes of stock. Sudan hay outyields timothy, rye and barley hay by a fifty per cent margin. It is twice as rich in protein, fat and ash.

Sudan grows in any soil from sand to clay. Sudan hay will make money for you this season—the hay crop is scant and commands sky-high prices. Plant Sudan now and collect fat dividends later. Don't wait another day—send in your order at once and insure immediate delivery. Big free illustrated folder will be sent by return mail.

## SPECIAL JULY PRICES

36 cents per single pound, enough for 50x50 feet.

10 pound lots, 34 cents a pound, will plant half an acre (sown broadcast.)

25 pound lots, 32 cents a pound.

100 pound lots, 28 cents.

## ORDER BLANK

Enclosed find \$..... for which

send me ..... pounds of Germain's Proven Sudan Seed.

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SOUTH MAIN STREET  
LOS ANGELES - CAL.





there will be nothing better in our line than these Standard Budded as they are of a size that will undoubtedly show a higher cracking standard than anything else in our pack, will have the usual sweet and excellent flavor of the Budded Walnut and we believe that after a year's trial they will be the most popular seller in our line. We would like every jobber who is handling our Fancy Budded to try from ten to twenty per cent as many Standard Budded as Fancy.

What is a Budded Walnut?

As the Budded Walnut has only been marketed commercially for a comparatively short time many of our customers are not thoroughly posted as to how this nut differs in method of production from the soft shell. Therefore a brief explanation here will no doubt prove of interest to many jobbers. It should first be understood that the Budded Walnut is a variety of nut and not a grade. Trees that produce Budded Walnuts produce no other grade and trees that produce soft shells do not produce any Budded. Perhaps the simplest way of explaining the difference between a soft shell walnut and a Budded is to compare the propagation method of these two varieties. The soft shell walnut is grown by planting a seed from a parent soft shell tree. This seed sprouts and becomes itself a bearing tree producing soft shell walnuts. Generally speaking it is ten years from

planting before the ordinary soft shell walnut comes into profitable bearing. The Budded Walnut is grown by planting in nursery rows the seed of a wild black walnut. These seeds come from just such black walnut trees as grow wild in most Eastern states. A year from planting the seed when the young black walnut tree is about three feet high the trunk is cut off about three inches from the ground, a slit made in the bark of the three inch stub, and a bud from a walnut tree perfected in California known as the Placentia-Perfection variety inserted in this slit. This Placentia-Perfection bud shortly sprouts and develops the trunk and branches of the Budded Walnut tree. The nut known commercially as the Budded Walnut is really a Placentia-Perfection walnut. It is commercially known as the Budded Walnut by reason of the process of budding the Placentia to the black walnut root. A year from the budding operation the young tree is ready to be removed from the nursery row and is planted in orchard form, trees about 50 feet apart. Thus we have a walnut tree with a wild black walnut root which is very hardy and vigorous, and the Placentia-Perfection top. The budded trees grow faster than the soft shells and reach the profitable bearing stage in about six years from planting in orchard form. The Budded Walnut is typically a trifle larger than the soft shell, more uniform in shape and appearance, has a thinner shell, a plumper and sweeter flavored meat, and a considerably greater percentage of meat to shell than the soft shell variety. Thus at the usual differential in price

between the soft shells and Buds a dollar will buy about the same weight of edible meats in Budded nuts as in soft shells. Approximately 75 per cent of plantings made in the last seven years are Budded.

Association Gains

The consumption of walnuts in the United States has been increasing greatly each year. A new record was set for the 12 months ending June 1st, 1917, in which period considerably over 60,000,000 pounds of walnuts were consumed in this country. As the California crop will probably be larger this season than ever before it is naturally expected that every jobber will sell more California walnuts than on any previous season. The association will undoubtedly handle a considerably larger percentage of the crop than ever before, and announces the exclusive marketing of the product of the following new local associations: the Capistrano Walnut Growers Association at San Juan Capistrano, and the Walnut Creek Walnut Growers Association at Walnut Creek. Also in the old districts several thousand additional acres have been secured.

DON'T BE A SLACKER

The recent hot wave played havoc with the optimism of many of our ranchers and fruit growers. Many of them are perfectly satisfied that the end of all things has come. They have "lain down in the harness." They have "run out of gas." Their "differential is totally wrecked," and the joy is all taken out of life. True there is cause; the aforesaid hot wave caused damage. But, don't lose sight of the fact that if you don't think, and work, and hustle, harder than ever "the worst is yet to come."

It is the crop loss that is causing the "weeping and wailing and gnashing of teeth." It is the feeling that the crop is ruined, and in the agony of the moment there is a strong tendency to forget the future and become "slackers." That is, there is a tendency to "quit," to "lie down," to simply let things go to the "demnition bow-wow's." Orders for fertilizers have been cancelled. Orders for implements have been cancelled, orders for progressive action, work for the upbuilding of vine, tree and soil have been cancelled, and this at the time when these very things are most badly needed. Quit, is the slogan of the moment, but, it is with a comparative few.

They forget there is a future. They forget there is a season after this, that there are years to come, and many of them. They forget that this same catastrophe which affected the crop also affected the trees and vines and left them in a weakened condition, an easy prey to every enemy they have. They forget that more nourishment is needed than ever before, and more care; that they need and must have more protection from their natural enemies, for they are too weak to resist. Feed them, coddle them, destroy spider, mite and scale. Prepare for later attack from these pests, for it will probably come. Don't forget that a dusting of sulphur may save you many dollars. Work harder than you ever have before. Cultivate, fertilize, work, work, work, and watch, your next crop will be a bumper that will recoup all your losses, and you will have a strong thrifty lot of trees to carry on the work for years to come. For "cast thy bread upon the waters and it will return to thee tenfold."—Jack.

# ARE YOU THE MAN

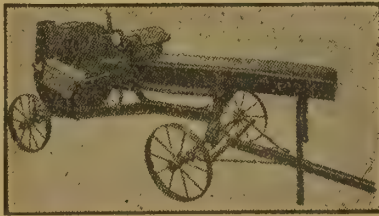
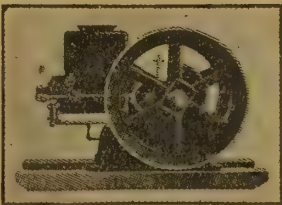
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to tell me his name and his address, and what he must buy this year. I will tell that man how to buy at wholesale, or even better, regardless of the make of the article, and I will show him a plan that will open his eyes—**ARE YOU THE MAN?**

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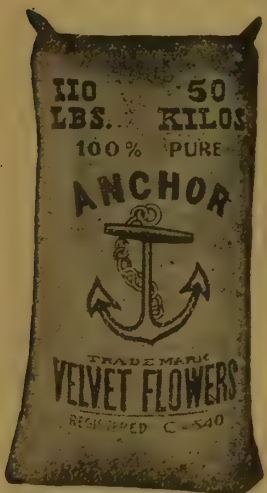
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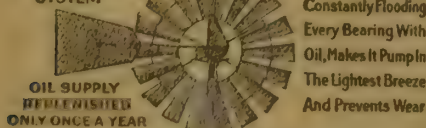


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Better service is assured by the advertiser if when writing you mention the California Cultivator.

## Planting Cabbage Now

Written for California Cultivator By D. F. Reichard



SUBSCRIBER at Anaheim writes, asking: "Is it possible to set out cabbage after July 1 in order to get them off about Christmas? What

would be the best kind and time to plant? Also, will the disease in land that destroys beans destroy cabbage?"

Mr. D. F. Reichard answers the inquiry:

Yes. Cabbage may be set out during July and satisfactory results expected, provided they are supplied with plenty of water, so that they are not retarded in their growth during the warm weather. These would mature by Thanksgiving unless the late flat headed varieties, which require about five and a half months from setting, were used. As it will probably be difficult to obtain plants of this variety we would recommend planting seed of early or quick maturing varieties, such as Cannon Ball, Copenhagen Market or Winningstadt, which require about four and a half months from setting.

Sow the seed thick in drills or in beds where the soil is rich and can be conveniently watered or irrigated. In six weeks the plants should be at least eight inches high and large enough to set in the field. Set the plant as soon as possible after pulling, in the bottom or on the side of furrows that are eight or ten inches deep. Irrigate down the furrows as fast as the plants are set and keep the plants growing by frequent irri-

gation. Cultivate on the ridges between the furrows, pushing the dirt down around the plants. After the second irrigation and cultivation the land should be leveled enough so that the third irrigation will have to be made through a furrow made for that purpose between the rows of cabbage. To have cabbage head well in early winter it must be kept growing continuously, but even then if the hot weather continues late into the fall or if there are extreme changes many of the heads will not be firm and will run to flower.

As to pests, the cabbage worm will be the worst. You will be forewarned of this by the appearance of the white butterfly which deposits the eggs on the cabbage leaves. This is controlled by spraying with Paris green or arsenate of lead. Do not wait for the worms to appear but spray plants shortly after the butterflies visit them.

There may also be cabbage lice or aphids. This is controlled by spraying with Black Leaf 40 before the heads start to form. If your soil is infested with wire worms cabbage will withstand them to some extent, but if they are bad the only remedy is to keep your ground fallow for a year, not allowing anything to grow on it, thus starving the worms out.

As to the disease which affects the beans, we cannot prescribe without further details but presume it is the result of wire worm attacks.

## Late Garden

Written for California Cultivator by Mrs. F. C. Stunden



WE hear a good deal about the man and the hoe, but the new "farmers" soon find it is one thing to plant a garden and another to keep it.

Even in California, unless it is near the coast, spring is our best planting season. Young plants are inclined to dry up in the late summer, and in the fall they often are very slow getting started.

If you haven't already planned ahead, plant flat-head cabbage seed rather thick in the ground. Don't bother with a box now. They will soon be large enough to set out. If you don't have a foggy day put out in the evening and water and shade well for a few days. Flat-head cabbage matures slowly and will not burst on maturing as the peaked varieties often do.

When crops such as early carrots, lettuce, etc., are used, plant long orange carrots. They will be longer

in reaching an eating size than the short ones, and will continue to grow and keep tender till late spring.

Rutabaga, parsnips, salsify, late beets and black seed onions will all stay in the ground all winter.

Be sure to have plenty of Swiss chard. It grows slowly in the winter, so one needs plenty to insure a supply of greens.

Hubbard squashes are another good winter vegetable, and where they can have a little water it is not too late to plant them even now. They will climb a fence as well as take up a lot of ground you might use for something else.

In the fall lettuce, radishes and endive and such quick growing things can be put in, also winter radishes. Try to have another garden patch for next spring and leave the old one till the new one is bearing. In this way you can have "garden sass" the year round.

## Drying Beans and Berries

Written for California Cultivator By Mrs. F. C. Stunden, San Fernando

A subscriber some time ago wanted to know about drying string beans, also blackberries.

I dried string beans last year. They must be absolutely young and tender or they will be stringy when dried. Cut off ends and cut in short lengths. Lay without cooking in the hot sun. They dry in a few days. Store in sacks or tin cans. Cook as dried shelled beans. The flavor is not as good as fresh ones, but they are good in the winter.

We used to dry berries "back East,"

but they were rather seedy. Would suggest putting berries, cooked without sugar, in quart bottles. A funnel will aid in the canning. When wanted for pies, cook a little, adding sugar and a little flour, and pour in pie paste hot.

### THE PITY OF IT!

Addressing a political gathering the other day, a speaker gave his hearers a touch of the pathetic.

"I miss," he said, brushing away a not unmanly tear, "I miss many of the old faces I used to shake hands with."



P. S. C.

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### READ THIS LETTER

VENTURA COUNTY  
HORTICULTURAL COMMISSION  
Santa Paula, California

May 22, 1917.

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Gentlemen—We have tried out the small samples of your new concentrated resin wash on black and soft brown scale and find it to be satisfactory in every way. A recent examination of infested trees treated shows that all scale hit of a vulnerable size were dead, and that no appreciable damage had been done to the trees treated. I am sure that if all the material put out by your company works as satisfactorily as the small samples tried by us we will use it exclusively in spray work in small citrus trees. I might add that we have long used resin wash for the control of black scale. This wash not being obtainable in a commercial form other than at prohibitive prices, we have in most cases made our own material.

A grove adjacent to the one treated with the samples of your material had been sprayed only a few days previous with resin wash made by one of our inspectors. Results obtained with your material is, I believe, a little more satisfactory than those obtained with our home-made resin wash.

Very truly yours,

(Signed) A. A. BROCK,  
County Horticultural Commissioner.

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# Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

## Trimming Apricots

When should apricot trees be trimmed, especially those which are old and do not bear. Would it be advisable to trim off some of the longer limbs at this time or to wait until spring. Would trimming out of some of the limbs induce the tree to bear another year?—Subscriber, National City.

The best time to prune so as to renew or cause vigorous wood growth is when the tree is entirely dormant. However, where there is some vigorous wood on apricots severe topping or cutting back of many of the branches soon after the crop is removed from the tree, following this with heavy irrigation, gives a fall growth with plump buds which may mean the setting of a heavy crop another spring. Many deciduous fruit growers have an idea that once the fruit is off there is no demand on the tree from then until the next growing season but it must be borne in mind that the buds formed in the fall are the ones which set the next season's crop and these buds require a proper condition of the tree in the fall if it is to have vitality sufficient to set the next crop. The heavier cutting, especially thinning out useless branches, had better be deferred until the winter pruning time.

## Celery Going to Seed

We planted celery seed in the house in December. The plants were slow in coming but were in good condition when transplanted to the bed outdoors and did very well for some weeks but are now going to seed. Will you advise if the hot weather would cause the plants to go to seed?—Subscriber, Potter Valley.

This question was referred to D. F. Reichard and he answers: "This celery was started too soon. The seed usually is planted from the first of February to the first of April and the plants set out from the middle of April on for success. In planting earlier than that it is very liable to go to seed."

## Worms in Rabbits

Please advise how to treat Belgian hares with worms. Would it be advisable to treat a doe with young, or pregnant does?—Subscriber, Paradise.

Regarding worms we have the following from Townsend's "Practical Rabbit Keeping," published by Cassell & Company, Ltd., New York: "The best-known remedy is six-grain doses of areca nut every other morning in a saucer of milk. Feed early the day previous to starting the treatment, and do not give any bedding. To be effective, the medicine should be given on an empty stomach. About half a teaspoon of castor oil, given half an hour after the dose of areca nut, may be administered with advantage once or twice during the time the rabbit is being treated." Any abnormal treatment of pregnant does should be avoided if possible. If infestation is not serious would delay treatment. Will be glad to hear of breeders of any experience which may prove helpful.

## Turkeys with Swellhead

Please advise treatment for a flock of 30 young turkeys which have developed roup or swellhead. Have tried the two per cent solution of perman-

ganate of potash but lost several and none seem to have been benefited. Is there anything that can be done for them? Several are nearly blind, with swollen heads and discharge from the nose but they seem to have good appetites.—Subscriber, Burbank.

The permanganate solution could not possibly have killed your poult unless you held their heads under so long that they drowned. Some directions say hold the head under 30 seconds, but I have never dared hold it under half as long. All you want to do is to let the solution run into the nostrils and wash out the eyes. I usually dip the head under two or three times, not over five seconds at a time, and repeat twice a day. The solution should be prepared fresh every time it is used, for it soon loses its strength. As the disease seems to affect your poult's eyes especially you might try washing both and nostrils with a two per cent boric acid solution in a decoction of chamomile flowers. If you have a small syringe spray the nostril. The eyes are best washed with a little absorbent cotton. Any druggist will prepare this wash for you. A still more simple treatment would be to wash the eyes with a boric solution (a scant half teaspoonful boric acid to a glass of warm water) and anoint with pure vaseline to keep them from sticking. Most of the patent roup remedies are also quite efficient. But no treatment for roup in either chickens or turkeys is successful without removal of the cause. Where do your poult sleep? Have they perfectly fresh air at night? Are their quarters clean, are they free from lice, and have they abundant room for exercise? Poult on free range, roosting in the open ought not to have swellhead, but sometimes a roup taint in the blood reveals itself in this way in spite of the best environment.—J. A. K.

## Feed for Young Ducks

Please advise best feed for young ducks.—Subscriber, Ione.

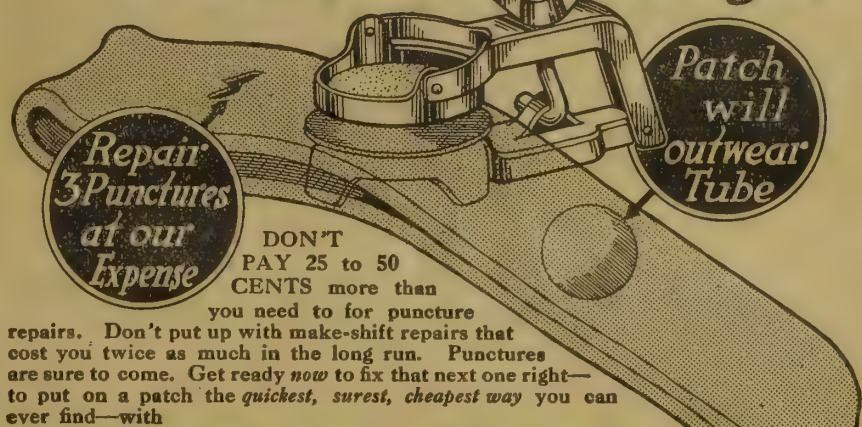
The essential thing about the feeding of young ducks is that all food be soft. The duckling has no gizzard and cannot easily grind hard grain. Cracked corn is sometimes fed as the birds approach maturity but with this one exception all hard grain is best omitted. The ration should contain bran, corn meal, sand or fine grit and cut up greens of some sort. Many breeders add beef scrap, but this is not necessary. Middlings may be used with the bran and corn meal, if desired, and rolled breakfast oats may be part of the mash at the beginning. The first two days ducklings are given nothing but sand on a board or in a basin. Towards evening the second day some fine cracker or bread crumbs may be sprinkled over the sand. This is to give the birds a little practice in eating. The morning of the third day a mash of bran with considerable sand added, and made crumbly wet, is spread on the board and this is fed four or five times a day. At each feeding a fountain of fresh water is given. Ducklings of this tender age should not be allowed to get wet but they must have water to wash down their meal. In cold weather it is a good plan to warm the water slightly. By the tenth day a little corn meal and a little cut up green stuff (preferably alfalfa) are added to the bran mash, and the amount is gradually increased until by the end of the first month the mash consists of equal parts bran and corn meal, with from 15 to 25 per cent of greens added, and always a little

sand. If the ducklings are to be pushed for market the mash may be kept before them all the time from now on. If they are to be breeders four or five meals a day the first month, diminishing to three meals by the end of the second month, will usu-

ally be sufficient. If beef scrap is added it should be added gradually, and should never be more than ten per cent of the grain part of the mash. Beef scrap has a tendency to loosen the bowels, and hence must be used very carefully.—J. A. K.

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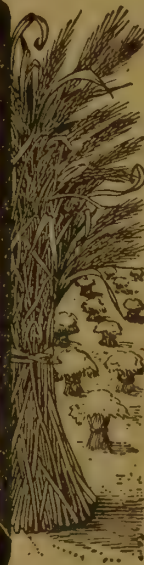
is open to you—to every farmer or farmer's son who is anxious to establish for himself a happy home and prosperity. Canada's hearty invitation this year is more attractive than ever. Wheat is much higher but her fertile farm land just as cheap, and in the provinces of Manitoba, Saskatchewan and Alberta

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THE AMERICAN

## Garden Planning

Written for California Cultivator By E. Branton



THE most difficult task about gardening is not how to grow plants, for if one sort of plant does not thrive in its present location, another may, and in no event will failure of one, or even many plants, spoil a garden or estrange the owner from a deep interest in and love for the garden. In many instances such failure has stimulated his interest in plant life and determined him upon a course whereby he could through experience find out what best he could grow and best pleased him.

The real problem of the garden is the plan, for once planted with trees and shrubs the plan is difficult to change after some years of active growth and development. We are still somewhat in the period of revolution or evolution in garden planning and planting. Years ago, and not many years either, we were all for artificial and unnatural effects. The plan was purposely and too often hopelessly formal or conventional. No attempt was made looking to ease or comfort. It seemed as though all considered it easier to walk around a square corner than a rounded one and that a right-angled path or road was a better and perhaps shorter route between two given points than one of gently-flowing curves. No stretch of green lawn was permissible unless it was embellished with one or more carpet beds of geometric design, composed of plants of bizarre hues, beet-top and variegated colors predominating. The actual effect of such a bed or beds on a smooth stretch of lawn is comparable to one or more angry fever sores upon an otherwise fair face.

Now the pendulum is still swinging toward the other extreme, though its course is nearly run, and a return to the point of greatest gravity will eventually ensue. It must not be expected that a garden, at least that portion about the house or any part of a city lot, shall be so natural as to appear a part of the wilds, any more than we expect houses to appear as caves. We cannot return to primal conditions, nor do many of us have such desires. Those who make the attempt are objects of just ridicule by their fellows, whether pertaining to personal habits and dress or to gardens. But we are sick of meaningless bright dabs or daubs of color, "specimen" trees, shrubs, and other plants, and of those clipped into conventional forms. We desire and admire smooth unbroken stretches of lawn and natural masses of trees and shrubs and irregular zones of one sort of flowering plant merging and mixing "in transit" to a bed of another sort. We wish easy lines, no corners, and gentle curves in design, garden seats, arbors, and all that contributes toward comfort and

enjoyment in the garden. We come more and more to regard it as an outdoor living room, even dining and sleeping therein to a degree never expected a generation back of the present. Utility, art and nature should combine and conspire to make a garden both lovable and livable. When this has been accomplished you have succeeded most admirably in a close approach to the ideal garden.

### Plant Culture

All things are possible in plant culture in California, though in some cases special conditions must naturally exist or be created. We have been told, at various times, that we cannot grow peonies, rhododendrons, azaleas, alpine plants, edelweiss, bog plants such as the insectivorous class, and a host of others of special requirements. But all such have been and are growing in many parts of California. One may need a northern slope, to first grow a shelter or shade of trees and shrubs, or to have a stream or body of water. But when these exist or are supplied we may grow any plants that can be grown by mankind in any land. So do not despair; get your favorite or fancied plants, study their needs, supply them if you can, and success should attend your efforts.

### Changes in Names

At last we are to have stability in both popular and scientific names. Committees from all interested national organizations were appointed and met to discuss ways and means to obtain uniformity, and they have already sent out the first list of names. Without being too technical it may be stated that the tendency of the day is toward simplicity and reduction of numbers in general. This is a severe blow at official hair splitting. To cite a local example; many years ago our Christmas berry was separated from Photinia, a genus of several species, and called Heteromeles, making one more name. Now it is returned to Photinia, simplifying the whole matter and reducing the number of names we have to use. Some day the layman may yet concede that botanists are wholly sane and therefore safe to be at large.

### Gladiolus Catalog

Cornell University, Ithaca, New York, has issued a 174-page catalog of gladiolus by Prof. A. C. Hottes that describes accurately all the sorts now on the market, giving names of all that are the same in flower, thus cutting out many repetitions for dealers. These bulletins are free to residents of New York, but I would advise outsiders to send not less than ten cents in stamps when asking for a copy. No attention may be paid to request not accompanied with stamps or coin.

## Torrens Title Accepted



IT SEEMS that the Torrens title will be accepted by the federal land bank in making farm loans, but only in cases where the title has been issued twelve or more months. There are practically no Torrens titles issued in this state that far back but many are being secured every day now. Those who contemplate borrowing in the future from the federal land bank should secure their Torrens titles at once. It appears that

the Torrens title will be vastly cheaper than securing an abstract. The only other title accepted is where a policy has been issued by a title insurance company. Bear in mind this is a policy and not a certificate of title, hence at best it appears that the securing of a loan from the federal bank will be more or less expensive. However, more specifically, we give by courtesy of President White of the land bank at Berkeley copy of circular letter issued to secretary-treasurers of various loan associations.

"To Secretary-Treasurers:

"The question of determining of



titles has received the serious consideration of the officers of this bank. The bank has been obliged to take into consideration the necessity for certainty as to titles as well as the question of expense to its borrowers.

"Notwithstanding the Federal Farm Loan Board has authorized the bank to make a charge to borrowers for examination of titles, the bank will not make such charge at this time, but reserves the right to change its policy in that regard if it should find that the expense of examination becomes so heavy as to make it necessary.

"Inasmuch as the success of the federal farm loan banking system depends upon the sale of its bonds, every element entering into the security of the bonds must be zealously guarded. Certainty as to title is one of those elements.

"The bank gives the following as its position with reference to evidence of title and requests that all former advice be disregarded if in conflict therewith:

"First: Abstracts of title will be accepted.

"Second: Policies of title insurance will be accepted, although the company issuing same must first be approved by the bank, and, providing further that no policy of title insurance will be accepted as an original issue but only in cases where a policy is already outstanding.

"Third: A certificate under the Torrens law will be accepted provided twelve months will have elapsed between the date of judgment in the proceeding under the Torrens law and the time of closing a loan from the bank.

"Fourth: Ordinary certificates of title will not be accepted.

"In coming to the foregoing conclusions the bank has had in mind that national farm loan associations will be able to make advantageous arrangements for the making of abstracts; if reasonable and fair contracts for their making cannot be made with local searchers of records, then this bank stands ready to send into your county competent searchers of records, who, under contract with the bank, will do the work for the members of your association at actual cost. You and your board of directors should be able to determine whether local abstract companies are offering you fair and reasonable terms. If they do, then accept such. If, however, they do not, then you should report to the bank and it will take steps to provide abstracts of title for your members at their actual cost. Abstracts of title should not be ordered until you receive notice from the bank of the granting of the applications for loans.

"The secretary-treasurer of many associations is also a notary public; some are fire insurance agents. Wherever charges for service are standardized, such as fire insurance premiums written in board companies, and charges for notarial work, the bank knows of no reason why a secretary-treasurer when rendering such service may not make the customary charge against association members. However, all commissions should be limited to such classes of service. Under no circumstances should a commission be charged or any compensation accepted by a secretary-treasurer in the contracting for abstracts of title.

"Secretary-treasurers will be required to furnish an itemized statement showing the source of all fees and other compensation received in connection with their services as secretary-treasurers. In all such matters no secretary-treasurer should accept compensation in any form unknown to his association.

"In making all such arrangements, as are herein referred to, secretary-treasurers should lay such matters before the board of directors.

"All communications from the federal farm loan board or the bank should be laid before the board of directors at the meeting next following receipt of same."

REVIVING OLD ORCHARD

In treating tree trunks with concrete, as advised in a former Cultivator, I would suggest that after thoroughly scraping and cleaning the interior of the cavity the surface should be disinfected and a covering of asphalt used before the cement is filled in.—G. F. C.

How to Keep Cereals and Flour

Neither cereals nor flour will keep indefinitely. During warm weather cereals will germinate within 30 days, and sooner if kept in a warm room or kitchen where the temperature is above 65 degrees. Cereals will spoil more quickly than flour.

Flour should remain in good condition for at least four months after milling, if the mill is modern, clean and flour is manufactured under proper and sanitary conditions.

Keep both cereals and flour in a clean, cool, dry place, where the cool air can circulate freely. Flour will improve in quality, age naturally and make better bread, biscuits and cake if left in the standard cotton sack used by at least 95 per cent of the mills in the United States. Glass jars, tin receptacles or any air-tight container should be avoided, as they prevent aeration of the flour, which is necessary for proper maturing. If your storage room is sufficiently large and it is your intention to carry stocks for a long period, you will obtain the best results by plac-

ing your flour or cereals on a small table in the center of your storage room, and at least once each month brush off the sacks, packages and table on which the goods are placed. We do not advise hoarding supplies, but this information is given with the desire to prevent loss and waste to those who have purchased supplies in excess of their immediate requirements.

The first essential for every purchaser to consider is whether or not stocks purchased are freshly milled. It is well to remember that with the present scarcity of freight cars, vessels and tonnage of all kinds, it is practically impossible for an eastern or northern miller to manufacture and deliver flour or cereals in California under 30 days. As a matter of fact, most of the flour and cereals shipped to this market are more than 60 days old before they reach the consumer. All of the cereals and flour required by the people of California can be manufactured by the mills in this state, and for general family use no better flour is made, regardless of rice.—O. H. M.

Book Review  
"BUSH FRUITS"

"Bush Fruits," by F. W. Card; published by the Macmillans, New York; \$1.75.

The publishers say: "First published in 1898 when the author was professor of horticulture in an agricultural college, this book has come to be regarded as standard in its field. It now appears entirely revised and rewritten by Professor Card, who has in the meantime had experience in the growing of fruits and who knows the various problems which confront the amateur and professional grower from both the practical and the theoretical end. The chapters on insects and diseases were prepared by specialists; the articles on the handling and disposal of the crop describe the latest practices; the science as well as the instruction and advice of the actual commercial gardener are here. Currants, gooseberries, blackberries, raspberries, dewberries and blueberries are all taken up in turn, as are several other small fruits, and full information on each is given."

There are 17 chapters in the more than 400 pages of well printed text, with many illustrations. There is also one chapter devoted to miscellaneous types of bush fruits. It is the most complete treatise on these small fruits we have ever seen.

# WATER TANKS

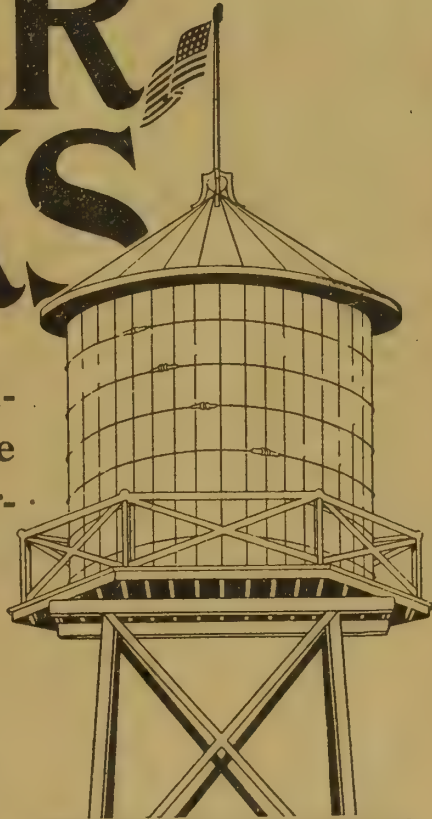
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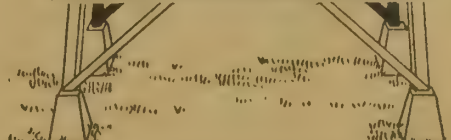
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Livestock and Dairy Journal, Established 1901,  
Combined with California Cultivator 1916

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loss through dishonesty of any adver-  
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tempt, however, to adjust trifling differ-  
ences between subscribers and honest,  
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George Ade says: "The world is roughly divided into two classes—those who saw wood, and those who sit on the fence and tell others how to saw wood," and of all the years when our "advisers" sit on the fence and give instruction to the farmer this year takes the plum and the cake and all the other good things of the pantry. It has become almost sickening to the farmer—who, spurred on by patriotic spirit and his own interests, backed by years of experience, has been doing his best—to listen to some of the bunk which has been passed on to him. However, we are doing pretty well, thank you, and in spite of all obstacles and advice—and some weather—the farmer will still win the war.

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One of Los Angeles County's horticultural inspectors, J. W. Mashmeyer, of Pomona, says we did not quote him strictly correct in the account of the Claremont Pomological

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In each district a number of automobile owners have pledged the use of their machines in rushing trailers to any place where a fire breaks out. There is also a volunteer force of twenty farmers for each trailer.

Fires may or may not be incendiary, but in any case they are coming all too frequently.

Be prepared.

Again, regarding the heat killing all the scale, it must be borne in mind that every black scale is capable of hatching 3000 or more young. If 2900 youngsters of each scale are destroyed the slaughter is great but the increase is still a hundred-fold, therefore the usual claim of "all the scale are killed by heat" must be taken with due allowance.

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The fruit grower is finding compensation because of the "hot spell." The nation is finding compensations because of war. It is destructive, economically, physically, morally. But to lessen that destruction so far as possible the nation is being taught to stop the wastes, be more economical with food, with all resources, and more efficient in all service.

The food speculator and gambler are dying hard, but their power will certainly be greatly reduced. Now congress has said that the destruction of grains in the making of all strong drinks must stop. The use of barley in beer manufacture is passed up to the president.

Not content with any action congress might take, the strongest farmers' organization in California—The Farmers' Protective League—is appealing for more efficient help, and to that end is appealing to boards of supervisors in various counties with the following:

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of \_\_\_\_\_ County.

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Be it resolved, That the Farmers' Protective League, as a war measure, call upon all county councils of defense, county boards of supervisors and town governments to enforce existing laws and to cancel every license that is a menace to agricultural efficiency.

The Farmers' Protective League was asked and authorized to follow up this resolution, known as resolution number three, hence calls upon the various county and local governments to the end that your attention may be called to the necessity of enforcing existing laws and otherwise regulate saloons in prohibition of the sale of liquor to intoxicated persons, as a war measure and in the interests of agricultural efficiency.

Thus, with the intention of carrying out the spirit of this meeting, this letter and resolution is most respectfully submitted to you.

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**ROBERT H. LOUGHRIDGE**

Announcement of the death of Robert Hills Loughridge, noted as a soil chemist and geologist and Professor of Agricultural Chemistry, Emer-

itus, in the University of California, in Waco, Texas on Sunday morning, July 1, was made by the University of California.

Since his retirement from active service in the university in 1909 Professor Loughridge had not been in robust health. He was one of the most tireless investigators, working with Dr. Hilgard in the University of California since 1891. He made particular study of methods of reclaiming alkali lands and of the questions of irrigation and drainage. With all his other high qualities he was a most genial and likable man.

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The producing interests have expected much of the federal farm loan banks. The one which is to handle the business for the Pacific Coast has been located at Berkeley. Applications have been filed and a few loans have been made. Some have felt that it has taken longer to secure action than should be the case. However, the would-be borrowers have been fairly patient. During the last few weeks those closer to the inner circle have imagined things were not running smoothly. San Francisco dailies about two weeks ago began to question as to the trouble brooding over the federal farm loan bank. We understand this was denied by President White but about the first of the month public announcement was made of the resignation of Dr. Elwood Mead of California and R. L. Douglas of Nevada. It was rumored that Prof. Thomas of Utah also tendered his resignation, but this was held up for the time being. All who know Dr. Mead appreciate the fact that he is no quitter and that with his great interest in advancing the welfare of the producers of California he would not discontinue his work with the federal farm loan bank if there were still opportunity for service. The San Francisco Chronicle states:

"Immediately following the intelligence at Washington, Commissioner Norris replied urging every effort to restore harmony. He forwarded two wires to each member of the board, in which it was indicated that an attache of the commission would be sent West at once to survey the situation. Friends of the retiring board members declare that it has been impossible for them to work with President White, who is charged with concentrating the labor of the board in his own hands to the complete exclusion of the others."

There is no man on the Pacific Coast who would give the bank such a standing with producers as Dr. Mead and we regret that the action of the management has been such as to cause this great movement to lose the services of a man of his type. A bit more of the history is given in the Chronicle of July 3, as follows: "The history of the present outburst dates back to the time when Secretary of the Treasury William McAdoo visited the Coast in advance of Herbert Quick, George W. Norris and W. S. A. Smith. During that trip Mead was freely consulted and urged to take the presidency of the bank. Mead declined, because of his university duties, but offered his service as a director. He was then asked to suggest others, and when McAdoo left the Coast it was thought that the personnel of the board was agreed upon. The surprise followed with the naming of White, a stranger to Mead and his associate in farm economics and finance. Thomas and Mead were the only two of the original suggestions to remain in the nominated list of directors.

"It subsequently developed that White was a law partner of George Lane, and Professor George Elliott of the law department of the State University. Lane is a brother of Secretary of the Interior Franklin K. Lane, and Elliott married a sister of President Woodrow Wilson's first wife. The suggestion of politics was scented and accepted as correct. The second upset came when, instead of allowing the board to organize itself, White was named as president as well as director."

**Agricultural Notes**

Serious injury to the bean crop of France was caused by bean thrips.

Ontario, Canada's, output of potatoes will be vastly larger than any preceding year.

New Zealand prohibits the exportation of wheat and flour, meat, hides, wool and rabbits.

The Spanish government permits export of 40,000 tons of potatoes with an export tax of 41 cents per cwt.

Immense shipments of agricultural implements will be made to India as soon as transportation can be secured.

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Butte County prune growers are hoping to sell on a six-cent basis.

California's output of barley will be 2,000,000 bushels greater than last year.

The Placer County farm bureau has a purchasing and marketing department.

Sonoma County's blackberry and Loganberry fields are turning out immense crops.

The extremely warm weather of the middle of June hastened ripening of all grain and fruit crops.

Yolo County has had several field fires which have caused immense destruction in grain sections.

A large tract of marsh land will be drained and made productive near Ferndale, Humboldt County.

To correct labor conditions it has been suggested that large numbers of negro helpers be secured from the South.

There have been resignations of two members of the board of directors of the federal farm loan bank at Berkeley.

Humboldt County dairymen are making a strong appeal for the con-

## Central California

Tulare County hopes to have a farm adviser.

A large fruit packing house is being erected at Turlock.

A cattle rustler was recently sentenced to nine years in San Quentin.

The cantaloupe shipping season will open in Stanislaus County about July 25.

Oakdale, Stanislaus County, reports almond orchards bending under the load of fruit.

Many San Joaquin Valley ranchers report thefts of wheat and other grains from the fields.

The California Rodeo begins at Salinas, Monterey County, next Wednesday, July 18.

Terra Bella, Tulare County, recently shipped a car of grain direct to the allies in Europe.

Pajaro Valley apple growers are discussing rubber stamp for marking each individual fruit.

One gopher succeeded in shutting off the light and power from Fresno City by a break in a canal.

Forty-five per cent more of the hold-over raisin crop has been disposed of than last year same date.

Madera and Fresno Counties will unite in building a bridge on a fifty-fifty basis over the San Joaquin river.

Gas, Monterey County, is boast- it it is becoming one of the nportant live stock centers of ia.

y Horticultural Commissioner l of Fresno, because of lack of i the county court house, will s offices to the Holland build-

tate now allows a bounty of male mountain lions and \$30 les. The state has paid \$50, he last ten years in bounties i.

Stanislaus County Farmers' as purchased three ware- and will conduct a general nd selling business, handling uit and feeds.

e County has been working time to secure the necessary of her farmers as members rm bureau and now consid- n adviser for that county as-

Markarian, Fresno fig grow- orchard is said to be the g orchard in the world, is

leading a new fig packing industry which it is thought will bring prosper- ity to Central California fig growing sections.

The manager of the Prune and Apricot Growers Association recently fixed upon a 6¼ cent basis for prunes, September shipment; 40s, 50s to command a half cent advance. California will ship this year about 200,000,000 pounds of prunes.

San Joaquin Valley fruit growers are receiving very satisfactory prices for fruits. Prices are generally running about 25 to 50 per cent higher than highest prices of last year. Last year's canning peaches ranged around \$27.50 and \$30.00. This year canneries are freely paying \$50.00 for canners, \$30.00 for Elbertas, Fosters and Lovells. Malaga grapes are running around \$30.00 and \$35.00, Thompsons and Cornichon's \$30.00, Emperors \$50.00. Dried apricots have sold as high as 17 cents.

## Southern California

The cannery at Banning opened about July 1.

The Pomona cannery opened on apricots June 28.

Imperial Valley watermelons are moving out at the rate of about 20 carloads daily.

A five-stand gin for handling Egyptian cotton is on the way to Blythe, Palo Verde Valley.

Navel orange growers of California feel that the coming year's crop will be almost a total loss.

Beaumont fruit growers are planning to start at once on a squirrel extermination campaign.

Cantaloupe oil is the latest suggestion for use of off grade cantaloupes of the Imperial Valley.

Pomona fruit growers are operating cooperatively dry yards formerly owned by G. H. Waters.

A fruit packing house in Beaumont, Riverside County, is having its capacity more than doubled.

One bee keeper on the "desert" out in the Palo Verde Valley, recently shipped a carload of honey.

The box shook shortage has been largely overcome and now citrus shippers are faced with a car shortage.

The flood crest of the Colorado River has passed and Palo Verde and Imperial Valley farmers are breathing easier.

W. L. Churchill is the new manager to take charge of affairs of the Lima Bean Growers Association at Oxnard.

Twelve extra train crews were required daily to handle cantaloupes out of Imperial Valley during the height of the season.

Ventura County bean growers report injury to the bean crop by the hot wave was not as severe as first anticipated.

The sugar factory at Oxnard, Ventura County, is installing equipment for conversion of the wastes of the factory into potash.

Apple and melon men are investigating advisability of branding each individual fruit by using a new electrical branding machine.

Riverside County alfalfa growers recently met and discussed plans of stabilizing the market and securing fair return to members.

The San Bernardino Valley Producers Association has received \$25,000 for potatoes sold this season. They are receiving around \$3.75.

The Coachella Valley Date Growers Association is discussing methods of extermination of the scale of date trees, also the matter of marketing of dates.

While the scale pest has been hit by the hot wave investigators are urging continuance of the fight against the pest to accomplish almost complete eradication.

A water storage project calling for the investment of approximately \$2,000,000 is contemplated for San Dimas Canyon, Los Angeles County. It will create a lake covering 500 acres.

Because of pre-cooling demands and general volume of business the creamery at Brawley, Imperial County, will increase its capital from \$75,000 to \$250,000, to be invested largely in refrigerating equipment.

## The Coast

Chandler, Arizona, has a live boys' pig club.

Douglas County, Oregon, has 2000 acres of beans.

Idaho's wheat acreage increased over 10 per cent this year.

Idaho will produce over 2,000,000 bushels of apples this year.

California grown sweet corn is selling in Seattle at 85 cents per dozen.

Carloads of strawberries are moving out of the Hood River section of Oregon.

Rabies is destroying vast numbers of coyotes on the plains of Eastern Washington.

The disaster of a large forest fire near Douglas, Arizona, was lessened by timely rains.

The Idaho Poland-China futurity will be a strong feature at the Idaho State Fair at Boise this year.

Prune growers of Salem, Oregon, have formed a pool comprising about 1700 acres of prune orchards.

One silo construction center of Yamhill County, Oregon, recently shipped five carloads of silos.

Forty members of boys' and girls' club work in Arizona will receive free trips to the state fair this fall.

Shortage of feed in some portions of Arizona and New Mexico is making a serious problem for many range owners.

One Oregon wool grower recently sold 17,000 pounds of wool for \$8,500. He also closed out a number of five-year-old ewes at \$10 per head.

The Oregon Agricultural College will defer opening this year until October 28, this to permit pupils to work on farms as late as possible.

Silos are becoming fashionable in Arizona, one section near Tucson has nearly a score under construction, with a total capacity of over 4000 tons.

Union stock yards were opened at Pasco, Washington on June 25, the first day's sales aggregating \$15,000. The total cost of the yards was under \$20,000.

The Northwest Live Stock Association will hold its next live stock show at Lewiston, Idaho, November 8 to 15. The state legislature makes liberal appropriations for premiums.

The Arizona Council of Defense has appointed a lady to take charge of various districts and encourage more complete conservation of food supplies through canning and drying clubs.

Members of the Oregon Cattle and Horse Raisers' Association are planning a trip through the interior counties of Oregon, the object being securing information for members and building up the membership.

The White River Valley, Washington, Cow Testing Association reports membership of 680 cows, the best cow for the month of May making a showing of 90.39 pounds. A great number of cows ranged above the 60-pound mark.

State and other large fair dates for the Northwest are: Pendleton Round-up September 20-22; Idaho State, Boise, September 22-29; Oregon, Salem, September 24-29; Montana, Helena, September 24-29; Northwest Live Stock, Lewiston, November 16-23; Pacific National Dairy, Portland, November 16-23; Pacific International Live Stock, Portland, November 19-24.

road commission and the water users anticipate greater efficiency of their lands.

Rice growers of Butte County are contemplating marketing rice in attractive cartons. An effort is being made to have the packing done in Butte County but if impracticable will have it done in Eastern packing houses.

The late spring frost, which it was feared might greatly lessen the output of fruit, has proven far less disastrous than anticipated. Commissioner Gould of Yolo County reports peach, plum, prune and grape crops turning out well.

A cherry grower at Redding, Shasta County, has saved his crop by rigging a number of scarecrows through the orchard, each having attached to it a cow bell and these bells in various parts of the orchard are rung day and night by jerking cords connected with a water wheel.



Established 1886. Twenty-eighth Year

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Rural Californian, Established 1877  
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	Dr. Wm. Petrie

Live Stock: W. S. Guilford, C. L. Hughes, C. A. Briggs.

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E. J. Vosler has returned from a four-months' trip to Australia and brings a supply of parasites for the beet leaf hopper.

It is estimated that California will produce about 5,600,000 bushels of wheat this year. The crop will be slightly greater than last year.

Creameries of Humboldt County made largest returns for May and June butterfat of any preceding year. Prices varied from 37½ to 43 cents.

A new grandstand and other improvements are being made on the fair grounds at Ferndale, Humboldt County, in readiness for the fair to be held August 1-4.

The cannery at Yuba City will start its run later this year because of lateness of season. The first run last year was on July 12. This year it will not be before the 20th.

The Water Users Association, with holdings in Yolo County, has won a victory in the hearing before the railroad commission and the water users anticipate greater efficiency of their lands.

Rice growers of Butte County are contemplating marketing rice in attractive cartons. An effort is being made to have the packing done in Butte County but if impracticable will have it done in Eastern packing houses.

The late spring frost, which it was feared might greatly lessen the output of fruit, has proven far less disastrous than anticipated. Commissioner Gould of Yolo County reports peach, plum, prune and grape crops turning out well.

A cherry grower at Redding, Shasta County, has saved his crop by rigging a number of scarecrows through the orchard, each having attached to it a cow bell and these bells in various parts of the orchard are rung day and night by jerking cords connected with a water wheel.

## Central California

Tulare County hopes to have a farm adviser.

A large fruit packing house is being erected at Turlock.

A cattle rustler was recently sentenced to nine years in San Quentin.

The cantaloupe shipping season will open in Stanislaus County about July 25.

Oakdale, Stanislaus County, reports almond orchards bending under the load of fruit.

Many San Joaquin Valley ranchers report thefts of wheat and other grains from the fields.

The California Rodeo begins at Salinas, Monterey County, next Wednesday, July 18.

Terra Bella, Tulare County, recently shipped a car of grain direct to the allies in Europe.

Pajaro Valley apple growers are discussing rubber stamp for marking each individual fruit.

One gopher succeeded in shutting off the light and power from Fresno City by a break in a canal.

Forty-five per cent more of the hold-over raisin crop has been disposed of than last year same date.

Madera and Fresno Counties will unite in building a bridge on a fifty-fifty basis over the San Joaquin river.

Salinas, Monterey County, is boasting that it is becoming one of the most important live stock centers of California.

County Horticultural Commissioner Rouillard of Fresno, because of lack of space in the county court house, will move his offices to the Holland building.

The state now allows a bounty of \$20 for male mountain lions and \$30 for females. The state has paid \$50,000 in the last ten years in bounties for lions.

The Stanislaus County Farmers' Union has purchased three warehouses and will conduct a general buying and selling business, handling grains, fruit and feeds.

Tulare County has been working for some time to secure the necessary one-fifth of her farmers as members of the farm bureau and now considers a farm adviser for that county assured.

Henry Markarian, Fresno fig grower, whose orchard is said to be the largest fig orchard in the world, is heading a new fig packing industry which it is thought will bring prosperity to Central California fig growing sections.

The manager of the Prune and Apricot Growers Association recently fixed upon a 6¼ cent basis for prunes, September shipment; 40s, 50s to command a half cent advance. California will ship this year about 200,000,000 pounds of prunes.

San Joaquin Valley fruit growers are receiving very satisfactory prices for fruits. Prices are generally running about 25 to 50 per cent higher than highest prices of last year. Last year's canning peaches ranged around \$27.50 and \$30.00. This year canneries are freely paying \$50.00 for canners, \$30.00 for Elbertas, Fosters and Lovells. Malaga grapes are running around \$30.00 and \$35.00, Thompsons and Cornichon's \$30.00, Emperors \$50.00. Dried apricots have sold as high as 17 cents.

## Southern California

The cannery at Banning opened about July 1.

The Pomona cannery opened on apricots June 28.

Imperial Valley watermelons are moving out at the rate of about 20 carloads daily.

A five-stand gin for handling Egyptian cotton is on the way to Blythe, Palo Verde Valley.

Navel orange growers of California feel that the coming year's crop will be almost a total loss.

Beaumont fruit growers are planning to start at once on a squirrel extermination campaign.

Cantaloupe oil is the latest suggestion for use of off grade cantaloupes of the Imperial Valley.

Pomona fruit growers are operating cooperatively dry yards formerly owned by G. H. Waters.

A fruit packing house in Beaumont, Riverside County, is having its capacity more than doubled.

One bee keeper on the "desert" out in the Palo Verde Valley, recently shipped a carload of honey.

The box shock shortage has been largely overcome and now citrus shippers are faced with a car shortage.

The flood crest of the Colorado River has passed and Palo Verde and Imperial Valley farmers are breathing easier.

W. L. Churchill is the new manager to take charge of affairs of the Lima Bean Growers Association at Oxnard.

Twelve extra train crews were required daily to handle cantaloupes out of Imperial Valley during the height of the season.

Ventura County bean growers report injury to the bean crop by the hot wave was not as severe as first anticipated.

The sugar factory at Oxnard, Ventura County, is installing equipment for conversion of the wastes of the factory into potash.

Apple and melon men are investigating advisability of branding each individual fruit by using a new electrical branding machine.

Riverside County alfalfa growers recently met and discussed plans of stabilizing the market and securing fair return to members.

The San Bernardino Valley Producers Association has received \$25,000 for potatoes sold this season. They are receiving around \$3.75.

The Coachella Valley Date Growers Association is discussing methods of extermination of the scale of date trees, also the matter of marketing of dates.

While the scale pest has been hit by the hot wave investigators are urging continuance of the fight against the pest to accomplish almost complete eradication.

A water storage project calling for the investment of approximately \$2,000,000 is contemplated for San Dimas Canyon, Los Angeles County. It will create a lake covering 500 acres.

Because of pre-cooling demands and general volume of business the creamery at Brawley, Imperial County, will increase its capital from \$75,000 to \$250,000, to be invested largely in refrigerating equipment.

## The Coast

Chandler, Arizona, has a live boys' pig club.

Douglas County, Oregon, has 2000 acres of beans.

Idaho's wheat acreage increased over 10 per cent this year.

Idaho will produce over 2,000,000 bushels of apples this year.

California grown sweet corn is selling in Seattle at 85 cents per dozen.

Carloads of strawberries are moving out of the Hood River section of Oregon.

Rabies is destroying vast numbers of coyotes on the plains of Eastern Washington.

The disaster of a large forest fire near Douglas, Arizona, was lessened by timely rains.

The Idaho Poland-China futurity will be a strong feature at the Idaho State Fair at Boise this year.

Prune growers of Salem, Oregon, have formed a pool comprising about 1700 acres of prune orchards.

One silo construction center of Yamhill County, Oregon, recently shipped five carloads of silos.

Forty members of boys' and girls' club work in Arizona will receive free trips to the state fair this fall.

Shortage of feed in some portions of Arizona and New Mexico is making a serious problem for many range owners.

One Oregon wool grower recently sold 17,000 pounds of wool for \$8,500. He also closed out a number of five-year-old ewes at \$10 per head.

The Oregon Agricultural College will defer opening this year until October 28, this to permit pupils to work on farms as late as possible.

Silos are becoming fashionable in Arizona, one section near Tucson has nearly a score under construction, with a total capacity of over 4000 tons.

Union stock yards were opened at Pasco, Washington on June 25, the first day's sales aggregating \$15,000. The total cost of the yards was under \$20,000.

The Northwest Live Stock Association will hold its next live stock show at Lewiston, Idaho, November 8 to 15. The state legislature makes liberal appropriations for premiums.

The Arizona Council of Defense has appointed a lady to take charge of various districts and encourage more complete conservation of food supplies through canning and drying clubs.

Members of the Oregon Cattle and Horse Raisers' Association are planning a trip through the interior counties of Oregon, the object being securing information for members and building up the membership.

The White River Valley, Washington, Cow Testing Association reports membership of 680 cows, the best cow for the month of May making a showing of 90.39 pounds. A great number of cows ranged above the 60-pound mark.

State and other large fair dates for the Northwest are: Pendleton Round-up September 20-22; Idaho State, Boise, September 22-29; Oregon, Salem, September 24-29; Montana, Helena, September 24-29; Northwest Live Stock, Lewiston, November 16-23; Pacific National Dairy, Portland, November 16-23; Pacific International Live Stock, Portland, November 19-24.



## Our Spring Pigs Are Mighty Good Buys

We have for sale a limited number of specially selected spring pigs, sired by Mayhews Leader 6th, a son of the \$3,000 Grand Champion of the World, Grand Leader 2nd. These pigs are well developed and are excellent value at their prices. All are cholera immune. The guarantee of Anchorage Farm is behind every pig.

Write today for full information to

**ANCHORAGE FARM**  
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Home of STAR LEADER,  
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**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by imported Stallion Ibn Mahruss, head of our Arabian stud. Dams are the choicest thoroughbred mares of Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahruss, world renowned imported desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle Stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the very best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted California State Record Cows. Write for details.

Correspondence Invited

**Anita M. Baldwin**

W. H. TAYLOR, Superintendent

Santa Anita, Cal.

## WHY NOT?

WHY NOT?

BUY A BULL, from one of our tested cows to head your herd?

DO A LITTLE FIGURING, and see just what you are losing by using a bull at the head of your herd that should have been sold for veal in the first place?

STOP THE LOSS NOW, by buying a good bull?  
GET INTO THE PROFIT PRODUCING CLASS?

WRITE NOW FOR DESCRIPTIVE BOOKLET OF A  
REMARKABLE OFFERING OF MALES AND  
FEMALES?

**Gotshall and Magruder**

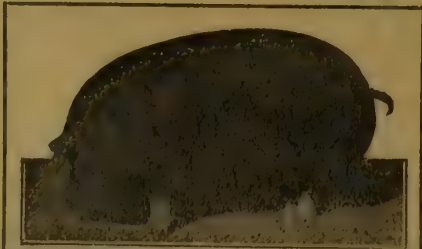
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IT MAKES THEM FAT.

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San Francisco, Cal.

When writing advertisers, mention The Cultivator.

## Butter and Cheese Scoring Contest

By H. S. Baird



WENTY-ONE cubes of butter and 16 cheese were entered in the third scoring of the 1917 Educational Butter and Cheese Scoring Contest held at Modesto. Four buttermakers and four cheese makers were present for the scoring. This part of the contest seems to be growing and we hope that even more interest will be taken by the butter and cheese makers in the future.

Hans Beck of the Danish Creamery, Fresno, received the highest score on butter with 94½. High scores on cheese were as follows: Cheddar; John Reber of Bieber, Arthur Schoenrock of Galt and Ray Weedmark of the University Farm tied with a score of 92; California (Granular): Ray Weedmark, University Farm 93; Jack: Chas. Basciarini, Columbia Dairy, Woodland and Rufus Steele, Swanton tied with a score of 92½.

The scoring was done by T. J. Harris, official inspector of the San Francisco Wholesale Dairy Produce Exchange, H. S. Baird and S. L. Denning of the Dairy Division. The following is a list of the scores:

### Butter

Ed Hooper, Spreckels Market Creamery, San Francisco, 93¾;

G. G. Plunkett, Exeter Creamery Company, Exeter, 93;

F. H. Strieby, University Farm, Davis, 93;

Harvey R. Smith, Exeter Creamery Association, Porterville, 92½;

J. T. Hague, McCloud Dairy, McCloud, 92¼.

**Summer Defects Prominent in Butter**  
S. L. Denning, who was one of the judges, makes the following comment on the butter:

"The butter entered showed the effect of the recent hot weather both in flavor and body. Some of the entries were criticised for an old, unclean flavor indicating that the cream was not of the best quality. Some of the cubes contained a neutralizer flavor. During the summer months it is a problem, especially in the hot valleys, to handle the cream so as to make a fair quality product. Several of the buttermakers have indicated that they are churning at night. Where the cream is hauled on routes and arrives at the creamery in the afternoon or evening it is undoubtedly better to churn at night because the sooner the cream is churned the better the butter will be. Even if the cream is pasteurized it should be churned as soon as possible and not held over night. The body in a large percentage of the entries was leaky and greasy. Several were also weak. These defects are very often caused by the butter warming up while working.

The average score of the 21 cubes was 92.25. Although this is a lower average than for the last two scorings it is a very satisfactory showing for this time of the year. There were no

scores below 90 and 66 per cent of the entries scoring 92 or better.

The composition scores will not be as high as they should be. The average percentage of moisture was 14.2 and the average percentage of salt was 2.3. The moisture varied from 13.0 to 15.9 per cent and the salt from 1.2 to 3.3 per cent. If this is representative of the daily makes some butter makers are losing money for the creameries. If, however, the low percentages of moisture are due to special churning those buttermakers are missing the intended benefits of the contest.

The color was very uniform throughout all the entries. The boxes were also very uniform in size and appearance."

### Cheese Not Uniform

The average score of all cheese entered was 90.97. The following is a report on the different classes, given in the order of average score, average moisture and average fat.

Cheddar, 91.6, 37.6, 29.8;

California (Granular), 91.1, 39.96, 29.66;

Jack, 90.2, 43.38, 22.5.

The common criticisms on the flavor of the cheddar cheese were "bitter" and "sour." These flavors are, no doubt, caused largely by a poor quality of milk. A few cheddars were criticised for being open and others for being dry and crumbly. High acid milk will cause the latter defect. The criticisms on the flavor of the California (Granular) cheese were much the same as those on the cheddar. The body and texture of several of the cheese of this class were criticised for being dry and rubbery. The "eyes" which are characteristic of this cheese were lacking, most of the cheese being "close" and "heavy." It is quite probable that four-fifths of the defects in the two types of cheese mentioned above were caused by high acid and unclean milk.

The jack cheese lacked greatly in uniformity, the only similarity of any two cheese being the shape. This seems to be a fair representation of the jack cheese reaching the market according to the reports of the buyers. The moisture content of the cheese varied from 39.4 to 49.4 per cent. Some of the flavors were very unclean indicating that the milk used was of a very poor grade. In order to make a good jack cheese the milk used must be fully as good as milk used for the other types of cheese. It seems to be the opinion of some that "half skim" jack cheese can be made from almost any quality of milk because the cheese is to be dried. Unclean flavors will not be lost in drying, and it will be fully as objectionable when the cheese reaches the consumer as unclean flavors in the softer types of cheese.

The next scoring will be held in connection with the State Fair at Sacramento, September 8th to 15th.

## Raising Young Kids

Written for California Cultivator By Martha W. Howland



GET the best results from a young kid by giving its mother's or another doe's milk, warm and living, newly drawn from the udder, either by allowing it to nurse or by means of a baby's bottle. If the bottle method is adopted five feeds a day

are necessary at first, beginning with the first milk, or colostrum, about five ounces at a feed, and gradually increasing the amount and decreasing the number of feeds per day till at four months the kid is taking nearly a quart at a feed and being fed three times a day, morning, noon and evening.



Warranted to Give Satisfaction.

**Gombault's  
Caustic Balsam****Has Imitators But No Competitors.**

▲ Safe, Speedy and Positive Cure for  
Curb, Splint, Sweeney, Capped Hock,  
Strained Tendons, Founder, Wind  
Puffs, and all lameness from Spavin,  
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Cures all skin diseases or Parasites,  
Thrush, Diphtheria. Removes all  
Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism,  
Sprains, Sore Throat, etc., it is invaluable.  
Every bottle of Caustic Balsam sold is  
warranted to give satisfaction. Price \$1.50  
per bottle. Sold by druggists, or sent by ex-  
press, charges paid, with full directions for  
its use. Send for descriptive circulars,  
testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

**The Giant  
Of The Dairy****Grade up with a Jersey Bull!**

He is half the herd, and the breed  
determines half the profits. Breed  
him to your grade cows and bring  
the herd average near the Jersey  
average—489 pounds of butter  
fat per year. Your calves will be  
beauties. They'll mature quickly  
into gentle, hardy, vigorous and  
persistent milkers, long-lived and  
adapted to any climate. Let us  
tell you more about them. Send  
for our book, "The Story of The  
Jersey." It's free and it's a dandy.

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Shorthorn herd headed by Count  
Glory, 426982, grand champion at  
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Berkshire herd won Premier Ex-  
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economic investment. The ten largest records of  
Holstein cows average 1,007 pounds of butterfat  
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produced 974 pounds of butterfat, and 18,120  
pounds of milk. One good Holstein cow will pro-  
duce as much as two ordinary cows at a saving  
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If the kid is allowed to remain with  
its dam, and she is a good mother,  
she will regulate its feedings herself,  
but if she prove an indifferent one the  
caretaker should hold the doe at stat-  
ed times, and let the kid get a full  
meal. This is the exception to the  
rule as nearly all goats are good moth-  
ers. When the kid begins to chew its  
cud then other food should be acces-  
sible, good alfalfa hay to nibble at, or,  
better still, freshly cut "filaree," sup-  
plemented with about two ounces of  
rolled barley at first and gradually in-  
creasing until at four months it is re-  
ceiving one-half pint per day. After  
a year old give all the alfalfa hay it  
will eat and one pint of rolled barley

per day, preferably given in two feeds,  
night and morning. The milk should  
be given as previously stated, up to  
five months of age, then gradually  
stopped.

Keep kids in a big, shady corral with  
a jumping platform or bench in the  
center so they can play and exercise  
at will. Never keep one alone. If  
there is no other doe, then keep two  
kids together.

There is no other satisfactory sub-  
stitute, although cow's milk, sweet and  
pure, can be used. If this is not avail-  
able I would use condensed milk in  
preference to these prepared meals  
that are on the market.

**A Great Holstein Sire Comes to  
California**

One of the most important improve-  
ments ever made in the Holstein  
blood in California comes through the  
purchase of the great sire, King of  
the Black and Whites, by Henderson  
Company, Sacramento. While the pur-  
chase price has not been made public,  
it was undoubtedly the longest price  
ever paid for a bull of any age or

King of the Black and Whites now  
has 20 A. R. O. daughters, several  
with records above 20 pounds butter  
in seven days as 2 year olds, and has  
a large number of daughters, yet to  
freshen with first calf in a number of  
good herds. He will be given a large  
opportunity in the splendid herd of  
over 300 head that Henderson Com-

**HOLDER OF THREE STATE  
RECORDS**

Stanislaus Princess Cleopatra, 239-  
986, owned by A. J. Stalder, and as  
senior three-year-old holder of three  
state records. She started her test

breed by a California breeder, for  
King of the Black and Whites is in-  
sured for \$30,000.

King of the Black and Whites ranks  
as one of the top-notch young sires of  
the breed, unexcelled in the uniform  
high production of his female ances-  
tors, and carries a combination of  
what is probably the greatest proven  
transmitting blood of the breed. He  
was bred by A. A. Hartshorn of New  
York, formerly president of the Hol-  
stein-Friesian Association of America,  
a man who has devoted the greater  
part of his life to a herd of registered  
Holsteins that today has no equal in  
all the world in respect to number of  
families with consecutive generations  
of cows with official records above 30  
pounds butter in seven days.

King of the Black and Whites was  
the first bull of the breed whose seven  
nearest dams averaged over 30 pounds  
butter in seven days, and the records  
of all seven of these dams are re-  
markably uniform in high milk flow  
and a most desirable average percent-  
age of butter fat. Six of the seven  
nearest dams have records above 30  
pounds of butter in seven days, and  
the average for the whole seven is  
574.9 pounds milk, 31.04 pounds butter  
in seven days, average per cent of  
butter fat 4.31.

May 12, 1917, and made a seven-day  
record of 513.9 pounds of milk, 31.04  
pounds butter. Her milk tested 4.83.  
Her 14-day record was 996 pounds  
milk, 59.29 pounds butter. Thirty-day  
record 2198.7 pounds milk, 119.7  
pounds butter. Average test 4.35.

pany already has, and the benefit that  
the dairy industry of California will  
derive through the bringing of this  
great young sire to the state can hard-  
ly be overestimated.

**CHANGE IN JERSEY REGISTRA-  
TION FEE**

The American Jersey Cattle Club  
has revised its schedule of registra-  
tion fees. It now stands as follows:

Females one year old or under, to  
members, \$1.00 each; to non-mem-  
bers, \$2.00.

Females over one year old and not  
more than two—To members, \$2.00  
each; to non-members, \$3.00 each.

Females over two years old—To  
members or non-members, \$10.00  
each.

Males one year old or under—To  
members, \$2.00 each; to non-members,  
\$3.00 each.

Males over one year old and not  
more than two—To members, \$3.00  
each; to non-members, \$5.00 each.

Males over two years old—To mem-  
bers or non-members, \$10.00 each.

**DAIRY CATTLE CONGRESS**

The Dairy Cattle Congress will be  
held at Waterloo, Iowa, October 1-7.  
There will be addresses on dairy sub-  
jects and an exhibition of dairy cat-  
tle, dairy equipment and creamery  
supplies.

**CUTTER'S  
BLACKLEG PILLS**

"California's Favorite"  
for nearly 20 years

For the Prevention of Blackleg  
in calves and young cattle

Their superiority is due to near-  
ly 20 years of specializing in  
"Vaccines and Serums only."

Year in and Year Out they give  
better satisfaction than any  
other vaccine made, and the  
cost of a few cents per dose  
is cheap insurance against a  
disease that always takes the  
fattest and best.

Single Pills may be used for or-  
dinary and range stock.

Double Pills should be used for  
pure bred and high grade stock.

Use any Injector, but Cutter's  
simplest and strongest.

**Prices:**

10 dose pkge. Single pills \$1.00  
50 dose pkge. Single pills 4.00  
10 dose pkge. Double Pills 1.50  
50 dose pkge. Double Pills 6.00  
Cutter's Pill Injector.... 1.50

Insist on Cutter's. If unobtain-  
able, order direct.

Write for new booklet, "The  
Control of Blackleg." It tells  
about Anti-Blackleg Serum  
which cures Blackleg and  
may be used simultaneously  
with vaccine to combat out-  
breaks and safely protect val-  
uable stock.

The Cutter Laboratory, Berkeley, Calif.

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Eastern Agent

**CUTS LABOR IN HALF**

Do you first disinfect, and then go over  
all surfaces again with whitewash in  
order to keep your stables, dairies  
and poultry houses bright, cheerful and  
free of lice, mites, fly eggs and the germs of  
roup, white diarrhea, cholera, glanders, etc?  
Such a method is a waste of time, money and  
labor. Use Carbola instead—it does the two things  
at the same time. It is a disinfectant that dries  
out white—not dark and colorless—and gives much  
better results.

**CARBOLA**  
The Disinfecting White Paint

Carbola is a mineral pigment combined with a  
germicide twenty times stronger than pure car-  
bolic acid. Comes in powder form, ready to use  
as soon as mixed with water. Applied with brush  
or sprayer. Will not clog sprayer. Will not flake,  
blister or peel off nor spoil by standing. No dis-  
agreeable odor. Absolutely safe—will not harm  
stock if they lick surfaces painted with Carbola.

If your dealer does not carry Carbola, send his  
name with order and we will ship direct.

10 lbs. (10 gals.) \$1 and postage. 20 lbs. 20 (gals.)  
\$2 delivered. 50 lbs. (50 gals.) \$4 delivered  
Trial package—enough to paint and disinfect  
250 square feet—sent by parcel post for 25 cents  
Germain Seed & Plant Co.  
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**HOLSTEIN-FRIESIAN  
CATTLE**

Registered young bulls from best  
families. Some of serviceable age.

**REGISTERED BERKSHIRE PIGS**

Masterpiece, Longfellow and Robin  
Hood Strains. Fine individuals of  
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Careful attention given to mail  
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Pure Bred Stock Sales a Specialty

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Experience.

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Extra parts are always available without delay  
for standard advertised machinery. This class always  
found in the California Cultivator.





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In our own modernly equipped Cotton Mills at Lexington, N. C., nainsook from which Loose-Fitting B. V. D. Undergarments are made, is produced in a scientific manner from selected cotton to insure durability in wash and wear.

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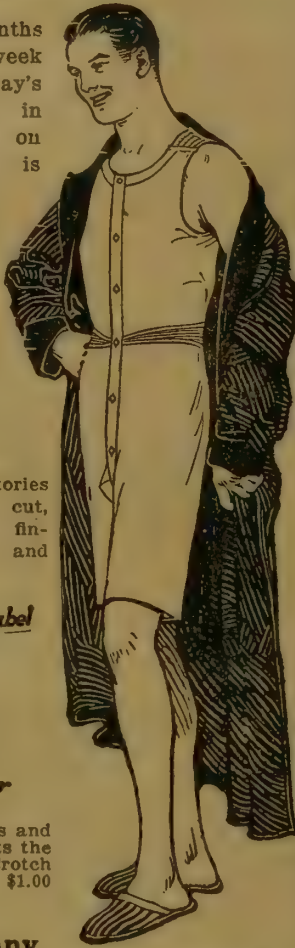


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## Field Notes From the Live Stock Men

Gotshall and Magruder have assembled a herd of registered Holsteins on their farm at Ripon that is bound to be heard from. Their state record, 27 pound, two-year-old daughter of King of the Pontiacs shows promise of great production as she matures, and there are some royally bred heifers in the herd that are bound to make good.

The senior herd sire is a grandson of King of the Pontiacs, being sired by King Pontiac Netherland Segis, whose dam is a daughter of King Segis Pontiac. His dam is a 31-pound four-year-old daughter of Sir Skylark Ormsby Hengerveld and this combination of blood promises much in this sire.

King's Valet, the grand old Jersey sire in the N. H. Locke Company herd at Lockeford, is today a remarkable example of vigor in an aged sire. Although nearing his fifteenth birthday he is straight of back, bright of eye and quick as a two-year-old. In the Locke herd he has a splendid lot of daughters. These have for years been consistent winners on the show circuit in the younger classes and they have developed into wonderfully deep bodied cows with uniformly good top lines and probably the best average lot of udders of the daughters of any one Jersey sire in the state.

King of the Black and Whites arrived safely at Henderson Company's Ranch, Sacramento, after his long trip from New York. He received the most enthusiastic reception ever accorded a bull on arrival in California. A crowd estimated at no less than five hundred persons visited him at his new home.

These are busy days on the big 1200 acre ranch at Galt, that is now the home of Willowmead herd of registered Holsteins owned by James McGillivray. A vast amount of development work is being done to make this one of the biggest and best Holstein breeding establishments in America.

J. W. Benoit has fortified against shortage of feed for his registered Holsteins on his farm at Modesto. A cement stave silo was recently erected and partially filled with barley cut in the milk. The Holsteins in the herd rank it one of the leading herds of Stanislaus County, many of the cows having good A. R. O. records. There is an especially promising lot of well grown heifers of good type coming on and they will be given an opportunity to show their producing quality in A. R. O. work.

The Third Sacramento Consignment Sale of registered Holstein cattle will be held at State Fair Grounds on October 25-26. Some consignments of high class cattle are promised from prominent herds, and nothing will be left undone to make this the greatest offering yet made at Sacramento.

Succulent forage should be provided for throughout the year. Do not expect the pig to live on this alone, as many farmers do. After the pig has been weaned do not turn him out to root hog or die. Feed him some barley and tankage each day; he will put on more flesh and bring you more profit than if he was turned out into a field of 80, 100 or more acres. After he has the bone and frame, give him all he will eat. Don't be afraid to cut the string on a sack of barley.

A pig should at the end of 30 days weigh 15 pounds. During the second month it should gain about one-half pound daily; during the third month it should gain seven-tenths of a pound

daily and during the fourth nine-tenths pound daily. These gains can be increased if the sow is a good suckler and the feeder an experienced man. At five months it should be put on full feed and kept gaining from one to two pounds daily thereafter till ready for the market. Hogs fed in this way will reach maturity quicker and of more uniform size.

In selecting foods digestibility as well as bulk should be considered. The measure of the feeding value of any material is not so much the amount of protein, carbohydrates and fat it contains as the amount which the animal is able to get out of it.

## Veterinary

Answers in this column by Dr. Wm. Petrie, 2714 South Harvard Blvd., Los Angeles, are without charge. For immediate mail answer remit \$1.00. In writing questions give full symptoms or particulars of injury of animal.

Unsigned communications receive no attention.

### Caked Udder

I have a cow which has a hard caked udder. She will be fresh in several weeks.—Subscriber, Mecca.

Caked udder that comes sometime before calving is not so serious as when there is a large flow of milk. Rub the udder with the hands and milk her out clean twice a day. Also mix three pounds of epsom salts, two pounds of common salt and two ounces of powdered nux vomica and give her a handful in the feed once a day. Feed green or sloppy feed and see that she gets plenty of good drinking water. You should be able to get the swelling all out before calving.

### Rubbing Tail

I have a fine, six-year-old horse that rubs the hair all off the top of the tail. Did the same last summer but did not during the winter and the hair grew out again. Otherwise he is in good health.—Subscriber, Fresno.

It may be caused by pin worms in the rectum or by eczema in the skin. For pin worms inject two gallons of tobacco tea made by pouring boiling water on about four ounces of scrap tobacco. Repeat this in about a week. Allow the tea to cool before injecting it.

For eczema scrub the parts clean once with soap and warm water and then once a day wet the parts with chloride of zinc solution using one dram to the pint of water. Tie the horse so he can not reach any place to rub the tail because when the habit is once acquired he will continue to rub after the irritation is stopped. In a short time he will forget it.

### Large Type Poland Chinas



**W. H. Browning**  
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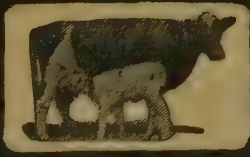
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**KING OF HOLLOW-HILL 25876**

The sire is a son of Itchen Daisy's May King of Langnath 17349, which was recently sold to a California breeder for the record price of \$8000, and of Caroline of Chilmark 24812 which has just finished an A. R. test with 15,185.9 pounds milk and 722.97 pounds butter fat.

King of Hollow-Hill combines the May Rose blood of Imp. Itchen Daisy III 15630 and Dolly Dimple 19144 with that of Imp. Mashers Galove 8572, Imp. Cora's Governor of Chilmark 8971 and Governor of the Chene 1297 P. S.

The prices on these calves are reasonable.

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## Milch Goat Production Cost

For several years the New York agricultural experiment station (Geneva) maintained a herd of milch goats, and in Bulletin No. 429 announces the results of its studies upon these animals. The milk was used in many cases of poor nutrition of babies and infants, in almost every instance with good results and with remarkable benefit for some of the patients. It is for such use that the station recommends the keeping of goats, for as a source of milk for ordinary consumption only the very best producing does, which are uncommon, can be compared with cows for economy.

As the goats do not suffer from tuberculosis one source of danger to

infants is avoided, and the milk seems to be assimilated by many babies whose systems reject cows' milk or find it a source of trouble.

The bulletin gives a detailed statement of the feed cost of the goat milk but it was found impossible to calculate accurately the other sources of expense. The average food cost of the milk produced by the herd in three years was 3.4 cents a quart, while the Jersey herd of the station during the same period produced milk at a food cost of 0.2 cent a quart. The best doe in her best year produced milk at a cost of 1.72 cents a quart for food.

The bulletin, like all issued by the station, will be sent free on request.

## Shorthorn Expansion

For more than a century and a quarter Shorthorns have had an active identity with the progress of agriculture in America. The breed is today the most popular and most widely disseminated in the United States of any bovine breed. Yet if all of the registered Shorthorns now living in this country were assembled in the state of Iowa there would be an average of less than two to each quarter section in the Hawkeye state.

During a few weeks' period in the late winter of 1917 over 500 Shorthorn bulls were sold in a limited territory in Central Illinois—a suggestion

of the inclination of corn belt farmers to rely upon this time-tried breed for the improvement of their cattle stocks.

During the years 1915, 1916 and so far in 1917 there has come up from the South, where cotton raising has long been the almost exclusive farming industry, a call for Shorthorn breeding stock, unprecedented in its extent. Many hundreds of Shorthorns have been shipped to the cotton states to satisfy this demand. The Shorthorn is favored because its dual-purpose characteristics and its adaptability to the prevailing conditions in that latitude are generally recognized.

## Ration for Work Horse

The Illinois Experiment Station says:

"The ration for a horse of a pound of grain and a pound of hay per hundredweight per day is a useful standard. The horse doing light work may receive more hay and less grain, and the horse at severe labor should receive approximately the above amount of hay and enough grain to keep him in condition.

"For the past seven years our work horses and mules at the station have been fed for the most part legume hay. Their grain ration has been either ear corn or ear corn two-thirds and oats one-third. These ra-

tions have been entirely satisfactory for feeding mature geldings and mules.

"It is essential to feed a good quality of legume hay. For our work horses we prefer a rather stemmy alfalfa hay to the more leafy, pea-green sort. The latter proves too washy. When one feeds all or as much as one-half legume hay to the classes of workers mentioned, it is ordinarily not necessary or economical to feed a protein concentrate. In feeding hay we like to feed one-half of the total daily feed at night, the balance being evenly divided between the morning and noon feeds."

## Keep Pigs Growing

Keep the pigs growing. It is the pig's business to develop a good frame, to grow bone, muscle, and vital organs, and to lay on fat. Plenty of pasture, some grain, exercise, and good sanitary quarters are all necessary if the pig is to be thrifty and profitable. They should be kept on pasture as long as possible and gain the benefit of its cheap nutrients, especially mineral and protein, and its tonic and digestive qualities. But pigs on pasture alone, even alfalfa, need some grain supplement. The amount of grain or other concentrated feed used would depend on how much pasturage is available, on the cost factor of grain or other feeds, on the age and condition of the pigs, and the time at which the farmer expects to market them.

Less protein supplement is needed when pigs are run on leguminous pastures. Under most farm conditions the pigs will gain well on a 1 to 2 per cent grain ration. The self-feeding method makes for cheap and rapid gains. If the grain ration is limited, the hand-feeding method is better.

By feeding once a day in the early evening, pigs take greater advantage of the pasture and graze hungrily during the cool of the morning or afternoon. Plenty of fresh, clean drinking water always should be available.

Pigs on pasture usually get enough exercise. A concrete wallow will add to the pigs' comfort, and a layer of oil on the water will keep down lice. Clean bedding also helps to keep away lice, as will an oiled sack on a rubbing post, or sprinkling the pigs with crude oil every two weeks.

To supply mineral matter and a tonic, the following mineral mixture is good. It always should be accessible. Dissolve the copperas in hot water and sprinkle over the mixture.

Copperas, 2 pounds; Sulphur, 4 pounds; slaked lime, 4 pounds; salt, 8 pounds; wood ashes, 1 bushel; fine charcoal, 1 bushel.

—U. S. D. A.

### LAZY JOY

Among the few great joys of life is staying in bed fifteen minutes after we know we ought to get up.

## We will Reward You With This Great Book

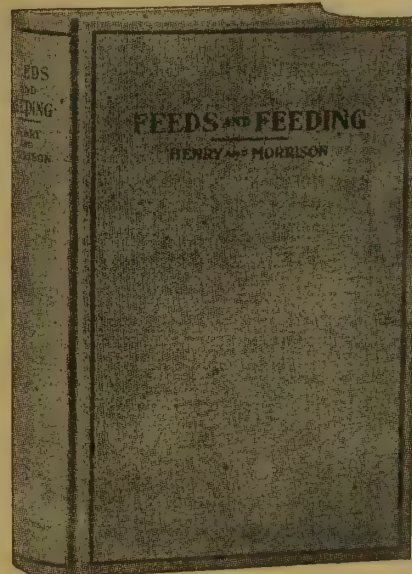
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# Weaning the Chicks

Written for California Cultivator By Jean A. Koethen

**A**T ABOUT the age of six weeks, varying somewhat in different breeds and under different management, comes the time in the chick's life when it is ready to do without other warmth than that of its own body. It has already learned to eat, to fight for its own rights, to seek shelter from the sun and protection from the cold. If it happens to be a hen-brooded chick, it may be the happy recipient of mother's care for some weeks longer; on the other hand, it may have been thrown on the mercies of a cold world some weeks earlier. If it is a brooder chick it has certainly learned to shift for itself as far as possible. There is now but one more lesson to learn, the trick of roosting.

Chicks differ greatly in the readiness with which they take to the roost. Some begin to practice roosting very young, and will hop on any box edge that presents itself, while others, more timid, perhaps, of the same age and breed, will crouch on the ground under their roosts long after the majority of the flock are exercising their inherent right and privilege. It is best not to force any to roost until they are quite ready.

The device most generally used for teaching chicks to roost is a sort of floor made of lath or thin slats about the width of lath nailed to strips of wood an inch thick. Such a floor as this is placed in the bottom of the weaning coop or under the roosts of the house which is to be the future home of the chicks. As soon as they have learned to keep their balance on these strips they are ready to find their places on the roosts.

For the small number of chicks I raise in a season I do not bother with these slatted bottoms,—not that I do not approve of them, but I have found an easier way. As my chicks are usually hen brooded, and there are not often more than two broods of the same age, there are rarely more than 20 chicks to be weaned at once. These are placed in what I call a brooder box, which is merely a clean apple or potato or cracker box. If the chicks are not over a month old, as sometimes happens, when the hen leaves them, they are given a box high enough to permit of a door being cut in one side. The bottom is covered with straw and the top covered with an old quilt or blanket. In chilly weather there is no better covering than an old wool sweater with a burlap sack over it, the sweater being so arranged that it rests on the chicks' backs. The door is left open to provide ventilation. If the chicks are fully ready to roost they need no

cover, and therefore no door in the box. They are lifted in for a few nights and then know perfectly where to go to bed. This brooder box is placed on the ground under the roosts of the small colony coop which is to be the home of the pullets till they go to the laying house and of the cockerels till they are ready for the fattening pen. The chicks continue to go to bed in the box for several weeks, but gradually one after another is found at night on the side of the box or on the roost above it, and before they know that they are learning to roost every one is roosting. This may be a lazy woman's way of teaching chicks to roost, but it is more comfortable for the chicks than struggling to keep their balance on the slatted platforms. The boxes are

easily cleaned with the hose, and as soon as they are no longer needed for the chicks are chopped up for kindling.

In order to get the best results these weaning coops—or colony coops, if they are to be the permanent home of the chicks,—should be on clean, green range. A hopper of mash and a crock of water, with sprouted grain for breakfast and mixed hard grain for supper, a fruit tree here and there to provide shade in the middle of the day, frequent sprayings or paintings to keep the coops free from insect enemies, and your chicks are literally "in clover." Nothing to do but grow, and everything to keep them growing. We make ourselves a deal of trouble when we confine our growing chicks to bare, dry yards.

## Egg Laying Contest

**S**TORRS, Conn., report for the thirty-fourth week ending June 26, 1917. The Rocks, Wyandottes and Leghorns all made a bid for weekly honors. By the small margin of one egg F. M. Peasley's Leghorns from Cheshire, Connecticut, got first place with a yield of 60 eggs. A Hartford pen of Buff Wyandottes entered by Cloyes & Sullivan, and A. P. Robinson's White Leghorns from Calverton, N. Y., tied for second place with 59 eggs each. The total yield for all pens amounted to 4290, which is 160 less than for the preceding week but 140 more than for the corresponding week last year.

There is, of course, a point beyond which hens cannot go in laying eggs. Without much question the zenith of production has been reached. Large numbers of the heavier breeds have been broody, and this always means at least a temporary interruption in the egg yield. Furthermore some individuals that have been slackers all along will soon be shedding their feathers, and molting nearly always means no eggs. Thus the poultryman's problem is not so much how to get more eggs this week than he did last but rather to recognize the fact that hens will yield less eggs from this time on to the end of the laying season. Good care and management during the summer means that the

falling off in yield should take place gradually instead of abruptly.

The subjoined table indicates the best week's production during each of the past four years. It shows also the time at which this high water mark was reached and the percent yield from the one thousand hens under consideration.

Year	1914	1915	1916	1917
No. Eggs....	4490	4244	4724	4510
Wk. Endg. Apr. 24	May 9	May 14	Jn 12	
Per cent yield	64.1	60.6	67.5	64.4

The three best pens in each of the principal varieties are as follows:

### Barred Plymouth Rocks

Fairfields Poultry Farms, 1425; Merritt M. Clark, 1210; Michigan Poultry Farm, 1155.

### White Wyandottes

Merrythought Farm, 1311; Obed G. Knight, 1166; Joseph Moreau, 1145.

### Rhode Island Reds

Allan's Hard to Beat Reds, 1336; Geo. W. Harris, 1254; Hillview Poultry Farm, 1245.

### White Leghorns

A. P. Robinson, 1498; J. O. LeFevre, 1358; Hilltop Poultry Yards, 1352.

### Miscellaneous

Cloyes & Sullivan, (Buff Wyandottes), 1246; Holliston Hill P. Farm (White Rocks), 1207; Obed G. Knight, (White Orpingtons), 1199.

## Grass Clippings for the Poultry Flock

Grass clippings are an excellent green feed for chickens. The backyard poultry flock of a family often lacks sufficient green feed with a consequent reduction of egg and meat production. With the easy availability of lawn clippings the city poultryman can always have green feed through the summer for his chickens. The flock can be fed daily as much of the green clippings as they will

eat. If any continued bowel trouble shows the amount should be reduced. The remainder of the clippings can be allowed to dry and fed moistened during the time between lawn cuttings.

Amounts in excess can be dried for winter. They can be dried and stored in sacks. These dried clippings, moistened and fed to the flock, are a very fair substitute for the succulent green feeds of summer.

## Wetting Spoils 5,016,000 Dozen Eggs

Approximately 5,016,000 dozen eggs spoil needlessly every year in cold storage simply because some one has let clean eggs get wet or has washed dirty eggs before sending them to market, according to the specialists of the United States department of agriculture. Careful investigations of large quantities of stored eggs show that from 17 to 22 per cent of washed eggs become worthless in storage, whereas only four to eight per cent of dirty eggs stored unwashed spoil. The explanation is simple. Water removes from the shell of the egg a

gelatinous covering which helps to keep air and germs out of the inside of the egg. Once this covering is removed by washing or rain which gets to eggs in the nest, germs and molds find ready access to the contents and spoil the eggs.

### ALL PERVASIVE

The teacher's last question was meant to be a scientific poser.

"What is that which pervades all space," she said, "which no wall or door or other substance can shut out?"

No one had an answer ready but Freddy Sharpe.

"The smell of onions, miss," he said, promptly.—New York Times.

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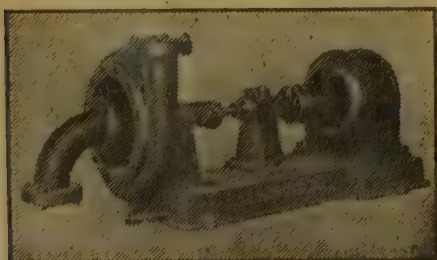
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**Here is Your Opportunity to Secure A1 citrus trees.** We offer several thousand 2-year-old lemons; Eureka and Villa Franca, also Washington navel; also several hundred Valencias on sweet root. We call these good trees and we know whereof we speak. ALBERT JACKSON, Upland, Cal.

**For Sale**—15,000 "Sweet Root" Valencia orange trees, choice yearling high buds, very thrifty stock raised from seeds of largest seedling orange trees in California. E. W. Pyne, 4 miles N. E. Olive, Orange County. Phone Placentia, 2373.

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**For Acacias, Avocados, Budded Loquats, Citrus trees, Evergreens, Feljos, Palms, Roses and all kinds of trees, shrubs, vines, etc.** Write for our new catalogue. Robertson Nurseries, Fullerton, Cal.

**For Sale**—Two-year sour seed bed stock, thrifty with good roots. Only 20,000. Price \$20 and \$25 f.o.b. Be quick if you expect to plant. C. W. Wilhite, Glendora, Cal. Phone 303.

**Citrus Trees**—All kinds, any quantity. Butler's Morning Side Nursery, Lamanda Park, Cal.

**Avocado Seedlings, in flats.** Write for prices. Newberry-Sherlock, R. D. 2, Pasadena, Cal.

**Citrus Nurseries, Murphy Oil Company, East Whittier, California.** Selected stock for sale; inspection invited.

**Quality Trees**—Prune trees 10c each. Cash Nurseries, Sebastopol, Cal.

### WANTED

**Wanted**—Working foreman for alfalfa and grain ranch completely stocked with high class dairy cattle and hogs. Want ambitious, energetic man of sterling character and brains, fully capable of taking entire charge. Prefer married man with Agricultural College training supplemented by thorough experience. Give age, qualifications and experience. Address W. Cultivator.

**Wanted**—Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' work to right parties. Address J. H. Yetter, Sales Department, 810 Santa Marina Building, 112 Market St. San Francisco, Cal.

**Big Money Can Be Made** selling the BEST-PHONE. A new Talking Machine that "Speaks for Itself." Previous experience unnecessary. By our new selling plan, the BEST-PHONE sells itself. Write for particulars. Chas. W. Shonk Co., 109 Seventh Street, Maywood, Ill.

**Position Wanted** by married man experienced with pure bred dairy cows, also milking machines and general farm work. Willing to work. No boozing or tobacco user. Give me a trial. References. Write G. care of Cultivator.

**One of the Most perplexing problems to farmers and ranchers is that of help: A small liner ad in California Cultivator is the quickest and easiest means of securing farm help.**

**Wanted**—Thirty Duroc Jersey weanling sows. J. L. Brodie, Dutton's Landing, Cal.

### FARM LANDS FOR SALE

**For Sale**—A Bargain!! In the great Antelope Valley: 80 acres of fine soil within ½ mile of best producing hay and bean ranches. Good 3 room house, young orchard, 1½ acre, with water piped to it, barn, horse, cow and chicken corrals. Windmill on good domestic well. Water at 18 feet. Fine shade trees. Nice home to move into. \$45.00 per acre, no less, no trade. Owner, Box A, Rosamond, Cal.

**160 Acres, fenced and cross-fenced, nearly new four room house, barn, out buildings, six big springs, garden, young orchard, near school, store and postoffice. Farming tools, span of horses, harness, wagon, some household furniture, fine climate. Priced for quick sale \$1300. No trades. W. W. Baldy, Raymond, Madera Co., Cal.**

**For Sale or Lease**—1000 acres bean land, \$75 per acre; on Santa Fe R. R. within 6 miles of ocean, near new government cantonment and within 100 miles of Los Angeles. Might divide or lease to responsible parties for beans. Plenty of water. Address for appointment, Owner, 1236 Citizens Bank Building, Los Angeles.

**Twenty Acre Ranch** for rent on Mission Acre Tract. Good new buildings. Best of soil. Will rent for term of years to right party. Also ten acres without buildings, one mile west of Van Nuys. W. C. Planalp, San Fernando, Cal.

**Oregon, California Government Lands.** Latest, Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

### PATENT ATTORNEYS

Patents that protect are secured through the PACIFIC COAST PATENT AGENCY, INC., Savings & Loan Building, Stockton, California; send for our little booklet on "PATENTS"

### MONEY TO LOAN

**Money to Loan**—On improved farms, city property or for building loans, also on cattle or cotton crops. C. G. Paul, 206 North Glendale Ave., Tropic, Cal.

### HOGS

**Chester Whites, the Billiken Brand**—Bred sows and gilts. Every rancher should carry at least one good brood sow; are you going to help out our future meat supply? I have the following to offer, first class in every respect and priced low: 2 young tested sows to farrow in July; 6 spring gilts to farrow in September; 13 fall gilts to farrow in October. Weaned pigs, both sexes, to be delivered during the month of June; 4 young boars ready for service. Write for prices and circulars. C. B. Cunningham, Mills, Cal.

**Grape-Wild Farm Berkshires**—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

**For Sale**—2 registered Big Type Poland China gilts of the famous Whitten Ranch stock, nine months old, just ready to breed. Only reason for selling, owner at Officers' Reserve Corps, Presidio. For further information address Mrs. A. G. Bohannon, 2036 Oak St., South Pasadena, Cal.

**Large Yorkshires**—Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.

**Superba, World's Grand Champion Poland-China** boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

**Rancho Rubio Durocs.** Only a few September gilts left. One corking good fall boar by Orion Model, son of the last International grand champion. Place your orders now for weaned boar pigs. Best I ever raised. Elmer Lamb, Ceres, Cal.

**Wanted**—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

**Large Type Poland-Chinas.** Have ready for shipment three spring yearling boars, three fall pigs, spring pigs both sexes. Sired by Glenn Chief, a 1000-lb. boar, and out of prize winning sows. Cremer-Erikson & Co., Orland.

**Big Type Durocs.** Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

**Cholera Immune Duroc-Jerseys.** Big type. Weaned boars and gilts from 500 to 700-pound sows. Prize winning stock. Derryfield Farm, I.O.O.F. Temple, Sacramento.

**Duroc Jerseys**—Southern California, the Duroc center of the west. For the best Durocs, see Peters, Lamson & Walker, Devore, San Bernardino, Cal.

**Crawshaw's California Chinas** are profitable and profitable. Weanlings \$15.00, boars \$25.00. Dr. J. A. Crawshaw, Hanford, Cal.

**Poland-China Swine Recorded.** Stock for sale at all times. We please you or refund your money. W. A. Young, Lodi, Cal.

**Most Money in Duroc-Jerseys.** Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

**Choice Boar Pigs for Sale.** Sired by Superba 220620, champion Poland boar at San Francisco. Prices right. C. R. Hanna, Riverside, Cal.

**Large Yorkshires**—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Callotoga, Cal.

**Normandy Farms** herd of Berkshires are now to be found at A-1 Ranch. Write for catalogue. Arlington M. Smith, Visalia, Cal.

**One Large and two medium type boars,** extra choice, 9 and 10 months old. W. Bernstein Ranch, L. C. Trewhitt, Mgr., Hanford, Cal.

**Model Herd Berkshires** bred for size and quality. Weanlings and gilts. J. L. Gish, Laws, Calif.

**Carruthers' Farm Berkshire Hogs.** Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal. Berkshires—Two hundred pounds at six months. Ray C. Hannan, Corning, Cal.

**Poland-Chinas**—A few good breeding boars. S. F. Williams, Orland, Cal.

### HORTICULTURAL PRINTING

**Catalogues**—Good Printing. Specialists in preparing nursery, seed, poultry and live stock catalogues and all kinds of commercial printing. For prices and information address WOLFER PRINTING CO., 115 No. Broadway, Los Angeles.

### RABBITS

**Raise Rabbits For Us**—We sell you foundation stock and buy back what you raise, paying \$1.75 and \$2.00 each for them. Send 25c for our proposition, our book on rabbit culture and our supply catalog. Gilmore's Rabbit Farm, Dept. C, Santa Barbara, Cal. (The rabbit farm of international reputation.)

### LIVE STOCK

**D. E. Kellher, importer and breeder of Hampshire sheep,** Eugene, Cal., offers for sale a choice lot of Hampshire ram lambs, sired by Walnut Hall and Butterfield Rams, purchased at Salt Lake, August, 1916. Lambs ready for delivery after July 15th, 1917. Inspection and correspondence invited.

**Feeder Hogs For Sale**—Eighty-five choice Poland-Chinas by registered boars and out of nearly pure sows. The fast growing, quick fattening kind. Call at Whitten Ranch, Saucelito School corner, between Pixley and Terra Bella, Tulare County, or write owner, R. H. Whitten, 610 Security Building, Los Angeles.

**Butte City Shorthorns, Shropshires, Berkshires and Ponies.** Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

**At Last the Perfect Silo—the Stay Round.** No hoops, no bolts. No experiments. Any one can erect. Close price. Address D. O. Lively, 125 Hobart Bldg., San Francisco.

**Registered Shires**—Blackhawk Stock Ranch. Importers and Breeders. Easton & Ward, Burlingame, Cal.

### CATTLE

**Holstein Herd for sale:** Herd consists of seven females and five bulls, including a splendid cow, her four daughters and a grand daughter, all registered stock of good breeding. Priced for quick sale. P. A. Hogaboom, Route A, Fair Oaks, Cal.

**Registered Holsteins out of A.R.O. Dams.** Grandsons of King Korndyke Hengerveld Ormsby who has 20 A.R.O. daughters with records of over 29 pounds. Look up this sire. Geo. Kounias, Modesto Farms, Modesto, Cal.

**For Sale**—Fine young three-year-old Holstein bull, registered, and five-year-old registered Holstein cow. Both in fine condition and have good pedigrees. Prices reasonable. Ben F. Thorpe, manager Canfield Ranches, Bonsall, Cal.

**For Sale**—Entire dairy and equipment. 19 cows, 5 heifers, team of horses and farm implements and crops. Lease on 10 acre dairy. Inquire 747 W. 153 St., one block E. of Strawberry Park Store, Gardena, Cal.

**Registered Shorthorns**—Milk and beef strains. Bulls and heifers for sale from record dams and sires, direct from the East. Catalog mailed free. Harrison, London Ranch, Glen Ellen, Cal.

**D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco.** Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.

**Venadera Jerseys,** the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

**Young Holstein Bulls,** bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Calif.

**N. H. Locke Co., Lockeford, Cal.**—Choice young Jersey bulls for sale.

**Holstein Bulls** from record cows. Prices right. A. M. Bibens, Modesto, Calif.

### MACHINERY

**WHY BUY NEW? SAVE HALF** Material guaranteed. It's 2nd hand after used few times, but not worn out.

**PIPE** 300 feet 8-in. galv. irrigating pipe 35c; 400 ft. heavy riveted 16c.

**WINDMILLS** Let the wind do it. 8-ft., \$27.50; 10-ft., \$35; 12-ft., \$55; 16-ft. mills, \$125, cost new \$285. Pumps as much as 4 h. p. engine for nothing once installed. Why buy gas?

**TANKS** New, used tanks guaranteed; 1500-gal. galv. with cover, \$22.50; 10,000-gal. galv., \$150; 16,000, \$250; steel heavy, 20,000-gal. galv. tank with cover, \$275; 10,000 redwood, \$75. See who's cheapest.

**ENGINES, PUMPS, PIPE.** Centrifugal pumps; plunger pumps, \$5 up; double-acting No. 3 Ames, \$225; cost \$660; Means double-acting deep well pump, \$275; Large Addison double acting plunger pump complete with 85-ft. 10-in. pipe, 9-in. well brass cylinder, double rods, pumps 50 in. outfit cost \$1500, snap at \$475; 9 h. p. Foss, \$135; 8 h., \$125; 6-h. Stearns, \$89. Many other first class engines very cheap.

**Brass cylinders, Plunger rods, pipe, Fittings, Ranch Machinery, Sundries** Fine 2-gang mouldboard plow, \$45; 3 or 4-gang disc tractor plow; alfalfa renovator, \$25; 24-disc, 4-horse harrow, \$38; mowers, buck rake, feed cutter, \$8.50; Bulldozer pump jack, \$42; bone grinders, \$6.50 to \$12.50; feed mill \$16.50; water trough, \$4; cement mixer, \$25; sprayer, \$19.50; new discs, \$1 each.

**Wanted to buy** first class material. No junk wanted. Pioneers in our line. DEMMITT CO., Office Upstairs, 120 N. Main. Yards, 816 Yale, Los Angeles.

**Several new and slightly used engines** at a bargain. Best makes. 1 to 35 h.p. Arnott & Company, Wholesale Machinery and Implements, 112 South Los Angeles St., Los Angeles, Cal.

### SEEDS AND PLANTS

**Tepary Beans for Sale**—Twelve pounds will plant an acre. Will mature in 65 days from seeding. Seed very scarce. We have on hand a limited quantity which we offer, ten pound lots at \$2.50; hundred pounds \$20.00 F. O. B. Tucson. Tucson Seed Company, Dry Climate Seeds, Tucson, Arizona.

**\*\* ORDER YOUR SEEDS NOW \*\*** If you are going to need any seeds for next season now is the time to render your orders. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbuckle, Cal.

**\*\* ALFALFA SEED OUR SPECIALTY \*\*** Six Sacks Sudan Grass Seed—Absolutely pure. For quick sale 40 cents per pound. Imperial Valley Seed House, El Centro.

### CAPRI FIGS

**Capri Figs** Ready July 5th to August 10th. Well colonized. Tribble Bros., Elk Grove, Calif.

### POULTRY

**Poultry Wanted**—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

**200-290 Egg Leghorns, Wyandottes, Rocks, Reds, Anconas, Orpington, Pullets, Cockerels, Breeders, Guarantees profit makers at bargain.** C. Beeson, Pasadena, Cal.

**Baby Chicks**—White Minorcas and Golden Buff Leghorn. Two popular breeds. Cockerels for sale. Sandridge Hatchery Kerman, Cal.

**"Eastman's Bred-to-Lay" Barred Plymouth Rocks.** Fairmead Poultry Farm, Fairmead, Cal.

### MISCELLANEOUS

**Free for Six Months**—My special offer to introduce my magazine, "Investing for Profit." It is worth \$10 a copy to anyone who has not acquired sufficient money to provide necessities and comforts for self and loved ones. It shows how to become richer quickly and honestly. Investing for Profit is the only progressive financial journal and has the largest circulation in America. It shows how \$100 grows to \$2200. Write now and I'll send it six months free. H. L. Barber, 430-23 W. Jackson Boulevard, Chicago.

**If You Have Transportation and Irrigation problems or surveying, consult J. H. Knapp, Civil Engineer, 220 L. W. Hellman Bldg., Los Angeles. F7810. 25 years' experience in West.**

**Slacked Lime**—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road Pasadena.

**To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue.** Smith's Cash Store, 112 Clay St., San Francisco.

**Send One Dime,** receive 25 cent cake best skin and scalp soap, postpaid. Healing Soap Co., 1704 Oregon St., Berkeley, Cal.

### AGRICULTURAL IMPLEMENTS

**Large Assortment** slightly used and agents' sample plows, harrows, cultivators, wagons. Call and see them before buying. Save 50 per cent on some. Four floors. Largest stock. Arnott & Company, Ranchers' Supply House, 112 to 118 South Los Angeles St., Los Angeles.

### LUMBER

**Lumber**—Sash—Doors—Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A.R.W. Shingles 50c per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.

## Legal Queries

Louis B. Stanton, attorney, 243 Wilcox Building, Los Angeles, will answer legal queries in this department.

Immediate mail replies cannot be given except where fee to Mr. Stanton is paid. When replies are wished in Cultivator address query to 115½ N. Broadway, Los Angeles.

### Attaching Mortgaged Property

A holds note signed by B and wife; B fails to pay. Can A attach the mortgaged property of B?

If it is real property it may be attached and sold under execution on the judgment obtained subject to the lien of the mortgage. If it is personal property with a chattel mortgage thereon the holder of the chattel mortgage may require his mortgage to be first paid off on notice of the attachment.

### CONSERVING ENERGY

"De man dat talks de loudest," said Uncle Eben, "generally lets his voice keep workin' while his mind rests."—Washington Star

Never would have been need of a "swat the fly" campaign if Noah had swatted the couple which walked up the gang plank of the ark.

When a man can talk on only one subject he soon lacks opportunities to talk at all.

Our farm adviser says: Don't plant tea in coffee grounds.

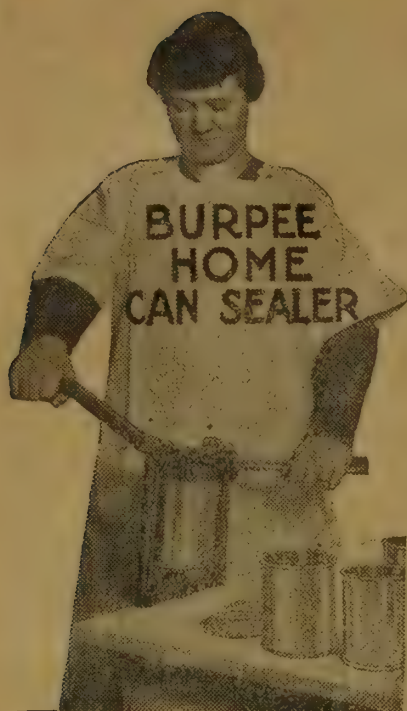
### CANNING RECIPES

"The National Steam Pressure Canning Outfits" is the title of a catalog or booklet relating to home canning outfits. A most valuable feature of this booklet is the fund of recipes given in the last 33 pages. We believe that copies of this will be sent to those interested in home canning by the Berger and Carter Company, 17th and Mississippi Street, San Francisco.

### HOME CANNING

"Home Canning by the Cold Pack Method" is the title of the remarkably fine booklet published by the International Harvester Company, Harvester Building, Chicago. It has a fund of information regarding canning, the use of the home canner, and even disposal of canned products.





## Can Your Own Foods

Economize! Save Your Surplus.

Let nothing go to waste—but put up your fruits, meats, vegetables and fish in sanitary tin cans. Turn them into money or enjoy them yourself.

Use the Burpee Home Can-Sealer. Adopted by canning clubs all over the country because of its simplicity and the fact that no solder nor acid are needed. Seals cans airtight. Every machine guaranteed. Cans secured from our distributing stations. Recipe book with every machine. Write for free literature now.

**BURPEE & LETSON, Ltd.,**  
South Bellingham, Wash.

MAIL THIS COUPON TODAY

BURPEE & LETSON, LTD., E  
So. Bellingham, Wash.

Dear Sirs:—Please send free illustrated folder on BURPEE HOME CAN SEALER.

Name \_\_\_\_\_

Address \_\_\_\_\_

## Canning Joy! is a Joy!



**Cooked By Steam Pressure**

Grandest invention for canning. Fruits and vegetables keep whole. Retain natural delicious flavors. No attention. Simplicity itself. Saves fuel. Saves time and labor. Also cooks meals. Pays for itself in one season. Lasts for years. No. 20—popular size—holds 14 one-quart jars. Copper bottom. \$9; solid copper \$18.00. Prepaid. 80 page cook book free if you order today. Money back if not satisfied. Free catalogue, showing other sizes. FREE. Write today. THE TOLEDO COOKER, Dept. 47, Toledo, Ohio.

**MACHINERY**  
OF EVERY DESCRIPTION  
**BOUGHT and SOLD**  
**BUTTRICK & McCLELLAN**  
205-7 N. Los Angeles St. A-5473 Bldg. 8008

# Household Department

## OLD LAVENDER

My mother had a hedge  
Of ancient lavender  
Down at the garden's edge  
With yellow bees astir.

She used to clip the bloom  
And spread it out to dry  
Up in her sunny room,  
Under the gables high.

Of some, the stalks and all,  
A thick brew she made,  
And put in bottles tall,  
For country pain and ache.

Then purple sprig and green,  
She laid within the drawers,  
The towels, the sheets between,  
And my starched pinafores.

Great bundles, too, she set,  
All in the closets hoar.  
I think I smell it yet,  
The Sunday gown she wore!

And pillowed safe and deep,  
How sweet the little bed,  
Where I lay down to sleep,  
After my prayer was said!  
—Lizette Woodworth Reese

## POVERTY VS. LOVE

**S**HE finished the page of the big ledger and sat looking down at it with the satisfaction that always comes after a piece of work has been accomplished with faultless effect. Clearly, she worked because she loved to.

The sunshine of the afternoon came in through the window, beyond which, almost on a level with herself, the usual Saturday crowd was moving. The sounds of many voices in varied keys and the shuffle of leather soles made languid assertion to her loneliness in the big, still office.

Suddenly one footfall detached itself from the rest. Her back was toward him as he entered, but she turned instantly, responding to his greeting with a nod and a remote little smile.

He glanced toward the empty chair at the other desk. "Hawley's not in, I see?"

"He is out of town till tomorrow." "Ah, yes!" He drew a deep breath and appeared to ponder, while she waited with her distant air of courtesy, yet in reality almost painfully conscious of him in every detail—the set of his broad shoulders, the curve of his chin, the way his hair grew at his temples.

"I wanted to see Hawley," he said. "But it doesn't matter. Another day will do as well. Good afternoon!"

He went out quickly and she turned back to her ledger with exceeding heaviness of heart. A moment she kept her head up, then it went down upon the page, while her fingers pressed the tears back into her hot eyes.

He had come again and gone without giving her a word. His mission had been merely to see Hawley.

As Hawley's friend she had come to know him. At first he had always stopped at her desk for a bit of chat. Twice he had walked home with her. Once he had brought her a book upon which they had passed judgment in a moment's conversation.

She knew all about him from Hawley—how brilliant he was and how poor, because he maintained that a lawyer should keep his calling as pure as a priest should keep his.

She could not tell when she had first become impressed by his change of attitude toward her. At first she had blamed herself for it, so went was she to hold men at a distance, but gradually she was forced to un-

derstand. Her pride helped her then and she had met him with coldness equal to his own. So they had moved apart. Yet why? What had caused it all?

She was still trying to reason it out, her head on the ledger, when the big clock struck the close of her working day. She rose, locked her desk and set forth for home.

The streets were quiet as she walked rapidly to the old house in a fashionable quarter of the town, where she lived with an old cousin who had once been wealthy. It was a fine house, finely appointed, as befitted the taste of a gentlewoman.

A maid admitted her, and she went up to her room; spacious and handsome with old furniture, old lace at the windows, an old rug on the floor.

In a large closet hung a row of dresses for indoor wear. She selected one deliberately and put it on—a cream silk of rough foreign weave, simply made. It was the custom of this house for its occupants always to dress for dinner.

The picture the long cheval glass showed to her when she had finished dressing set Esther to wondering how other business women managed who had only their salaries to depend upon. Surely there would be no putting on of silk frocks for them when their day's work was over, no dining from the daintiest limoges, no sleeping afterward in a mahogany four-poster.

She felt a fresh sense of gratitude to her father for having left her so much money that she need work only enough to ease her loneliness and afterward play the lady in any style she chose.

Until a few months ago her work and the ability to surround herself with every luxurious accessory necessary to the happiness of a woman of modern culture, had sufficed her for happiness. She had believed herself the most carefree woman living. Now, however, all was changed. Since Arthur Hale came into her life and was withdrawing from it apparently of his own accord she had learned what actual heartache was.

Cousin Hannah, faded of face and raiment, yet in both distinctly the aristocrat, was waiting at the dining room door as she came down to give her a kiss and a letter. Esther did not receive many letters and this one aroused in her a faint feeling of surprise.

She tore it open, warned of its importance even before she scanned the typewritten page. It was from Michelson, her father's former partner, the man in whose care he had left her money. Fear smote Esther as she read. Quickly she crossed to the table and sat down in her place, her face as pale as the verbenas in the tiny cutglass vase at her plate.

"What is it?" Cousin Hannah was leaning over her. She lifted her eyes.

"I don't know. I cannot seem to understand. But I don't like the tone of this letter. I'm afraid I have been foolish to trust Mr. Michelson so long even though father wished it. If only Mr. Hawley were at home! But there is Mr. Hale! I must consult someone. Cousin Hannah, while I am gone to 'phone to him, see what you can make out of this letter."

She gave it to the older woman and left the room.

"He is coming at once," she said when she returned. "Did you read the letter, Cousin Hannah?"

The older woman looked troubled.

## The Cultivator Patterns



8410—Children's Dress. Cut in sizes 2, 4, 6 and 8 years. The dress is in one piece.

8426—Ladies' Waist. Cut in sizes 36 to 42 inches bust measure. Long or short sleeves may be used.

8163—Ladies' Overblouse. Cut in sizes 34 to 44 inches bust measure. This overblouse is made to slip on over the head.

8434—Ladies' Dress. Cut in sizes 36 to 44 inches bust measure. Sleeves may be long or short and the skirt has three gores.

8419—Ladies' Apron. Cut in sizes 36, 40 and 44 inches bust measure. The apron is cut in one piece and is to be slipped on over the head.

8417—Boys' Russian Suit. Cut in sizes 2, 4 and 6 years. The blouse closes at the right side of the front and the pattern provides for straight trousers.

8152—Ladies' Skirt. Cut in sizes 24 to 34 inches waist measure. The skirt is cut in four gores.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

### HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send ten cents in coin or (1 or 2c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department

**California Cultivator**  
Los Angeles



"I'm afraid—" she began, helplessly.

"I'm afraid, too," Esther said. "O, Cousin Hannah, I never realized until this moment how much my money means to me."

Within an hour Hale was there. Esther met him in the dim old drawing room alone, and they talked earnestly together. When he had read the letter she saw that he was even less hopeful that she had been.

"Something should be done at once," he said. "If you will trust me—" A look from Esther's eyes answered him.

During the weeks that followed he and Hawley together fought with might and main to save for Esther a remnant of her fortune. But the day came when she knew that their com-

"No," Esther answered, wondering.

"Your money. I loved you, but I was too proud — after Hawley told me—"

"O," cried Esther, radiant and enlightened, "that, then, was the obstacle. But we shall be poor now, Arthur—"

"Poor in everything save love," he whispered, happily.—Ex.

**MORE ABOUT CANNING TOMATOES AND SQUASH**

Written for California Cultivator  
By Mrs. E. C. Hawley, El Cajon

**I** AM certainly surprised at the number of requests I have had for recipes because of my letter in the Cultivator of May 19. I am glad to

range oven and in that way avoid the careful watching and stirring necessary when pumpkin is cooked over the blaze.

Also I always cook such things as pumpkins or fruit butters in the oven on days when fire has to be kept and the top of the stove is full of other things. When the pumpkin is cooked tender I put it through a fruit press or potato ricer, returning it to the oven and cooking till it is like butter, then I fill the jars and seal and it is splendid and always ready for pies and puddings and is fine warmed in the oven with salt, pepper and butter added.

My "pet economy," which I would like to recommend to every farmer's wife, is a dandy pet sow. My "Mary Jane" was one year old May 19, 1917,

and she, with her family of six pigs (five weeks old), has lived and grown on just what would otherwise be total waste. And pigs are just splendid pets—cleaner and better than pups any time.

**HOUSEHOLD QUERIES**

**Hominy**

Please give recipe for making hominy.—Subscriber, Manhattan Beach.

Here are two methods:

Three cups hardwood ashes, two quarts cold water, two quarts dry corn. Put ashes into water and boil 30 minutes. Leave until the ashes settle to the bottom. Pour off the clear water, which should feel slippery. Add corn to this water and boil until the hulls begin to come off. Drain and wash the corn in cold water, rubbing

**HELP SAVE NEEDED FOOD!  
GET BEHIND HOOVER!**

**THE FOOD PLEDGE OF CALIFORNIA WOMEN.**

I am glad to join in the exercise of food conservation for our nation and hereby accept membership in the United States Food Administration, pledging myself to carry out the directions and advice of the Food Administration in the control of my household.

Name .....

Street .....

City .....

Occupation of breadwinner .....

Number in household .....

Do you employ a cook? .....

Have you a garden?..... (Fruit?)..... (Vegetables?).....

Will you take part in authorized neighborhood movements? .....

**HOW YOU CAN HELP SAVE**

First—To save the wheat:

One wheatless meal a day, using cornbread or other cereal as a substitute.

Second—To save the meat:

One meatless day a week.

Buy less and serve smaller portions.

Third—To save butter fats:

To use no butter in cooking. Three times the necessary fats are consumed in cooking.

Fourth—To save transportation:

By eating home products and so release freight cars for other uses than transportation of food.

Fifth—To preach "The Gospel of the clean plate."

To buy less foodstuffs.

To skimp the garbage can.

Sixth—To increase the use of corn, buckwheat, rice, rye and of all vegetables.

Aside from eating an increased proportion of these commodities in order to save on wheat, meat and butter fats, to preserve and store any surplus for winter use.

Pursuant to the national movement for food conservation, Herbert C. Hoover, head of the United States Food Administration Commission, is calling upon every patriotic California family to aid in saving foodstuffs.

If you wish to join with hundreds of thousands of loyal Americans in helping to win the war, cut out the above pledge, fill it in and mail it to the state council of defense at Sacramento. Then live up faithfully to the promises you have made—and get others to do so.

binéd efforts had been vain after all. Her money was gone and with it the clever rogue to whose keeping it had been intrusted.

That evening Esther was sadly turning over her few valuables wondering what best she could dispose of, when the maid came to tell her that Mr. Hale was waiting in the drawing room to see her.

During the stress of the past weeks though they had met often and talked together at length, their acquaintance had made no advance in friendliness. She wondered a little as she went down stairs why he had called to see her when there was no apparent need. As she entered the room he met her with hand outstretched.

"Esther," he began suddenly. Then, as she turned startled at the expression of his voice and face, his arm closed about her. The next instant she was against his shoulder, joyfully conscious that she was his and he hers forever.

"You understand, dear," he said, presently, "that this would have happened long ago but for one thing. Can you guess what that was?"

pass on any information I may have that others will profit by, but I am a very busy woman and it is really impossible to answer each of these letters. Hoping that you will help me, I am sending you the recipes most asked for.

**Canning Tomatoes**

Scald and peel tomatoes, let stand several hours till water forms, more than enough to cook. Add one teaspoon salt to six quarts tomatoes, skim carefully while cooking, have jars ready and fill boiling hot, seal and test.

Many people seem to find it difficult to keep tomatoes or strawberries in glass. There will be no trouble if they are kept in a dark room or wrapped in paper and packed in boxes.

**Canning Squash and Pumpkin**

Squash or pumpkin can usually be kept nearly all winter just stored in a cool, dry place. But when canned either squash or pumpkin needs to be cooked 10 to 12 hours. I use a large granite dishpan which fits into my


—give the California pig a chance

—make him the biggest animal in California—most valuable and most in demand. That will help make farms more prosperous. It will keep money in California; keep it circulating—coming back to you.

Tell your dealer to give you

**MAY ROSE**

ham and bacon — the choicest meats—cured in our government inspected plant in San Francisco—freshly smoked—sweet and tender—give the California pig a chance.



**Mayrose**  
Brand  
**SMOKED MEATS**  
Western Meat Co.  
San Francisco,  
U. S. A.

**WESTERN MEAT COMPANY**  
SAN FRANCISCO



**MORE BETTER LIGHT**

Install a PRIVATE GENERATING PLANT and have ELECTRICITY FOR LIGHT AND POWER. The Uni-Lectric system generates the standard 110-volt direct current, which will operate from 1 to 50 lights. It will run your sewing machine, electric iron, vacuum cleaner, churn, washing machine, etc.

**NO BATTERIES—NO SWITCHBOARD**

High speed gasoline motor, generator and automatic governor, all complete. Uses standard lamps and fixtures. Can be used for one or more houses.

WRITE FOR ILLUSTRATED CATALOGUE TO  
**KARL A. HEDBERG**  
104-106 Clay St. San Francisco, Cal.



## Overalls for Women

Through the ingenuity of skilled designers, have been made to look well as well as to give service.

Shown here in PEGGY JEANS style; one-piece garments of gingham; square neck, short sleeves, trimmed with fancy stripe or plaid gingham .....\$2.50

STRONGHOLD OVERALLS— with large bib, shoulder straps and pockets .....\$1.75 and \$2.00

Our Removal Sale is offering wonderful bargains all over the store; ask for anything we carry—it is very likely reduced now.

ORDERS BY MAIL—receive prompt and careful attention.

### Coulter's

215-229 South Broadway  
224-228 South Hill Street  
LOS ANGELES

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—as perfect in tone as the highest priced model—a necessity in every home. All the world's greatest artists at your command. This wonderful instrument which will give you years of joy, together with 12 selections of your own choice (6 double sided records) charges prepaid for



\$19.<sup>50</sup>

Victrola IV

Send for Catalogue. Buy anything you need or want of us by mail.

OUR MOTTO:

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(Schireson Bros.)

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"The House of Integrity"  
Ask your Banker

## Don't Pay For Ice



ICELESS

Get a Stephenson patent COOLER and have your eatables fresh at all times.

NO ICE REQUIRED  
TEMPERATURE LOW.

Made in two regular sizes. (Special sizes made to order.)

Write today for prices and particulars to

L. ANDERSON CO., MFRS., Martinez, Cal.

**American Nut Journal** National monthly covering all phases of all kinds of Nut Culture, discussed by experts. Official Journal. Highly endorsed. \$1.25 a year; 3 years \$3. Sample copy 15c. 39 State St., Rochester, N. Y.

thoroughly with the hands to remove the hulls. Wash until there is no taste of the lye. Put into clear water and boil several hours until tender. Reheat in pork fat or serve hot with a thin white sauce.

One quart yellow corn, one teaspoon baking soda, plenty of water. Wash the corn several times. Put it in a kettle with the soda and cover with water two or three inches above the corn. Bring to a boil and stir often. Then cover and let simmer two hours or longer. Drain off the water and rinse thoroughly. Cover again with water, and with the kettle cover, and again bring to a boil. Set it back, tightly covered, after salting to taste, and let it cook four hours or more, when it is ready to dish up and eat with milk or cream as a cereal or with pork fat or butter as a vegetable.

### REDUCE DISEASE

Here are fifteen rules for more scientific habits of daily living which Professor Fisher of Yale University, proposes as a means of keeping people well and happy, and lengthening their lives:

1. Ventilate every room you occupy, and keep the air in the house always as pure as the air outdoors.
2. Wear light, loose clothes of porous cloth, so loosely woven that air can be blown through it, for the skin needs air.
3. Spend some time in the open air every day.

4. Have lots of fresh air where you sleep, or sleep out if you can.

5. Breathe deeply.

6. Avoid eating too much.

7. Do not eat too much meat and eggs.

8. Eat various kinds of food—most people eat too soft food. Hard foods like crusts, toast, hard fruits, and nuts, which require chewing, are beneficial. The danger with most people is that they eat too much of concentrated foods and not enough of the bulky or filling foods, such as lettuce, celery, cucumbers, spinach, asparagus, cabbage, cauliflower beets, onions, carrots, parsnips, squash, pumpkins, tomatoes, and other garden vegetables. Some raw foods, such as fruits and salads, should be eaten each day, as these raw foods contain certain beneficial elements which are often lost in cooking.

9. Eat slowly.

10. Have your bowels move at least once each day—preferably twice—

11. Stand, sit, and walk erect.

12. Avoid poisonous drugs.

13. Keep clean and avoid contagious diseases. The daily bath is desirable. The hands should always be washed before eating. Water should be boiled before drinking if its purity has not been established. Mosquitoes and flies should be kept out of the house and away from food. Fruits—especially apples—after a meal are good mouth and tooth cleaners.

14. Work hard, but play, sleep, and rest too. Laughter is healthful.

15. Be cheerful, and learn not to worry.

"The secret of life and of happiness," says Professor Fisher, "seems to be in taking one's life and work cheerfully. Almost anyone can assume this attitude if the proper desire is present."

If your neighbor has found a better way of doing farm work you ought to know it. He is probably anxious to give you the benefit of his experience, but unless you desire it he is not likely to force it on you.

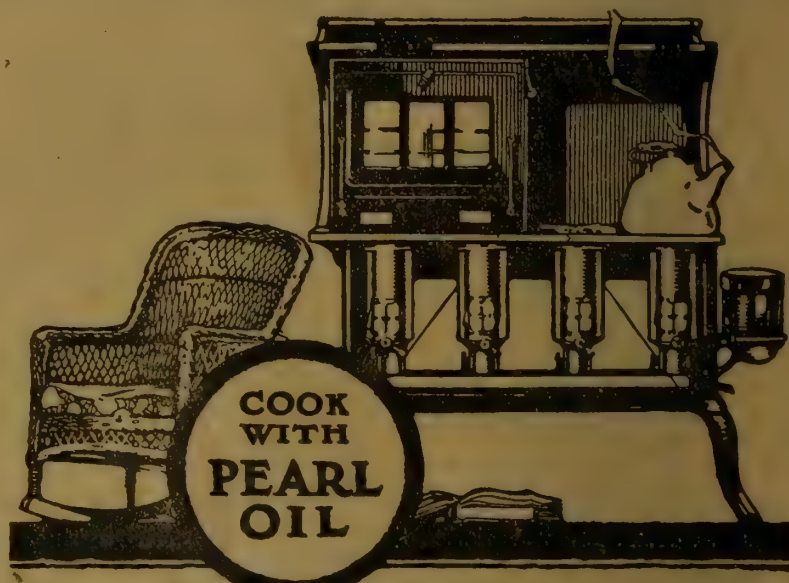
### SAVE SUGAR IN JELLY MAKING

Much waste of sugar and spoilage of jellies can be avoided by using a simple alcohol test recommended by the bureau of chemistry, United States department of agriculture. To determine how much sugar should be used with each kind of juice put a spoonful of juice in a glass and add to it one spoonful of 95 per cent grain alcohol, mixed by shaking the glass gently. Pour slowly from the glass, noting how the pectin—the substance in fruits which makes them jelly—is precipitated. If the pectin is precipitated as one lump, a cup of sugar may be used for each cup of juice; if in several lumps the proportion of sugar must be reduced to approximately three-fourths the amount of juice. If the pectin is not in lumps, but is merely precipitated, the sugar should be one-half or less of the

amount of the juice. If the juice shows no precipitation under this test it is unsuitable for jelly making and must be combined with apples or other juices rich in pectin.

The housewife will do well before making the test to taste the juice, as fruits not as acid as good tart apples probably will not make good jelly unless mixed with other fruits which are acid.

The erring woman is as much entitled to mercy as is the erring man. Men and women who lead clean and upright lives are under no social, moral or religious obligation to make unclean men and women their associates, unless such men and women show decidedly that they have reformed. When they have reformed we should encourage and help them along the same as if they had never offended.



COOK  
WITH  
PEARL  
OIL

## LESS WORK

No coal, wood or ashes to lug. No waiting for the fire to burn up.

Meals in a jiffy and a cool kitchen all the time. Bakes, broils, roasts, toasts. Better cooking because of the steady, evenly-distributed heat.

More convenient than a wood or coal stove for all the year 'round cooking, and more economical.

The long blue chimneys prevent all smoke and smell.

In 1, 2, 3 and 4 burner sizes, with or without ovens. Also cabinet models. Ask your dealer today.

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STANDARD OIL COMPANY  
(California)

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Furnishers

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ESTABLISHED—1880

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Broadway  
LOS ANGELES



Los Angeles Market

LOS ANGELES, July 10, 1917.

BUTTER

Produce Exch. Quotations.  
Price to trade 4c higher.  
Rets. wk. ending July 10, 280,811 lbs.  
California extra creamery .....38  
Extr. Cry. Exch. past wk.  
July .. 4 5 6 7 9 10  
'17 ..... 36 36 .. 37 38

CHEESE

Brokers' prices.  
California fresh, lb. ....23½  
Oregon Longhorn .....27@27½  
Tillamook Trip. ....26

EGGS

Exchange quotations  
Rets. wk. ending July 10, 2246 cs.  
Fresh extras .....37  
Case county .....36  
Pullet .....33½  
Fresh Ranch Exch. past wk.  
July .. 4 5 6 7 9 10  
'17 ..... 37 37 .. 37 37

POULTRY

We quote to producers:  
Broilers .....17@20  
Fryers .....22  
Hens—Leghorns 10, Heavy Cold .....20  
Roasters .....25  
Ducks, lb. ....15@17  
Squabs, doz. ....3.00@4.00  
Roosters, old .....10  
Turkeys .....21@24

LIVE STOCK

We quote cwt. f.o.b. L. A.  
Cattle—  
Beef steers, av. 1000 to 1100 lbs. ....9.00  
Helfers, good .....7.00  
Cows, good .....6.50@7.00  
Fair .....6.00@6.50  
HOGS—  
Av. 125 lbs. ....12.50  
Av. 150 lbs. ....13.50  
Av. 175-200 lbs. ....14.00@14.50  
Rough, docked 20 lbs.; piggy sows, 40  
lbs., stags, 40 per cent. ....9.50@10.00  
Ewes .....9.00@9.50  
Lambs .....13.00  
Yearlings .....10.00@10.50

POTATOES

Wholesale selling price:  
New, cwt. ....2.25@3.50  
Sweets, lb. ....12

ONIONS

Wholesale selling price:  
Crystal Wax, cr. ....1.20@1.35  
Bermuda, cwt. ....1.75  
Bolling, cr. ....1.50  
Pickling, cr. ....2.00

VEGETABLES

Wholesale prices:  
Artichokes, doz. ....50@75  
Beans—Wax .....7@8  
Limas, lb. ....9@10  
Ky. Wonder .....8½@9  
Beets, sk. ....2.00  
Cabbage, lb. ....1½  
Carrots, sk. ....2.50  
Cauliflower, doz. ....1.00  
Celery, doz. ....75@1.35  
Corn, lug .....75  
Cucumbers, lug .....50  
Egg Plant, lb. ....12  
Horseradish, rt. lb. ....15  
Lettuce, doz. ....35  
Leeks, doz. ....30  
Mint .....40  
Onions, green, doz. ....25  
Okra, lb. ....10@12  
Peas, lb., Telephone .....8@9  
Peppers, Chili, lb., 25; Bell .....20@25  
Parsnips, doz. ....50  
Parsley, doz. ....20  
Radishes, doz. ....20  
Rhubarb—Strawberry .....1.25  
Romaine, doz. ....40  
Spinach, doz. ....17½@20  
Squash, Summer, cr. ....60@70  
Crownneck .....60  
Tomatoes, cr. ....1.35  
Turnips, doz. ....35

FRUITS

Wholesale prices:  
Apples—  
White Astrachan, lug .....1.40  
Avocados, doz. ....6.00@12.00  
Apricots, lb. ....3@4  
Bananas, lb. ....5½@5½  
Cantaloupes—  
Standard .....1.65@1.75  
Pony .....1.50@1.60  
Special .....65@70  
Jumbo .....1.80  
Cherries, lb. ....13@15  
Crab Apples, lug .....90@100  
Currants, cr. ....1.60  
Figs, box .....75  
Grapes, Seedless, lb. ....8@10  
Malagas, lb. ....10@12  
Loganberries, bskt. ....5@6  
Loquats, lb. ....7½  
Peaches, lug .....1.00@1.65  
Plums, lb. ....5@7  
Blackberries, basket .....5@6  
Raspberries, basket .....7@8  
Gooseberries, lb. ....10  
Strawberries, basket .....5@6  
Pineapples, lb. ....8  
Watermelon, lb. ....2@3

CITRUS

Lemons .....4.25@4.75  
Juice .....2.50  
Grapefruit .....3.00@3.25  
Limes, basket .....1.00  
Valencias .....3.00@3.75

HONEY

Wholesale prices:  
Extr. White 11; W.W. ....12½  
Comb., case. W. 3.75; W.W. case. ....4.00

NUTS

Peanuts, raw .....12  
Pine Nuts .....20

RICE

Wholesale quotations:  
Cal. ....6.25  
Broken .....4.75@5.00

BEANS

Wholesale Prices:  
Lady Washington .....13.50  
Limas .....13.50  
Pinks .....10.50

Manchurian Reds .....11.00  
Baby Mex. ....9.00  
Garbanzos .....9.00@10.00  
Small White .....13.50  
Blackeyes .....8.00  
Tepary .....7.00  
Lentils .....18.00

HAY

Quotations by Nichols-Loonis Com-  
pany. Wholesale prices to grower f.o.b.  
L. A. carlots.  
Tame Oat .....17.00@19.00  
Volunteer Oat .....13.00@15.00  
Wheat .....13.00@16.00  
Barley .....15.00@18.00  
Alfalfa .....14.00@17.00  
Straw .....8.00

GRAIN AND FEEDSTUFFS

Wholesale cwt. f.o.b. L. A.  
Alfalfa Meal .....1.65  
Alfalfa Molasses .....1.75  
Barley, Rolled .....2.45  
Barley, Recleaned, Whole .....2.50  
Barley, Hulls .....2.95  
Beet Pulp .....1.80  
Bran, Heavy .....2.95  
Cocoanut Meal .....2.30  
Cottonseed Meal .....2.50  
Corn, Yellow .....4.10  
Corn, White .....4.00  
Corn, Cracked .....3.95  
Corn, Feed Meal .....4.00  
Corn, Egyptian .....4.10  
Middlings .....2.85  
Milo .....4.10  
Oat Chop .....1.90  
Oats, White .....2.70  
Oats, Rolled White .....2.75  
Oats, Hulls .....4.60  
Oats, Rolled Chicken Groats .....4.70  
Oilcake Meal .....3.30  
Wheat, No. 1 .....4.10@4.15  
Wheat, Cracked, No. 1 .....4.50  
Rye .....4.10  
Blood Meal .....5.10@5.20  
Bone, Green .....2.65@2.75  
Bone, Dry .....2.85@2.95  
Charcoal, 50-lb. sk. ....2.55@2.65  
Clam Shell .....70@95  
Grit, Granite .....65@75  
Oyster Shell .....1.25@1.35  
Sunflower Seed .....4.10@4.20  
Soya Bean Meal .....3.30@3.40  
Scratch Feed .....3.80@3.90  
Rice Bran, ton .....40.00  
Middlings, ton .....45.00

San Francisco Markets

SAN FRANCISCO, July 10, 1917.

BUTTER

Dairy Exchange quotations, lb.:  
Fresh extras .....36½  
Prime firsts .....36  
Extr. Cry. Exch. past wk.  
July .. 3 4 5 6 7 9  
'17 ..... 36 36 .. 36 36½

CHEESE

Dairy Exchange quotations:  
Cal. Flats .....18½@19 Y. Am. ....21@22

EGGS

Fresh Ranch Exch. past wk.:  
July .. 3 4 5 6 7 9  
'17 ..... 32 32 33 32½ 33½

POULTRY

We quote from producers, lb.  
Hens, large, 25@25, Leghorns .....17@18  
Small Colored .....20@22  
Fryers, lb. ....26@28  
Broilers .....23@27  
Roosters .....30@32  
Squabs, doz. ....2.00@3.50  
Ducks .....16@18  
Geese .....19@20  
Belgian Hares, live 11@12; dr. ....15@16

LIVE STOCK

Prices gross weight:  
Cattle:  
The following prices are for grass fed  
stock. Hay fed bring ½ to ¾ c more.  
Steers, lb., 6½@8½; cows and helpers,  
4@7; calves, 7@9½.  
Sheep:  
Wethers, 11; shorn, 1½@2c less; ewes,  
10; lamb, lb., 12@12½.  
Hogs:  
Hard grain fed, wt. 100 to 150 lbs., 13;  
150 to 300 lbs., 14½; 300 to 400 lbs., 14.

POTATOES

Wholesale selling prices at wharf:  
New, lb. ....1½@2  
Sweets .....10

ONIONS

Wholesale selling price on wharf:  
New Red, sk. ....85@90  
Silverskin .....90@100  
Imported Australian, cr. ....2.50  
New Green, bx. ....50@75  
Garlic, lb., New .....3½@4½

VEGETABLES

Wholesale selling price:  
Asparagus, Fy. Wh., lb. ....5@6  
Beans, String, lb. ....7@10  
Fancy garden .....12@13  
Corn, Green, Bay sk. ....2.75@3.25  
Cucumbers, lug box .....75@1.00  
Okra, bx. ....50@75  
Egg Plant, lb. ....10@15  
Peas, Halfmoon, sk. ....2.75@3.00  
Peppers, Bell, 12½@15; Chili .....10@15  
Squash, Summer, lug .....60@90  
Italian, bx. ....40@50  
Tomatoes, bx.:  
Merced .....65@75  
Southern .....1.25@1.50  
Stone .....175@90

FRESH FRUIT

Wholesale selling price:  
Apples—  
New, Green .....60@1.25  
Red Astrachan .....40@50  
White Astrachan .....1.00@1.60  
Gravenstein, bx. ....1.40@1.50  
Avocados, doz. ....2.50@3.50  
Apricots, crate .....60@1.25  
Small box .....60@75  
Lugs .....1.00@1.25  
Bananas, bunch .....1.25@2.50

Cantaloupes—  
Standard, crate .....1.25@1.60  
Pony .....1.00@1.25  
Honey Dew .....2.00@2.25  
Cherries, dr. ....1.40  
Bings .....75@1.00  
Cal. Royal Anne .....1.00@1.15  
Ore. Royal Anne .....1.00@1.15  
Bulk, lb. ....4@5  
Figs, Mission, bx. ....90@1.25  
Single layer .....50@75  
Currants, chest .....5.00@7.00  
Grapes, crate .....1.00@1.50  
Strawberries, chest .....4.50@9.00  
Peaches, cr. ....50@75  
Large lugs .....75@1.25  
Pears, bx., Lawson .....65@75  
Plums, Tragedy and Santa Rosa, cr. ....1.00@1.75  
Clyman and Climax, cr. ....75@1.00  
Blackberries, chest .....6.00@7.00  
Gooseberries, lb. ....5@10  
Loganberries, chest .....4.00@6.00  
Pineapples, doz. ....3.00@4.00  
Raspberries, chest .....5.00@7.00  
Watermelons, lb. ....2¼@2¾

CITRUS FRUIT

Wholesale selling price:  
Lemons .....3.50@6.00  
Lemonettes .....3.00@3.50  
Limes, Mex., cs. ....4.50@5.50  
Grapefruit .....2.25@4.00  
Valencias .....2.75@3.75

DRIED FRUITS

Raisins—California Associated Raisin  
Company prices on layer and cluster 1917  
crop: October, November and December  
shipments:  
\*Sun-Maid Layers (note style pack be-  
low), 20-lb. box, \$1.50 per box.  
3-Crown London Layers, 20-lb. box,  
\$1.50 per box.  
4-Crown Clusters, 20-lb. box, \$1.75.  
6-Crown Imperial Clusters, 20-lb. box,  
\$2.60 per box.  
(5-lb. box, 50c additional; 10-lb. box,  
25c additional.)  
Bulk vineyard run Layers, 50-lb. box,  
\$3.25.  
Bulk Vineyard Run Layers, 100-lb. box,  
\$6.25 per box.  
Sun-Maid Brand Clusters.  
Fancy Clusters, 1-lb. cartons, 20 to  
case, \$1.85 per case.  
Fancy Clusters, 1-lb. cartons, 24 to case,  
\$2.20 per case.  
Fancy Clusters, 2-lb. cartons, 12 to  
case, \$2.20.  
Fancy Clusters, 5-lb. cartons, 4 to case,  
\$2.60 per case.  
All f. o. b. California common shipping  
points; regular California dried fruit  
terms; prices guaranteed against decline  
to January 1, 1918.  
\*The 20-lb. case Sun-Maid Layers is of  
the new style tray pack. This style will  
facilitate their handling by the dealer,  
and make possible a very attractive dis-  
play.  
Our prices on 48-lb. package Sun-Maid  
Seedless and 50-lb. boxes bulk unbleached  
Thompson Seedless, as quoted in our  
Sales Department Circular No. 29, under  
date of January 27, 1917, are guaranteed  
against decline to August 1, 1917.  
Prunes: A full attendance of growers'  
directors of the Prune and Apricot Grow-  
ers Association at San Jose July 2 voted  
unanimously upon a 6½ cent basis for  
prunes for September shipments; with 6½  
cent basis for 40-50's and 7½ cents for  
30-40 sizes. October shipments will be a  
quarter cent lower all around.  
BEANS  
Jobbers' prices, cwt. recleaned:  
Limas .....12.50@13.50  
Bayous .....9.50@10.25  
Garbanzos .....6.25@6.50  
Small White .....14.00@15.00  
Mexican Red .....10.00@11.00  
Large White .....14.00@15.00  
Pinks .....10.00@10.25  
Black Eyes .....9.00@9.50  
Cranberry .....10.00@11.00

NUTS

Peanuts, Jap, 7@7½; Eastern .....7½  
Pecans .....19@20  
Pine Nuts .....15@17

HONEY

Jobbers' prices:  
Comb, lb., W.W., 13@15; A., 8@10c;  
Lt. A. ....11@12  
Ex. Fy. W. lb. ....13c; Lt. A. ....11  
Beeswax, lb. ....33

RICE

Price to growers:  
Cal. Rough, cwt. ....2.00@3.25  
Lower Grades .....2.00@2.75

HAY

Under date of July 7, Scott, Magner  
& Miller say:  
Receipts for the week 1520 tons. Last  
week 1997 tons. Falling off in receipts  
principally caused by extreme heat that  
has prevailed throughout the interior dur-  
ing the week. Purchasing throughout the  
country has only been done in a small  
way. Fancy wheat in light bales has  
been scarce and the few arrivals of this  
grade have been sold at top quotations.  
Alfalfa is in light supply with the demand  
likewise. Straw is practically nominal as  
the new crop has not started to arrive  
and the old crop is cleaned up. Prices  
quoted below are on new hay only.  
We quote today wholesale prices in  
carload lots as appear from dealers'  
transfers upon the market. For prices to  
consumers charges of cartage, com-  
mission and handling expenses must be  
added.  
Wheat, Fy., lt. bales .....20.00@21.00  
Wheat or Wh. and Oat, No. 1 .....17.00@19.00  
Wheat or Wh. and Oat, No. 2 .....16.00@17.00  
Oats, Choice Tame .....18.00@19.00  
Other Tame .....16.00@17.00  
Wild Oat .....14.00@16.00

Barley .....14.00@16.50  
Alfalfa, first cutting .....13.00@16.00  
Stock Hay, new .....10.00@12.00

GRAIN

Grain Exchange prices, ctl.  
Corn, California Yellow .....3.25@3.40  
Corn, Egyptian White .....3.60@3.65  
Oats, White Feed .....2.25@2.30  
Barley, Feed .....2.07½@2.12½

FEEDSTUFF

Wholesale prices per ton:  
Bran .....37.00@38.00  
Cornmeal .....73.00@74.00  
Cracked Corn .....73.00@74.00  
Middlings .....48.00@49.00  
Alfalfa Meal, carlots .....33.00@34.00  
Cocoanut Meal .....37.50@38.50  
Shorts .....41.00@42.00  
Rolled Barley .....44.00@45.00

SEEDS

Prices in round lots, lb.:  
Millet, recleaned .....3¼@4  
Alfalfa .....20@21  
Flax .....5@6

Citrus Fruit Market

LOS ANGELES, July 11, 1917.

The market has taken readily every of-  
fering of good quality fruits. Prices are  
holding very satisfactorily and every in-  
dication is favorable to a successful Na-  
vencia season. While the end of the Na-  
vel shipping season occurred some weeks  
ago there are lingering offerings in the  
auctions, which are commanding prices  
but little above St. Mikes and Seedlings.  
As the season progresses the injury to  
Valencias from the heat is much less than  
anticipated.  
Lemon prices are good and will remain  
so.

Shipments  
Shipments of oranges from Southern  
California since November 1, 1916, 32,840  
cars; lemons, 6247; total, 39,087; to same  
date last season, oranges, 25,597; lemons,  
5009; total, 30,606. From Central Califor-  
nia to date this season, oranges, 4832;  
lemons, 164; total, 4996; to same date last  
season, oranges, 5393; lemons, 146; total,  
5539. From Northern California to date  
this season, oranges, 845 cars; to same  
date last season, oranges, 610, lemons, 1.

FROM THE AUCTIONS

July 5  
New York: 40 oranges, 2 lemons. Val.,  
\$2.60@4.95; St. Mikes, \$1.90@3.80; Sweets,  
\$1.55@3.50. Lemons, \$2.35@5.75.  
July 6  
New York: 26 oranges, 2 lemons. Val.,  
\$2.65@4.35. Lemons, \$3.15@3.35.  
Boston: 18 cars; lower. Val., \$1.70@  
4.30. Lemons, \$3.40@5.40.  
Philadelphia: 8 cars. Val., \$2.15@4.25.  
Lemons, \$3.25.  
St. Louis: 9 cars. Val., \$3.05@3.70;  
lemons, \$2.45@5.20.  
July 9  
New York: 47 oranges, 3 lemons. Val.,  
\$2.55@4.85; Sweets, \$2.10@3.50. Lemons,  
\$2.60@5.90.  
Boston: Val., \$1.25@4.70. Lemons,  
\$2.70@5.55.  
St. Louis: 11 cars. Val., \$2.85@4.10.  
July 10  
New York: 32 oranges, 1 lemon. Val.,  
\$2.40@5.05.  
Boston: 18 cars. Val., \$2.90@4.70;  
Nav., \$1.05@2.55; grapefruit, \$1.75@1.05.  
Lemons, \$3.45@4.75.  
Philadelphia: 14 cars. Val., \$2.20@  
4.05. Lemons, \$3.25.

HOSPITALITY

We seem to see the passing of that  
delightful phase of the old-time fam-  
ily life called hospitality. One charm  
of hospitality is that it dares to be  
spontaneous, even haphazard. Some  
one is picked up and brought home to  
dinner; or called by telephone Sunday  
night and urged to come for supper;  
or the neighbors are summoned by  
message that the wood fire is just at  
the stage for popping corn. The per-  
son who is afraid to be unconventional  
will never taste the sweetest joys of  
hospitality. Where true hospitality  
exists, every one is at ease and there-  
fore at his best.

One formidable obstacle in the way  
of exercising hospitality arises from a  
false notion that things are necessary;  
things to eat, things to look at—car-  
pets, furniture, silver, glass. Hospital-  
ity not only does not depend upon  
these things, but it is something far  
removed from them. Indeed, its fin-  
est flavor is often found amid the  
plainest surroundings.—Women's In-  
stitute Quarterly.

WEATHER CONDITION

For the Week Ending July 7, 1917				
—Rainfall—				
Wk. Season.	Norm.	Max.	Min.	
Eureka	.00	.00	.03	52
Red Bluff	.00	.00	.00	88
Sacramento	.00	.00	.00	100
San Francisco	.00	.00	.00	70
San Jose	.00	.00	.00	84
Fresno	.00	.00	.01	86
San Luis Obispo	.00	.00	.00	94
Los Angeles	.00	.00	.00	88
San Diego	.00	.00	.00	102

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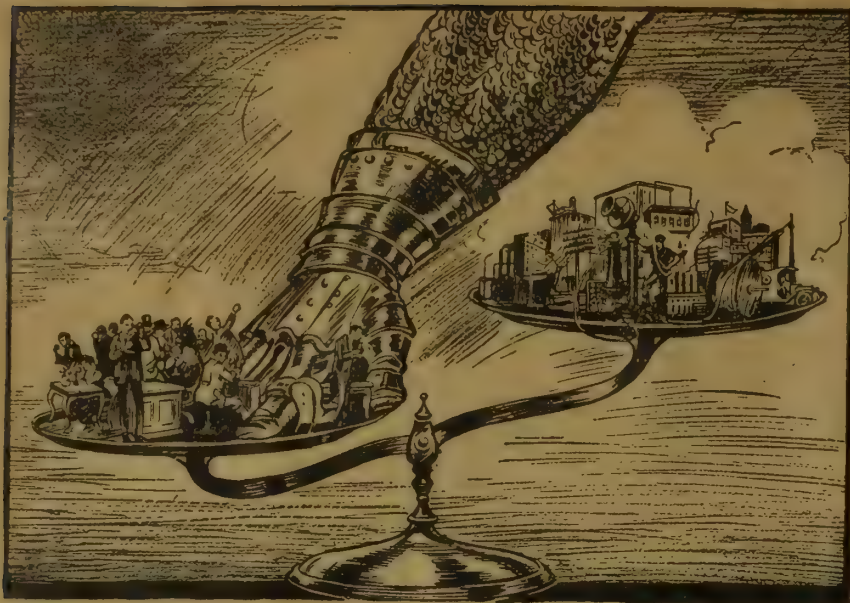
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In planning for additions to the plant of the Bell System for 1917, one hundred and thirty millions of dollars were apportioned. This

is by far the largest program ever undertaken.

But the cost of raw materials has doubled in a year. Adequate supplies of copper, lead, wire, steel and other essentials of new equipment are becoming harder to get at any price, for the demands of war must be met.

Under the pressure of business incident to the war, the telephone-using public must co-operate in order that our new plans to meet the extraordinary growth in telephone stations and traffic may be made adequate.

The elimination of unnecessary telephone calls is a patriotic duty just as is the elimination of all waste at such a time. Your Government must have a "clear talk track."



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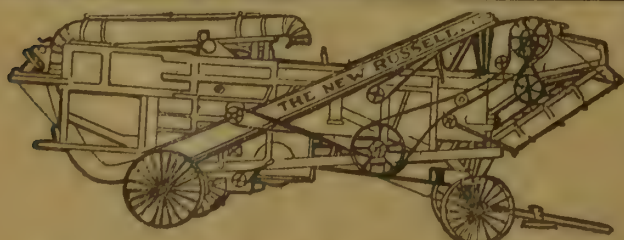
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of Quality

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An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

July 21, 1917

SAN FRANCISCO



Cow Testing in Arizona. See Page 51





## Of Interest to Citrus Fruit Growers

### Fumigation versus Spraying

Professor Frederick Maskew, Chief Deputy Quarantine Officer under the State Commission of Horticulture (now connected with the University of California) at present located at San Francisco, formerly collaborating with Professor R. S. Woglum in connection with fumigation investigations, SAID BEFORE THE 47TH CALIFORNIA FRUIT GROWERS' CONVENTION the following:

"With this wealth of experience on both sides of the question from which to draw; with a full knowledge of the fact that in the three great undertakings (experiments on a large scale to control insects by spraying) recited, spraying was abandoned for fumigation, with a clear comprehension of the many factors that make for success or failure in the employment of either method, and from the general average of results obtained, I state to you without hesitation that were I the possessor of a citrus orchard and it became necessary to disinfect the same for scale insects I should employ fumigation for that purpose, and also officially advise all those who consulted me upon this matter to do likewise.

Spraying is the contact method, and unless the contact is made results do not ensue. A tree is sprayed when it is wet all over both sides of all the leaves, twigs and branches. With an evergreen tree this is practically impossible unless at a prohibitive price due to waste of both material and time. With the most perfect of equipment success in spraying is largely a matter of the personal equation. With a perfect equipment the personal equation is almost entirely eliminated by mechanical action in modern fumigation, and last but not least in my mind is the fact that the instant a tent is removed from a tree any future deleterious effect to plant life is eliminated by the immediate dissipation of the gas. On the contrary, undue accumulations of spray material sometimes occur and remain after the operation, resulting in more or less injury to plant tissues."

It is an established fact that groves are **BETTER AND MORE EFFICIENTLY** treated for **SCALE CONTROL** by **FUMIGATION**. Painstaking growers have satisfied themselves that the cost of fumigation is less than the cost of spraying. Furthermore, **ONE FUMIGATION PER SEASON DOES THE WORK EFFECTIVELY, IMPROVING THE CONDITION OF THE TREES**, while several sprayings are necessary and the **RESULTS ARE INCOMPLETE KILLING OF SCALE WITH GENERALLY SERIOUS DAMAGE TO FRUIT AND TREES**.

The results of **SURVEYS** and **EXHAUSTIVE INSPECTIONS** made in citrus groves covering several thousand acres, in the counties of San Bernardino, Riverside, Orange and Los Angeles, show that **FUMIGATION EFFICIENCY** stands at 99.5 per cent. The average efficiency for spraying operations shows less than 45 per cent, with serious damage to fruit and trees.

**CYANEGG** will, this year, be available for the full needs of the citrus fruit growers. There is no need for growers to resort to the more expensive and less efficient spraying. Everyone owning a grove should fumigate.

Interested parties desiring additional information may obtain same by addressing,

**F. W. Braun**

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# California Cultivator

Vol. XLIX No. 3

LOS ANGELES: July 21, 1917

One Dollar Yearly

## Cow Testing Associations in Arizona

M. E. Bemis Writes for Cultivator Readers of the Beginnings of Cow Testing in One of the Newest Agricultural Sections of the Country. See Cover Illustration, Which Depicts Method of Handling Things in the Pioneer Way



**P**REPARATORY School for County Agricultural Agents—that is what the two first cow-testing associations of Arizona have developed into.

For a number of years dairying in the irrigated valleys of the state, and particularly in the Salt River Valley, has increased very rapidly. The luxurious growth of alfalfa and the mild climate have made dairying profitable. The rapid increase in numbers of dairy farmers has had too its disadvantages. Chief of these was the ease of disposing of the unprofitable cows.

It is a fine thing to sell the unprofitable cow to the butcher. There are comparatively few dairymen anywhere who will deliberately sell their neighbors a cow which has proved unprofitable, but they ease their consciences and help out their pocket-books if they make a public sale and sell out their herd. If it should chance that some of the cows were dry at the time of the sale and so not offered, and if it should also chance that those same cows were the best of the herd, who can say? The buyer at an auction sale knows that he takes a chance, and except for minor guarantees such as future dates of freshening, there is little probability of a come-back.

The temptation to unload in this way is all too strong and has resulted in the frequent transfer from one farm to another of the unprofitable

cow when she should have gone to the butcher. Possibly this migration of the unprofitable cow had something to do with the tardiness of the dairymen of the Salt River Valley in forming cow testing associations. Sporadic attempts to form associations fell

go to the small bother and expense incidental to joining a cow testing association.

The live stock division of the state agricultural extension found it difficult to interest the dairymen of the valley, although there were at the

tremely capable young men, both having just completed with honors a four year course at the state agricultural college. Watson Pickrell was placed in charge of the "Arizona Pioneer Cow Testing Association" and George Scheerer was the guiding spirit of the "Madison-Scottsdale Association."

These young men had much to contend with. The selection of the name of the first association was more or less of an inspiration as there was much pioneering to be done. The work was new; there was no other association of the kind in the state; and it was difficult to hold the interest of the members; there was always the tendency to sell out, more or less characteristic of a new country, and as a matter of fact several herds were sold. The dairy farmers were often too busy to transport the testers from one farm to another, and this made it inconvenient to the testers and annoying to the dairymen. There were a number of tenant dairy farmers whose courage flagged, and it needed diplomacy to keep their interest up. Green feed was short through the winter and the dairymen without silos—and but few did have them—found their cows shrinking in milk flow, and no way to prevent it. This was unfair to the cows and discouraging to the owners.

Then too the man who began to

Continued on Page 66



Testers of Two Cow Testing Associations in Arizona

Taken in front of the chamber of commerce at Phoenix. Both of these testers have now been advanced to county agent work.

through because there was lack of sufficient interest. The individual dairyman in some instances weighed the milk of each cow daily and either tested the milk or had the creamery which he patronized test it for him, but by far the greater majority of the dairymen were making a good fair profit and were apparently willing to drift along, and few seemed willing to

time some 50,000 head of dairy cattle, and it was only after much talking that two associations were formed, one in the west end of the valley and one in the east end of what is commonly known as the "North Side." Fortunately in each association there were some of the best dairy farmers of the community, and still more fortunately the testers were both ex-

## Time to Eradicate Scale Pests

Heat Accomplished Much and Thorough Fumigation Will Now Leave Citrus Orchards Comparatively Scale Free



**T**HE heat has killed the scale." "The freeze of 1913 killed the scale."

Every abnormal condition does kill untold numbers of these pestiferous insects, and for this reason the grower has now and then a bit of leeway, or opportunity to get another running start. But not often is the miracle of extermination performed. The citrus grower who knew the conditions of California citrus orchards 25 years ago when they were dripping with honey dew and slimy with billions of white scale well recalls the miracle which was performed by the vedalla and may be justified in hoping that when such a day comes as was given us in June and takes the fruit from the trees that it has also completely eliminated the scale.

Examination showed that very young scale which were susceptible to the heat of that day were killed. Now comes the more careful observer and says that we are not justified in being too optimistic. Every adult scale has wonderful reproductive power and is wise in that the next generation is not all brought forth at the same time. The young which has

been hatching since the early spring days probably all yielded to the heat, but the eggs which are now hatching are producing youngsters which must be controlled. The more observing of the fruit growers are not countermanding orders for fumigation supplies because they now see that the opportunity of a lifetime is here. These young scale, without the early maturing youngsters which become to a degree resistant to fumigation, may now be caught at a time of their life when they are easily destroyed. So growers, horticultural inspectors and commissioners are uniting in the slogan; "Hit 'em now and hit 'em hard."

At first it was announced that some orders for cyanide had been countermanded. We now learn that some of these countermanding orders have been countermanded. Notwithstanding cyanide is higher, sulphuric acid likewise, and labor hard to secure, the trees must be put into best condition to give a great crop for 1919. This they cannot do if they are supporting scale meantime. The growers have the money. The past year has been an exceptionally favorable one; the crop has been the largest ever, and the prices have been satisfactory, not at

times, but the entire year through. To be sure, some growers have not yet recovered from the cold of 1913, and now the crop has been greatly reduced for the coming year. But cultivation must be continued; irrigation also is necessary. It is probable that fertilization will yield big returns. With the other necessary upkeep fumigation must also be considered. We say "fumigation," for as a rule citrus orchardists have found better results in the handling of all scale pests by treating with hydrocyanic acid gas.

This process has been used in citrus orchards for nearly 30 years. It will be used in much the same way the coming year that it has for the past three or four years. Some will continue the manufacture of the gas under the tent after it is placed over the tree, in vessels, the same as has been done from the beginning. More will use the improved fumigation machinery. This process has the advantage of instantaneous production of gas and more uniform killing in all parts of the tent; also the saving in chemicals and in time makes it very economical, so that the expense of the application is no greater than un-

der the old and less satisfactory process.

As to how best results may be secured there are various answers. The more popular, or at least the more common, method is for each grower to contract with one who makes it his business to fumigate. Under the new county horticultural commissioner act fumigators or sprayers are now licensed by the county commissioner and the license may be revoked in case of unsatisfactory performance on the part of the contractor. Presumably best of results will be given by these men whose license depends upon their work.

The equipment and skilled labor required makes fumigation by the small grower impossible, and cooperation has been called into action. Some of the most successful fumigation, and at lowest cost, has been carried on by these cooperative organizations. These are sometimes entirely independent, and again connected with fruit growers' organizations which are able to secure supplies in large quantities at lowest possible cost.

It does appear that this is a year when the most effective work in many years may be secured.



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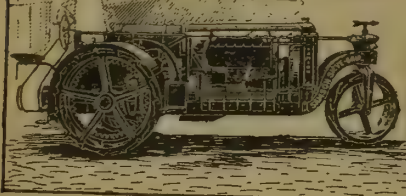
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## Intercropping of Orchards as Related to the Present Emergency

By R. S. Vaile, Citrus Experiment Station, Riverside

**T**HERE is a peculiar interest in orchard intercropping this season. Two factors are of primary importance in this interest: namely, first, the desire to produce more actual food supplies during the present war emergency, which carries with it, of course, the sharing in the high prices of such food supplies; and second, the light crop of oranges which is the result of the extremely hot weather in the middle of June. These two factors operate along somewhat different lines because the first one has made its appeal primarily to the owners of young non-bearing groves, while the second one affects directly the owners of bearing groves from which an income was expected this season.

The intercropping of young orchards has been carried much farther in Southern California this year than normally, and while it is too early to tell the result of this increased practice, the indications at present are that it will be successful from an economic standpoint. In all probability it is a thing to be encouraged in the future.

The question of intercropping orchards of bearing age, on the other hand, is one which has frequently been dismissed as unprofitable financially, and unsound agriculturally for Southern California conditions. This conclusion in the past has been based upon the factors of high water cost, low yield of the intercrop because of shade, and interference with the best development of the orchard crop. This year, the latter factor is somewhat removed because there is no fruit crop set upon the trees in many individual instances. Also there is a financial consideration which makes it apparently timely to reopen the entire question of the desirability of intercropping mature orchards.

In considering this question three points in relation to the orchard itself must be borne in mind: namely, the fact that the condition of the tree in the fall has a great deal to do with the setting of the next spring's crop; the fact that all fertilizing materials are to be extremely expensive next spring, and some of them entirely off the market; the fact that irrigation systems and intervals of irrigation are adjusted to take care of the trees and may not be satisfactory for maintaining both the trees and the intercrops. Because of the first two points it seems highly desirable that a particularly good winter cover crop be raised for plowing under next spring. It is usually deemed advisable to plant Melilotus clover or vetch for this purpose about the middle of September. Under the present conditions it may be permissible to delay this planting date for a month or even six weeks. In this case the most rapid growing crop should be used. The Broad Windsor or Horse bean appears to be better adapted to late planting than other commonly used legumes. It is the opinion of the writer and of many leading growers with whom this problem has been discussed that the fertilizing value of a leguminous cover crop during the winter will more than equal the cash value of any other crop which might be grown at this time.

It is possible to raise winter peas for harvest and at the same time have the advantage of a winter legume

cover crop, the straw from which may be turned under. In case such peas are to be raised for consumption as green peas, the high labor cost of picking is frequently a prohibiting factor. In case they are designed for canning the drawback is found in the fact that Southern California canneries are not now equipped for commercial threshing of peas. It is possible that these disadvantages could be overcome in certain cases, but they should be carefully considered before planting winter peas as intercrops with the idea of harvesting.

There are comparatively few crops that can be successfully raised between the present time and the time of planting winter cover crops. These might include Indian corn, Hubbard squash, Sudan grass, fall potatoes and certain truck crops. Of these none would give very high cash returns from the amount of land available between the trees. Potatoes would be impossible except where arrangements could be made for irrigating at least once every two weeks. Truck crops would doubtless be the most profitable per acre, but they require a peculiar type of specialized agriculture, and it is doubtful if anyone, except a few scattering individuals who have had previous experience, could expect to be successful with them.

As a result of conferences with numerous experienced growers the experiment station feels that a word of warning should be sounded regarding attempts to intercrop orchards of bearing age. This is not a time to experiment with untried crops and processes. There are certain individuals who know without being told what they can raise at this time of year; they will in large measure be successful; they should receive every encouragement and their example should be carefully noted; but unless a man is familiar with the crop that should be grown and has had experience in its culture it is doubtful if he will get paid for his seed, extra water, and labor. It would seem better economy to raise all of the fertilizing material possible in the orchard, thus reducing the expense of the fertilizer bill next spring. In this connection, a crop of cow peas planted immediately will make considerable tonnage for disking under within 60 to 75 days. A crop for harvesting could not be matured in that time, however. Following the disking down of such material, a crop of horse beans, which is the most rapid grower of our winter cover crops, could be planted to give a good tonnage by the latter part of February. This policy may well be encouraged wherever an extra irrigation is possible two or three weeks following the planting of the cow peas.

For those growers who are in absolute need of a cash income during the coming year some of the crops mentioned above may prove valuable. There is opportunity for a limited number to enter the poultry or rabbit industries in conjunction with the orchards. All of the green feed and a part of the grain can be grown and the manure will be of benefit to the orchard. Doubtless after everything that can be successfully done in the orchards is actually under operation, there will be many who will have to find their income from outside sources such as the leasing of other lands or the use of teams and labor in other lines of work.

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Round steel cage, catches gopher every time. Postpaid 50c  
2 for 95c, 6, \$2.70. Circulars free

**E. J. CHUBBUCK CO.**, 731 Market St. San Francisco, Cal.



# Ant Poison

Written for California Cultivator

**T**HE ant is a strange creature of the insect world, or perhaps it would be more correct to say that all other insects are strange, for the ant is quite human in many of its habits. The story of its maintaining a "dairy" of aphids and destroying other insects which may prey upon the aphids is well known. This habit is becoming a matter of serious consideration with citrus growers. Close observation has developed the fact that the Argentine and other ants are destroying parasites or predaceous insects which have been introduced to control the citrus mealy bug, hence to give these parasites an opportunity to work on the mealy bug and save the orchards, a study at the Southern California insectary and by Prof. R. S. Woglum of the United States department of agriculture is being made. One of Prof. Woglum's suggestions is that an ant poison be distributed about the citrus trees and in this way control secured of the pest. A special poison is recommended by the department: It is: U. S. D. A. formula.—Fifteen pounds sugar, 7½ pints water, ¼ ounce tartaric acid; boil 30 minutes and cool. Three-quarters ounce sodium arsenite dissolved in ½ pint of hot water; cool. Mix together and add 1½ pounds honey. The method of distribution is novel and effective. Ordinary small paper sacks, say about the one-pound size, are first dipped in paraffine, then holes are punched around the entire sack some distance above the bottom, and a small quantity—say a teaspoon or more—of the above poison is placed in the sack. Prof. Woodworth has recommended that it be used with a sponge, but this is more expensive and County Horticultural Commissioner Wood of Los Angeles reports that he has found fully as effective results where the poison is poured or smeared over the inside of the bottom of the sack. The paraffine prevents soaking and destruction of the sacks.

The above formula does the work. Wherever used it has not only kept the ants from the tree but seems to cause the death of the entire colony; at least they disappear. The method of placing the poison in the tree has been to close the mouth of the bag, make one or two folds in the top and

tack to the side of the tree. Prof. Woodworth's formula for poison is somewhat simpler, the mixing of arsenic in sugar syrup. Regarding the ant, we quote the following from the monthly bulletin of the state horticultural commission for June.

The Argentine ant is, as its name indicates, a native of Argentina and is also common in Brazil. It was supposedly introduced on coffee ships into New Orleans, and was first noticed there in 1891. It also occurs in South Africa and Chile. In the United States at the present time it is found in a number of the Gulf states, as well as in California. Professor Woodworth gives its occurrence in this state as follows: Alameda, Azusa, Berkeley, Byron Hot Springs, Campbell, Claremont, College Park, Corona, Cupertino, Emeryville, Fruitvale, Los Angeles, Martinez, Melrose, Monrovia, Montecito, Oakland, Piedmont, Riverside, San Francisco, San Jose, Santa Clara, Stege, Stockton and Upland. During the past season we found it in several places in Sacramento.

The ant itself is a small, dark brown insect, and is practically without odor when crushed. There are three forms: the worker, the queen and the male. The queen is about twice as large as the worker and somewhat differently shaped, the abdomen being comparatively larger. The male is slightly larger than the worker and has a much larger thorax and smaller abdomen in comparison. Both of the true sexes are winged, although the wings of the queen are shed after a short time.

The ant nests in large colonies, either in the ground or in the crotches of trees, or in practically any protected place. A nest will contain from one to a large number of queens, the duty of which is to lay the eggs from which the colony develops. These are deposited at the rate of as high as 50 per queen per day, and are immediately removed by the workers and placed in localities in the nest where conditions are most satisfactory for their development. As soon as the eggs hatch the larvae are cared for by the workers and fed with sweet substances, which they collect by foraging. This food consists mostly of the honey-dew secreted by aphids and scale insects.

# The County Horticultural Commissioner Law

By Horticultural Commissioner Geo. H. Hecke Before Commissioners  
Convention at Modesto

**T**HIS LAW creates the office of county horticultural commissioner, provides for his appointment and removal and defines his duties.

The state board of horticultural examiners is created, consisting of the state commissioner of horticulture, the dean of the college of agriculture of the University of California and the superintendent of the state insectary. This board passes upon the eligibility of candidates for county horticultural commissioner by means of examinations, and from the list of eligibles so determined upon the county board of supervisors must appoint a commissioner for the term of four years. The expense of this office is borne by the county. A county horticultural commissioner may be dis-

qualified by the board of horticultural examiners after a public hearing of charges against him, and when so disqualified the supervisors must remove him from office.

It is the duty of the county horticultural commissioner to inspect any orchards, packing houses or other premises within his jurisdiction, and if found infested or infected with injurious insect or animal pests, plant diseases, or noxious weeds to notify the owner or person in charge to eradicate or control the same to the satisfaction of the county horticultural commissioner within a specified time. If the owner or person in charge does not abate the nuisance within the specified time it is the duty of the county horticultural commissioner to cause it to be abated, the expense thereof

# A Special Plow for California Orchards

Plowing conditions in California orchards demand special plow construction. A serviceable plow must stand the severe strains occasioned by the soil conditions and operate close to the orchard trees.

## John Deere California Orchard Tractor Disc Plow

meets these conditions admirably. Heavy lap-beam frame—laps securely joined by heavy bolts — no sagging — discs always in alignment.

Discs best quality steel — disc bearings oil-tight and dust-proof — scrapers made to stand severe strain.

Double setting of discs permits use in very hard, dry ground as well as in loose, trashy soil.



Special "Z" land axle brings land wheel parallel with rear disc beam, permitting plowing close to trees.

Special adjustment on front furrow wheel, causing it to set inside line of front disc so that plow will work close to trees when soil is being thrown to them. Beam has special shape to permit working close to trees.

Write for free booklet on this plow.

# A Bigger Yield From the Same Field

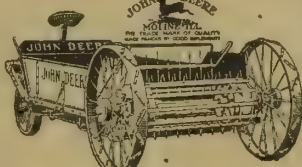
Manure well shredded and spread evenly gets the best results. It goes farther. Plant roots get all of its plant food. On any field that you have been manuring by hand you get approximately a 25 per cent increase in crops by using

## The John Deere Spreader

The Spreader With the Beater On the Axle

Ask any farmer who uses a John Deere Spreader. How much would that mean to you in these years of high crop prices? And you'll find there is a saving of 50 per cent in time and labor.

Beater on the Axle is found only on John Deere Spreaders. Does away with chains, clutches and half the castings otherwise necessary. Means better spreading, fewer repairs.



Revolving Rake which feeds manure to beater evenly, and Ball Bearing Apron Drive, securing frictionless apron travel with no racing, are other exclusive features.

Spreader only high—easy to load. Big drive wheels—light draft. Easy to operate—only two levers—a boy can run it.

Write for free booklet on the John Deere Spreader.

# Thoroughly Disc Before and After Plowing

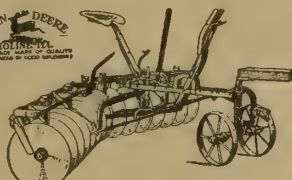
After the grain has been cut from your fields and before the hot August and September sun has cracked the ground, allowing the subsoil moisture to escape, use the

## John Deere Model B Disc Harrow

Noted for Thorough Disking

It produces a fine dirt surface mulch that stops evaporation, of moisture and catches and holds rainfall. Mixes stubble, trash and weeds thoroughly into the soil. Checks weed growth. Pulverizes surface thoroughly—ground is kept mellow—plowing is made easier.

Using the Model B after plowing completes a seed bed that is thoroughly

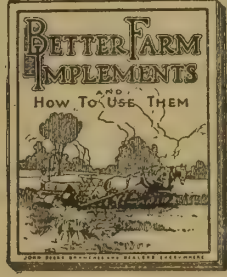


pulverized through and through—no trash bunches—no clods—no air spaces—seed bed fits the subsoil perfectly.

The Model B is exceptionally flexible—that is why it disks so thoroughly. The spring pressure third lever assures uniform penetration regardless of dead furrows or ridges.

Write now for free booklet on this profitable disc harrow.

# Big Book Free



## Better Farm Implements and How to Use Them

America must produce more food. Labor-saving implements will play an important part in increased crop production.

This book tells all about a full line of labor-saving farming implements. Tells how to adjust and operate many of them. A practical farm implement encyclopedia. Worth dollars.

Illustrates and describes the following machines: Walking and Riding Plows, Tractor Plows, Disc Plows; Disc Harrows, Spring Tooth and Spike Tooth Harrows, Corn and Cotton Planters and Drills, Listers, Alfalfa and Beet Tools, Grain Drills and Seeders, Riding and Walking Cultivators, Lister Cultivators, Mowers, Side Rakes, Loaders, Sweep Rakes and Stackers, Hay Presses, Grain and Corn Binders, Corn Cutters, Stalk Cutters, Kaffir Headers, Manure Spreaders, Portable and Inside Cup Elevators, Corn Shellers, Wagons, Farm Trucks and Buggies. This big book will be sent FREE if you state the implements in which you are interested and ask for Package X-1110.

# The Name "John Deere"

is implement insurance. It fixes the quality, and has done so for eighty years.

Don't forget that goods that have the reputation and are the biggest sellers on the market are the best in their line — always.

The increasing number of John Deere implements in use every year indicates the farmers' final verdict.



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One man can dust 20 acres of beans per day, and destroy the red spider, mildew, rust and other pests.

Use it on peas, beets, corn, cotton, melons, squash and all field crops.

Oranges, lemons, almonds, peaches, prunes and other fruits.

You will save the price of the machine in one day's work.

It saves time, material and crops.

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Get our LIQUID FLAME attachment and clean out your squirrels and gophers.

**PRICES**  
American Beauty, standard size .....\$16.00  
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being a county charge, and the sum so paid out shall become a lien upon the property, such lien taking precedence over all other liens excepting the lien of taxes.

The county horticultural commissioner is authorized to issue certificates to public fumigators or sprayers after examination as to qualifications.

It is the duty of the county horticultural commissioner to report on the condition of the horticultural industry in his county to the state commissioner of horticulture each year.

The statutes require any person or organization bringing or causing to be brought into a locality within the state from another locality within the state, any shipment of plants or plant products for propagation purposes, or any orchard appliances which either the county horticultural commissioner or the state commissioner of horticulture may consider liable to be infested or infected with dangerous insect pests or plant diseases, to immediately notify the county horticultural commissioner or his deputy or inspector, and hold the same for inspection.

Each shipment of plants or plant products for propagation purposes brought into any county of California from another county within the state must bear the name and address of shipper and the name of the person, firm or organization to whom same is shipped. A manifest showing contents and localities where grown shall be supplied to the county horticultural commissioner having jurisdiction.

## Tolerance of Alkali in Vineyards

Answering a question as to tolerance of grape vines for alkali Prof. Flossfeder of the University Farm at Davis writes:

"As far as I can understand from Professor Lipman very little is known as to the point of tolerance regarding alkali in vineyards. He informs me that with plenty of organic matter present, that is, when soils contain one and one-half to two per cent of humus, grape vines can get along very well with about .2 to .25 per cent of white alkali. Where the amount of humus is only one-half per cent or even less, the chances are that they will not stand as much as .1 of one per cent of white alkali.

All material in shipments of nursery stock, etc., from one locality to another locality within the state, found to be infested or infected with any insect or animal pests, plant diseases or weed seeds which would be injurious or liable to be injurious to the agricultural interests of California shall be deemed a public nuisance, shall be refused delivery and immediately destroyed or returned to consignor at his option and expense. The remainder of such shipment may be delivered upon disinfection satisfactory to the county horticultural commissioner, excepting that in cases where the insect or animal pests, plant diseases or noxious weeds found in the shipment are not known to exist in the locality where delivered, the entire shipment shall be refused, returned or destroyed as above. A provision is also made that in case shipments as above referred to contain pests or diseases of common occurrence in the locality where delivered and which may be exterminated by proper treatment under direction of the county horticultural commissioner, same may be disinfected at owner's expense and delivered.

The statute directs the state horticultural commissioner to promulgate the names of pests and diseases that may cause damage to agricultural interests of California, and to advise proper methods of treatment and disinfection of plants and plant products or their containers.

A penalty is provided for the violation of any of the provisions of this act.

Then again an important question is as to whether the white alkali consists of common salt or of sodium sulphate. The limits for common salt would properly be .1 per cent to .15 per cent of the soil with plenty of organic matter, whereas in a soil without sufficient organic matter about .05 per cent. In the case of sodium sulphate the same limits might be somewhere between .3 and .35 per cent. However, he informs me that there are no definite limits in the way of figures thus far known.

"As to the black alkali I beg to refer you to Professor Lipman, who I think has got some data on the subject."

## Crops Being Marketed

**B**UREAU of markets of the United States department of agriculture is securing from all the markets of the United States reports of shipments and sales. These reports are distributed to market centers daily and in addition monthly reports are furnished giving an excellent idea of monthly marketing conditions. The report for the past month shows:

### Potatoes Advance

Potato prices dropped early in the first week of July, but are now firm at slightly higher prices. Shipments the week of July 3 to 10, amounted to 3273 cars as compared with 2938 cars during the previous week. Even with this increase, the supply is hardly enough to meet the demands and f.o.b. prices rose to as high as \$5.00 per barrel on the Eastern Shore of the Virginia section. Jobbing prices advanced to \$3.50 to \$5.75 per barrel as compared with \$2.25 to \$3.25 last year for the corresponding time.

### Cantaloupes Cheaper

Cantaloupes from California and

Georgia are moving much heavier than this time last year. Shipments for week July 3 to 10 were 1256 cars as compared with 719 last year for corresponding week. Californias are now selling for \$1.50 to \$2.50 in large lots, \$1.75 less than the price a year ago. Total shipments of cantaloupes to date however, are 4919 cars as compared with 5452 cars last season to corresponding date.

### Georgia Peaches Abundant

Georgia peach shipments are coming heavier than last year, with prices declining but still higher than for the corresponding time last year. The movement of Elbertas has begun. Arkansas and Texas peaches are starting late. Last year at this time shipments were quite heavy from these sections. Georgia peaches are now selling at wholesale \$2.25 to \$3.00 as compared with \$1.50 to \$2.25 per crate last year for the corresponding time.

### Watermelons

Watermelon shipments for the past week were 2392 cars as compared

with 2223 last year for the corresponding week. The heaviest shipments this past week have been from Georgia. Watermelon prices for the past week have declined materially from the high prices which have prevailed to date.

### Onions

The onion movement from Jersey and Kentucky has just started, while

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1000	"	" -8	" "
2000	"	2x4-6	" "
1600	"	" -8	" "
1300	"	" 10	" "
1000	"	2x6-6	" "
500	"	" -8	" "
700	"	" 12	" "
500	"	" 14	" "
700	"	" 16	" "
300	"	" 18	" "
300	"	" 20	" "
250	"	2x8-8	" "
250	"	" 10	" "
250	"	" 12	" "
250	"	" 14	" "
250	"	" 16	" "

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## Brenneis<sup>4</sup> ROW BEET PLOW



This is our specially made Tractor Beet Plow to use with 18 horse power Yuba Tractors. No faster or better beet plow made. Plows 4 rows at a time. Every part constructed of strongest materials and put together by skilled mechanics. These plows can be made in any sizes and we make special designs to order. We also make a beet plow for horse power.

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last year by this time receipts were quite heavy. Due to the late season in Jersey and Kentucky, the total of shipments for this past week was considerably less than last year for the corresponding period. Prices of onions continue to decline.

#### Other Crops

New apples are moving in larger amounts from Illinois and Delaware than either the previous week this year or the corresponding week last

year. The shipments of apples for the week July 3 to 10 amounted to 72 cars, more than double the shipments of last year for corresponding time.

Asparagus shipments are decreasing. Only 38 cars were shipped during the past week, considerably less than for the previous week.

Early cabbage shipments are lighter. However, homegrown stock is appearing on many of the markets of the north.

## Standard Apple Act of 1917

From report just made by State Commissioner G. H. Hecke touching upon one act passed by the last legislature we quote as follows:

"The Standard Apple Act of 1917 provides for standards of packing and marketing apples when contained in closed packages. Three grades are established, viz., the "California Fancy," the "B" grade and the "C" grade.

Every closed package of apples packed, shipped, delivered for shipment, offered for sale or sold in California must bear a label giving the grade, number of apples contained in package (variation of five allowed) or net weight, variety, name and address of fruit packer and date of packing.

The selling or offering for sale of apples represented to be "California Fancy," "B" grade or "C" grade, but which in fact do not conform to the standard of the law, is forbidden, excepting that Gravenstein apples may be packed with the stems not retained in the apples.

It is made unlawful to import, sell or offer for sale, or to possess apples infested with any pests or infected with disease, excepting that apples so

infested or infected, grown in California, may be sold as part of the crop to a packer, or may be sold for manufacture into by-products. It is provided, however, that this provision regarding any pests and diseases shall be limited by the variations allowed in the different grades.

It is made unlawful to use any label on apple containers which is false or misleading, and it is forbidden to use the word "fancy" with reference to any apples which do not conform to the standard defined for "California Fancy."

The state commissioner of horticulture is charged with the enforcement of this act and is authorized to sell uniform stamps to be used to designate the grades of apples within the container, same to be sold at the rate of 1/2 cent for each container, the funds from such sale to be expended in the enforcement of the act.

He is authorized to seize and condemn any apples packed, shipped, offered for sale or sold in violation of this act, as a public nuisance.

A penalty is provided for the wilful violation of the provisions of this act.

## Give Canning a Fair Trial

"Don't judge the success of canning by your first effort with whatever product you happen to find in market, when you begin operations," says a statement just issued by the department of agriculture. "It is more than likely that if you are a beginner at canning you will start with strawberries, the first fruit available. If you do you should realize that strawberries are one of the most difficult of all products to can satisfactorily. It is next to impossible, in fact, to can this fruit, as distinguished from preserving it (in which case a much larger proportion of sugar is used), so that its color, size, and texture will be preserved.

"It is normal, if ordinary canning practices are followed, to have strawberries shrink, turn more or less brown, and float to the tops of the

jars. The product is palatable, however, and will keep perfectly if the sterilization has been done properly.

"Don't feel, therefore, that your strawberry canning is a failure. Above all, don't become discouraged and fear that all your canning will be unsatisfactory. Practically every vegetable and fruit worth canning may be canned and kept in a condition fairly comparable in flavor and texture to the fresh product.

"Canned food will be needed next winter as it has never been needed before. Let your slogan be, therefore: 'Can all the food you can; dry the succulent foods which can not be kept well otherwise.'

"In canning, specialize on nutritious foods and concentrate to small bulk by cooking down all vegetables high in water content."

## Placer County Resolutions

The state council of defense is urging farmers to take a strong stand against food speculators. It calls attention to the action of the Bowman Farm Bureau Center of Placer County. That organization has unanimously endorsed: "Whereas farmers are being forced to pay exorbitant prices for seed, in some cases from 100 to 1000 per cent in advance of former cost, and

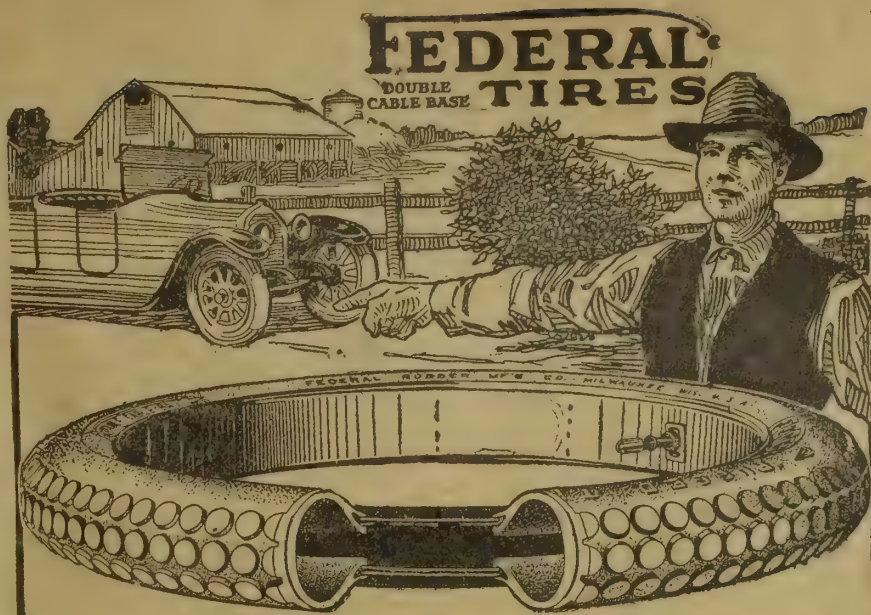
"Whereas the necessities of living are beyond the reach of people of ordinary means;

"We do earnestly urge that the government of the United States take immediate steps to exterminate the

vicious and parasitic speculator and gambler in foodstuffs."

#### FIBER CONTAINERS

The California Associated Raisin Company finds it is unable to secure an adequate supply of box shooks for the coming season's pack and has turned to fiber containers for its bulk seeded stock. The matter is now being taken up with the trade as to whether this will be acceptable. In any case this is a year in which producer, shipper and consumer must all adapt themselves to war time conditions.



Over there on my car is a set of Federal Tires that have given me not only good wear, but safe travel.

I bought them because I know how they are built on the inside. That's the important point.

Up hill or down, through ruts and holes, and the worst kind of going, those tires stay on the rims, and give perfect traction.

Experience has taught me the value of equipping a car all 'round with Federal Tires.

In the base of each Federal tire four strong steel cables anchor the tire safely to the rim against the hardest kinds of strains. Yet they slip off easily when necessary. Made in white Rugged and black Traffik non-skid treads. Sold by leading dealers everywhere.

### The Federal Rubber Company of Illinois

Factories, Cudahy, Wis.

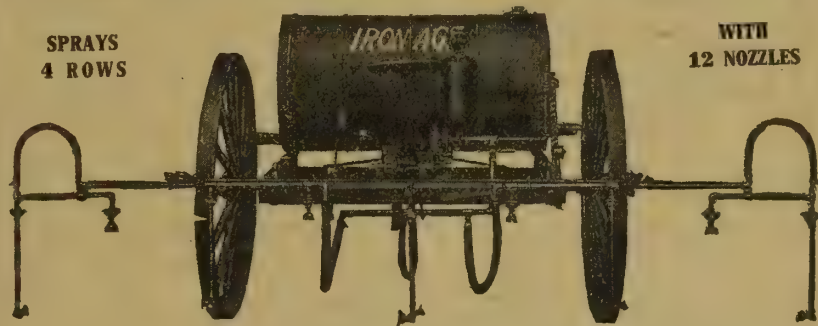
Manufacturers of Automobile Tires, Tubes and Sundries; Motorcycle, Bicycle and Carriage Tires; Rubber Heels, Fibre Soles, Horse Shoe Pads, Rubber Matting and Mechanical Rubber Goods.

## 1917 IRON AGE

### Low-Nozzle Traction Sprayer

SPRAYS  
4 ROWS

WITH  
12 NOZZLES

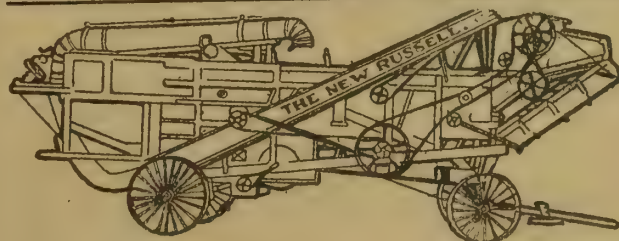


The 1917 Iron Age spray bar has twelve spray nozzles covering four rows at one time; there are four direct nozzles for the top and eight side nozzles. This system envelopes the entire plant in a heavy cloud of mist. The side nozzles are adjustable to throw more spray or to change the angle.

It is equipped with a 100-gal. wood tank, double-acting pump, steel angle bar for supporting the spray piping, nozzle strainers and "Iron Age" nozzles. Adjustments can be made to spray rows any desired width.

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Built Specially for  
California Conditions  
CATALOGS UPON  
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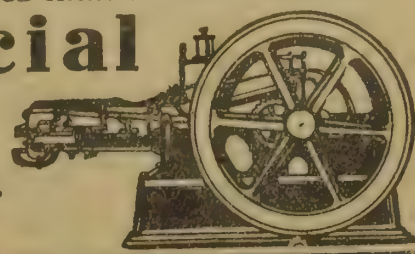
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# Mr. Brown proved that blasting pays



This shows part of the 18-year-old orchard of George W. Brown of Mount Cory. Trees in row at left were planted in ordinary dug holes; those at right were planted in blasted beds.

The trees in blasted beds now average 25 feet high with trunk girths of 42 inches. Those not in blasted soil average 18 feet high with trunk girths of 27 inches.

Plant your fruit trees in beds blasted with

## GIANT FARM POWDERS

STUMPING — AGRICULTURAL

and you will find, as Experiment Stations have found, that "trees planted in blasted holes develop deeper and stronger root systems than trees planted in spade-dug holes," and will bear earlier and yield larger crops.

The two Giant Farm Powders are made especially to suit western farm and orchard conditions. They pulverize the soil instead of packing it. Ask your dealer for either of them—Giant Stumping or Eureka Stumping Powder—and for other Giant blasting supplies. Be sure to get the genuine, bearing the Giant brand. If your dealer has only ordinary dynamites, we will see that you are supplied with the real Giant Powders.

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Every fruit grower will find valuable information in our illustrated book, "Better Orchard Tillage." We send you a copy free—mark and mail the coupon. Other books, on stump blasting, boulder blasting, subsoiling and ditching, also free on request.

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## Ground Squirrels an Ally of the Enemy



THE ravages of the ground squirrels and gophers must be checked. State Horticultural Commissioner G. H. Hecke is cooperating with the state board of health, the state and county councils of defense, the county boards of supervisors and other organizations to enable the county horticultural commissioners to commence decisive action under the amended county horticultural commissioner law (Section 2322A of the Political Code) to enforce control of rodent pests which are becoming a national menace.

The California ground squirrel stands first today as an undisputed ally of the country's enemies. Every day he is working most industriously to destroy large quantities of the food products of the state of California and that his efforts are crowned with material success will be told by any farmer. Ask the man who has had half of his grain field eaten by squirrels; or the man who has seen his almond crop destroyed; or the man who has watched his vineyard slowly disappear.

Every newspaper in the country today is laying stress on the conservation of food products. Nearly every food product comes from the farm and in this state nearly all of them are affected by the depredations of ground squirrels. Evidently the farmer occupies a most important position among the defenders of the country. It is up to him to keep clear that part of the food line that is in his hands. Most important is to grow the food. Next in importance is to see that the food is properly utilized. Certainly it is an act of defense to prevent the deviation of large quantities of food from the mouth of the soldier to the greedy jaws and sharp teeth of the ground squirrel.

Various estimates have been made of the destructiveness of ground squirrels. Probably the most accurate, however, are the figures compiled by Surgeon J. D. Long of the United States Public Health Service from the carefully investigated reports of 497 farmers who figured the increase in crops and land value after squirrels had been killed on their farms. These statistics show that on 321,233 acres the cost of killing squirrels averaged 11.2 cents per acre while the value of the increase in crops, pasturage, etc., was 34 cent per acre, a net saving of 22.8 cents per acre. Three hundred and seventy persons estimated that their land had increased in value \$2.74 per acre as a direct result of squirrel destruction. There are in California millions of acres of squirrel-infested, cultivated and pasture lands. At the above figures a destruction of squirrels on all these lands would net a saving of \$228,000 on every million acres.

These figures are an average and

show the gain from eliminating the average squirrel infestation. But the squirrel is a colonizing animal and averages do not properly represent his destructiveness. The acre or two on which a colony is located will grow mighty little grain or pasturage. As long as the colony is there the land it occupies and that nearby is waste land, a most unnecessary and inexcusable waste in these days when every foot counts. Where squirrel infestation is heavy over considerable areas, and there are many such localities, their destructiveness becomes all too plainly visible. There are many instances where entire fields of grain two or three hundred acres in extent have been ruined to the extent of not being worth harvesting; there are quite as many cases where fruit and particularly almond crops have been completely destroyed and today the United States Public Health Service, the California State Board of Health and the State Commission of Horticulture are constantly in receipt of complaints of excessive destruction in many widely separate localities.

Now is the time to kill the ground squirrels. Right now the farmer is getting big prices for his products and right now the ground squirrel is eating up more money than ever before. Right now the country has need of food while the ground squirrel keeps right on eating up a large share without making any return for what he takes except to keep alive a large stock of fleas and other vermin. The ground squirrel can be readily killed. It is not a hard animal to get at. There are at hand numerous, proved methods of extermination only requiring a little work and a comparatively small outlay of money to apply them. Every landowner is urged to do "his bit." In addition to each one doing "his bit" what is needed is cooperation. Since squirrels are a widespread pest it requires widespread measures to effectually deal with them. The man who kills the ground squirrels on his own land will undoubtedly reap the benefit but he will reap more benefit if at the same time his neighbors kill the squirrels on their lands, and it will be a more lasting benefit since there will not be left a colony of squirrels to replenish the fields at the next breeding season. Certainly when a man kills the squirrels on his land and so rids his neighbor of a menace to his crops he might expect reciprocity; and usually he will get it. What is needed is simultaneous action. If your neighbor does not understand the necessity of helping you to control this pest, apply to your country horticultural commissioner who, in cooperation with your county council of defense will take measures to enforce the horticultural law that now places the control of rodents in his hands.

## Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

### Fall Potatoes

In the issue of June 7 we gave from Mr. Musser information regarding planting and suggested that the Burbank potato was an old timer and now

out of the race. This statement by itself was hardly correct, and now the Aggeler & Musser Seed Company, of which Mr. Musser is a member, writes: "While it is a fact that Early White Rose potatoes are more satisfactory generally for planting in Southern California, it is also a fact that Burbank potatoes are adapted to some localities. The Burbank requires a heavy loam soil to get a satisfactory



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crop and it is a decided mistake to plant on light or sandy loam. The White Rose yields well in heavy loam and makes a fair crop in light or sandy loam, and that is why it is the safest plan to recommend it for general planting. When Mr. Musser wrote on June 20 he meant to refer to general planting conditions and he did not realize that the letter would be interpreted to indicate that it was a mistake to plant the Burbank anywhere in Southern California."

#### For Corn Ear Worm

The question was raised by a subscriber as to possible danger to stock from eating corn fodder where arsenate of lead, for the control of the corn ear worm, might have lodged on leaves or in the angle between leaves and stalk. This question was referred to Mr. Marks of the Germain Seed & Plant Company, who has had considerable experience in the use of this remedy, and he answers regarding this point, also as to dusting interfering with pollination:

"As far as we know there is no danger of poisoning with Corona Dry on account of any material lodging on corn stalks. We have had a report from E. L. Koethen of Riverside to the effect that he fed corn dusted with it to stock without any injurious results. We would not want to go on record as absolutely guaranteeing that corn stalks dusted with it would not result in poisoning, but we feel it would be a safe thing to do. There is so little of the poison that gets onto the corn stalk that there is little danger of poisoning. Regarding dusting the silk interfering with pollination, we have no evidence of this. Corona Dry has been used for the past three years now on corn ears and we have never heard of a barren cob being produced from its use.

#### Field Mice

I have a small two year old lemon orchard which is surrounded on three sides by barren hills from which come a great many field mice or moles which eat the bark around trees especially where I have basined and mulched the trees. These animals are about two-thirds the size of a common rat, but look more like a mouse. They have a tail about one and one-half inches long. Is there any kind of a solution I can soak grain or anything else in and sow broadcast to poison them? They are so numerous and hide in the mulch which I am using so easily, that it will take something quite drastic to have any effect.—Subscriber, Pomona.

See Cultivator of July 8, 1916, page 12, regarding this pest. In a word, the treatment consists in preparing poisoned cracked wheat or alfalfa. Strychnine is used. Above all pull the mulch away from the trunks of trees and give thoroughly clean cultivation. Do not allow weeds or any rubbish to collect. This has been a serious pest in various parts of California. Write to United States Department of Agriculture, Washington, D. C., for Farmers Bulletin 670 which gives full illustrations and different means of poisoning and control. A general discussion of field mice the United States over is also given in United States Biological Survey Bulletin 31, United States Department of Agriculture.

#### Ration for Laying Hens

Please advise best ration for 100 laying hens, also ration for young chicks.—Subscriber, El Cajon.

The best suggestion in the matter of a ration is to refer the inquirer to "Poultry for Profit" by Mrs. J. A. Koehn, published by the Cultivator Publishing Company, \$1.00. We may say larger value is hard to find than this one-dollar book on poultry. It devotes many pages to discussion of feeds and gives balanced rations recommended by many experiment stations. The first thing to consider is, "What feed is available and what feed is the low-

est in price?" The book gives the following suggestive ration, which has been recommended by various experiment stations: Grain: 10 pounds corn, 10 pounds wheat, 5 pounds oats. Dry mash; 5 pounds bran, 5 pounds shorts, 3½ pounds meat scraps. The mixed grain is fed in deep litter. The dry mash may be kept before the small breeds constantly. This was of course recommended when wheat was at normal prices. It could be in part replaced with barley or some of the sorghum grains, to which might be added meat or fish scrap to increase the supply of protein.

#### Real Estate Agent's License

Please inform me in regard to the new real estate law. Does it mean that one acting as agent for another in selling real estate must have a state license before he can charge commission? — Subscriber, Yorba Linda.

Yes, where one is to act as agent and collect commission, a license is necessary.

#### Carbon Bisulphide

Please advise if it is necessary to light carbon bisulphide when it is put on cotton and placed in mole holes, or is it sufficient to put in without lighting?—Subscriber, Cummings.

Some do and some do not. Some think the poisonous gas is driven to lower depths in the burrows if it is exploded. It is, however, deadly gas in either case.

#### Moles

What is the best method of eradicating moles in garden and lawn, which go through after each irrigation and destroy rose bushes and other plants? —Subscriber, Santa Ynez.

The only satisfactory way to handle the mole is with the regular mole trap. Seed houses and dealers in garden tools can furnish you these traps. The mole is hard to poison for its food is principally grubs and live worms. It scarcely ever destroys plants except as it does so by forcing up the ground.

#### Fertilizer for Potatoes

Would you advise liming potatoes after they are cut and just before planting? Have sandy loam soil which raises fine potatoes but not enough of them. The soil seems to be lacking somewhat in humus. What would be a good fertilizer to use when planting the seed?—Subscriber, Yucaipa.

The best substance to use with freshly cut potatoes is land plaster or gypsum. This is scattered over them immediately after cutting and the potatoes are then allowed to dry in the shade before planting. The use of lime on soil deficient in humus only aggravates the situation because lime attacks the little remaining humus. Such soil should be treated with a heavy application of stable manure, but of course this cannot be done while producing a crop of potatoes. The best treatment for such a soil where planting is to be immediate would be the application of a complete fertilizer rich in potash. This might well be applied in the furrow before the dropping of the seed.

## Legal Queries

Louis B. Stanton, attorney, 243 Wilcox Building, Los Angeles, will answer legal queries in this department.

Immediate mail replies cannot be given except where fee to Mr. Stanton is paid. When replies are wished in Cultivator address query to 115½ N. Broadway, Los Angeles.

#### Shooting Chicken Thieves

What penalty, if any, would attach to shooting a man caught in the act of stealing poultry?—Subscriber.

This would be an assault with intent to kill and could not be justified upon the ground of the trespass or to expel the trespasser. In such case the owner of the property may use such reasonable force as is necessary to prevent the injury or destruction of his property or to defend or regain the possession thereof, short of the use of a deadly weapon. What is such reasonable force is a question of fact for a jury. Assault with intent to kill is a felony punishable by imprisonment in the state prison.

#### Shooting Trespassing Stock

What penalty, if any, would attach to shooting live stock where the owner of the stock after frequent remonstrances persists in trespassing? — Subscriber.

The law under the head of "Estates", heretofore many times given in these columns, provides the remedy for the owner of the property to take. If the property owner should shoot and kill or injure the trespassing stock he would undoubtedly be held civilly liable for the value of the stock injured; it is probable that he could be held for the commission of a misdemeanor punishable by a jail sentence. Consideration for the public does not contemplate that any individual shall thus take things into his own hands.

#### Connecting Pipe Line

Six years ago I bought a ranch which was connected to the pipe lines of various water companies by a pipe line owned by one of said companies. This company now claims that neither I nor my predecessors had any right

to use this connecting line. The pipe line on my ranch is useless without the connecting line. This line has been used by myself and predecessors for the last 15 years; the first objection was made about a year ago. The line is used to supply other ranches below. No agreement in reference to this pipe line is known, but it was probably given for a right of way across my land. Can the use of the line be denied? — Subscriber, Claremont.

Whenever a corporation furnishes water to irrigate lands which the company has sold the right to the flow and use of the water remains a perpetual easement to the land; whenever a person cultivating land on the line and within the flow of any ditch has been furnished water by it to irrigate the land such person shall be entitled to the continued use of the water. The continuous, uninterrupted use of a pipe line for more than five years under a claim of right to so use it will ripen into a permanent right to the use of same. Thus it will be seen upon the facts stated that you are entitled to the use of the connecting line.

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# Preservation of Vegetables

By Prof. Wm. V. Cruess



PROF. WM. V. CRUESS of the State University writes that he has gathered together and put in popular form a series of articles on the subject of food preservation. We give here directions for drying of summer vegetables, canning vegetables by the lemon juice method and making of tomato paste. Others will follow in later issues.

## THE DRYING OF SUMMER VEGETABLES

Because of the scarcity and high price of cans and jars, it becomes necessary to devise other methods than canning for the preservation of the surplus vegetables. The abnormal

demand for food at the present time has stimulated the planting of home and small gardens. The falling price of potatoes indicates that this increased planting has had its effect on the supply. It is probable that much of the surplus will spoil or become too ripe for use unless information upon new methods of preservation is made available.

Practically all of the small vegetables may be satisfactorily dried and preserved in the dry state indefinitely. Under California conditions we may dry the vegetables without the use of artificial heat. This makes the process very cheap and convenient.

### Trays

Ordinary fruit trays can be utilized

for the drying of vegetables. If only a few pounds of vegetables are to be dried, paper or cloth may be used for trays, or improvised trays may be made of any lumber available.

Potatoes must be sulphured before drying. A very convenient way of sulphuring is to stack the trays of cut potatoes and cover the stacked trays with a large box made for the purpose. This box may be constructed of a light wooden frame covered with ordinary tar or building paper. The sulphur box should be considerably larger than the trays so that room will be available for the insertion of a pan of burning sulphur. For example, if the trays are two feet by three feet the sulphur box should be about 36 inches by 40 inches. This will allow space of one foot at the side. A small pan of sulphur may be placed in this space on the ground. The sulphur may be lighted by plac-

ing a few shavings in the pan of sulphur and covering the shavings partly with the sulphur or by dropping a few coals in the pan of sulphur before it is placed in the sulphur box. This same sulphur box may be used for the sulphuring of such fruits as apricots, peaches, and pears. The following special directions may be followed in the small scale or home drying of various summer vegetables:

### Peas:

Select peas at the optimum stage of ripeness. They should not be too ripe. Shell and spread on trays. If wooden trays are not available, paper, canvas or cloth may be used. Expose to the sun until dry. Store the dried peas in such a way that insects can not reach them. It is a good plan to place them in a flour sack or similar bag and wrap the bag in heavy paper so that insects can not lay their eggs through the cloth, or the dried peas may be stored in ordinary glass jars.

### Corn:

The corn used for drying should not be too ripe. It should be tender and sweet. Remove the husks and immerse the corn on the cob in boiling water for about three to five minutes. Chill it in cold water and cut from the cob. Spread on trays in the sun and allow to dry.

### Tomatoes:

Tomatoes can not be successfully dried in a cold moist climate. Bright sunlight and dry weather are essential. Cut the tomatoes in half or in thick slices. Spread on trays and allow to dry in the sun. It may be necessary to turn the tomatoes to prevent molding. Dry them until they are tough and leathery in texture.

### Cooking Dried Peas, Corn, and Tomatoes:

Corn should be soaked two to four hours, using two cups of water to one cup of corn. Peas should be soaked about 24 hours before cooking. Dried tomatoes will require at least 24 hours soaking or longer to soften them. The soaked vegetables are then seasoned and cooked in the ordinary way. The drying process results in loss of flavor and the dried product will therefore require more seasoning than would the fresh vegetables.

### Irish Potatoes:

Peel and cut into slices about one-fourth or three-eighths of an inch thick. Spread on trays. Sulphur the sliced potatoes on trays for 20 minutes. Speed trays in sun until potatoes are dry. Unless the potatoes are sulphured in this way they will be dark and unpalatable. To cook them, soak them in water for 24 hours and cook in the usual way.

### Sweet Potatoes:

(Farmers' Bulletin 841) — Select sound roots. Wash, boil until nearly done, peel, and run through a meat chopper or slice. Spread on trays and dry until brittle.

### Pumpkin:

Cut into strips and peel off the outer rind. Cut the strips into thin slices about one-fourth of an inch thick. Spread on trays and dry.

### Squash:

Squash may be treated in the same way as pumpkin.

### Cabbage:

Select well developed heads. Strip off the outer leaves. Cut into strips about one-fourth of an inch thick. Spread on trays and dry.

All of the above products must be stored away from insects. It may be found a good plan to sterilize all dried

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vegetables immediately after packing for storage by placing them in the oven for about 15 or 20 minutes to heat them through thoroughly. This will kill any insect eggs that may have been deposited on the vegetables during drying.

#### CANNING VEGETABLES BY THE LEMON JUICE METHOD

Vegetables are very difficult to sterilize because of their composition and because they contain bacteria that are very resistant to heat. Most vegetables are deficient in acid. This makes it very hard to kill these heat resistant bacteria. If we add any harmless fruit acid, such as the acid of lemon juice, or vinegar, the vegetables become as easily sterilized as fruits. The following method may be successfully used in the household. This method makes it possible to sterilize vegetables in one sterilization without the use of a pressure cooker.

#### String Beans or Peas

Prepare a brine consisting of three ounces of salt and six ounces of lemon juice to the gallon of water. String the beans and break into proper lengths for cooking. Pack them into jars or cans. Fill the containers with the brine described above. Place the rubbers and caps on the jars loosely but do not screw down the caps. Sterilize as follows: Place a screen or cloth or other false bottom and fill the container with water to within about one-half of the height of the jars. Heat the water to boiling and boil for about one and one-half hours. Seal the jars at once.

#### Asparagus:

Asparagus may be canned in the same way as described for string beans, but in this case the amount of lemon juice may be reduced to four ounces to the gallon.

#### Corn:

Corn is very difficult to sterilize. In this case eight ounces of lemon juice is used to the gallon and the corn must be sterilized for two and one-half hours. The amount of salt is three ounces to the gallon.

#### Tomatoes:

Tomatoes contain enough acid of their own to make them easily sterilized and therefore no lemon juice need be added.

#### Other Vegetables:

Other vegetables, such as carrots, beets, turnips, etc., may be sterilized in a brine consisting of five ounces of lemon juice, three ounces of salt to the gallon, followed by sterilizing in boiling water for one and one-half hours.

#### Use of Vinegar:

Where vinegar is used, use one and one-half times as much as recommended for lemon juice; that is to say, if six ounces of lemon juice is recommended, use nine ounces of vinegar, should vinegar be used instead of lemon juice. Vinegar gives as good results as lemon juice when used in this proportion.

#### TOMATO PASTE

Canned tomatoes form a very important part of the diet of the ordinary family. The canned product consists of about 95 per cent water. Because of the scarcity and high price of tin, cans and jars this season, it will be readily seen how much space is wasted by canning tomatoes in their natural state. They may be concentrated to about one-eighth or one-tenth the original volume, and the concentrated product will contain all of the food value and all of the flavor

and color of the fresh tomatoes. The concentrated product is called tomato paste or Italian conserve. The following method of manufacture is applicable to household conditions and results in a product containing all the value of the fresh vegetable.

Boil the tomatoes until tender. Crush thoroughly and pass through a fine sieve or screen to take out the skins and wood portions of the pulp. Place the strained pulp and juice in a shallow pan and boil down over a slow fire to a thick consistency. Do not boil until it begins to scorch, but boil down as far as possible without scorching. Then place the pan at the back of the stove where the heat is not sufficient to cause the paste to stick to the bottom of the pan or scorch. Allow it to evaporate under these conditions very slowly until it has become very thick and pasty; that is, until it reaches about the consistency of peanut butter. It should then be packed into scalded jars hot. The jars should be sterilized in a wash-boiler sterilizer as directed in previous circulars on canning for one hour. The jars should then be sealed.

The tomato paste made as above will be unflavored and would be used in the same way that fresh tomatoes are. It may be diluted several times with water and used as a flavor for various dishes or it may be used as soup stock, etc. The flavored tomato paste may be made by a recipe given

by Mrs. Jessica Hazzard of Los Angeles:

To one gallon of tomato juice and pulp add two sliced onions, two buttons of garlic, one bay leaf, and chili peppers to flavor. Boil down until thick over a slow fire and then concentrate over a steam bath or on the

back of the stove to a thick paste. Beat in olive oil and salt to flavor. Store in jars or cans without sterilizing.

It is urged that the concentrated tomato paste be made this season rather than that the tomatoes be canned.

## Raising Jimson Weed

Written for California Cultivator By Martha L. Baker



RAISING jimson weed for commercial purposes promises to be a profitable industry for ranchers of the San Joaquin Valley. Work has just been completed on the harvesting of the first crop in the vicinity of Porterville, Tulare County, where several hundred acres are under cultivation this year for the first time.

Last year a Pasadena firm employed a local representative to buy up all the wild jimson weed he could get in the Porterville district. About \$1700 worth was picked, by children mostly, and shipped to the southern buyers. It is used for medicinal purposes.

This year the same firm offered to furnish the seed for planting and contracted to buy up the product at 12 cents per pound. They secured contracts for about 500 acres, but not quite that amount was put under cultivation this season. Estimates place the returns at from \$150 to \$200 an acre.

Jimson is planted the first of April. The soil is prepared the same as for planting corn and the jimson is planted with a drill in furrows far enough apart to allow of cultivation and is cultivated much like potatoes.

The harvesting of the first jimson crop begins when the plants are about six inches tall and is a sort of a thinning process. The whole plant is pulled up and dried. The roots, stem and leaves of this young plant are used. At the three other crop harvestings only the leaves are picked, dried and crushed through a sieve, and sacked for shipment.

Like a number of other industries this of raising jimson, whose botanical name is *datura stramonium*, is a "war baby" project. The present war preventing the shipment to this country of belladonna, a medicinal plant, manufacturers of medicines had to start the propagation in this country of something to be used instead, hence the jimson weed which has long been more useless than useful except as a few who knew its remedial qualities used the leaves as poultices.



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**Saturday, July 21, 1917****OUR ADVERTISERS RELIABLE**

We guarantee our subscribers against loss through dishonesty of any advertiser in the Cultivator. We do not attempt, however, to adjust trifling differences between subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within 30 days from date of the transaction, and the subscriber must have mentioned the Cultivator when writing the advertiser.

**THIS WEEK'S COVER**

Meeting conditions as they are without waiting for all the comforts of civilization is shown in the illustration on the cover page of this issue. Arizona, like many sections of California, is yet new, and when up-to-date dairymen learned of the advantages to be derived from cow testing associations they organized and a cow tester was put into the service. But the homes of the pioneers were not all built so that the once-a-month visits of the cow tester found them unable "to sleep him" except out under the blue vault. Then the cow tester provided his own Pullman car, as is shown in the illustration. This is Mr. Watson Pickrell of the college of agriculture of the University of Arizona, first tester of the Arizona Pioneer Cow Testing Association. He has been advanced to the position of county agricultural agent for Pima and Pinal Counties. He not only uses his Ford to carry his outfit from dairy to dairy, but, as may be needed, makes up his bed in the machine wherever night overtakes him. Most interesting information regarding the Arizona methods of cow testing may be had in Mr. Bemis' article on Page 51.

**MUTUAL INSURANCE**

The fires which destroyed so much valuable property in Ventura County were to a degree a test of the stability of cooperative fire insurance. With many other counties of California Ventura has organized a County Mutual. It is not exclusively a farmers institution, that is, under the present state law it is permitted to carry insurance to a very limited extent in cities.

The Ventura County organization has had losses before, all of which have been quickly paid. This last fire

however, caused the greatest losses it has ever had to meet. The total was about \$25,000. The reserve fund amounted to only about \$20,000. The directors promptly went to the banks and secured the remainder and are still doing business at the old stand. They will continue to do more if business methods of this type are followed. So far as we have learned there is not one fifty-cent-on-the-dollar Mutual Fire Insurance Company in California.

**HIS EYE OPEN**

"Produce More"; "Save a Starving World"; "The Farmer Will Win the War"; and a few other slogans of like nature have been popular for several months. The farmer has answered the call; in some instances to his profit; in others to his loss. Onions in the Stanislaus section could not be sold for enough to pay for harvesting, but that condition has been in part corrected. In Riverside County the potato growers gathered themselves together and are securing fair recognition and some little return for their crops. But it is developing that some of those who shouted loudest for greater production are singing lowest as to returns to producers.

It is now time for planning another season's crops, and the farmer is ready to produce greater than ever if implements and supplies may be had, but it is useless for him to consider greater investment and greater production unless he protects himself from the sharks in the markets. No better time for cooperative effort ever offered itself, for the farmer now realizes more clearly that in all times and all seasons he will be exploited if he does not have his cooperative eye wide open.

**SENDING OUT LIVE STOCK**

Our news columns have an item regarding the sending of a quantity of live stock from Imperial Valley to Kansas City packing houses. The Eastern packer will pay freight on the stock, cure and pack the meat in Kansas City, pay more freight on the finished product back to California—and the consumer pays all.

This offers a problem worthy of some experts in economics. Why should California stock sell at prices which make it attractive to Easterners to pay high freights and suffer the losses which come from long hauls? There are packing houses in California, but perhaps not enough to take up this stock at prices which Easterners are willing to pay. In any case, they do not manufacture enough of the finished product for California's own use. A San Francisco packer is making a campaign of putting up some of California's best in a California packing house and advertising it as a California product. This is especially the case with bacon.

Now is there not some way in which, either through cooperation or otherwise, we may secure the finishing of this product in California or at least some place nearer than the Missouri River?

**TORRENS TITLE**

With the announcement that the federal loan bank will accept the Torrens titles only after they have been in force for 12 months farmers who may possibly wish to secure these in the future should take early steps to perfect their title under the new state law. Many savings banks whose directors have interests in certain title insurance or guaranty companies have

announced that they will not loan on the Torrens title. This forces the farmers either to pay the higher costs under the old system or to make other provisions for securing capital such as the federal farm loan. We believe this will result in more general use of the farm loan and in addition the ultimate organization of cooperative loan organizations. We see no reason why farmers may not have organizations similar to the building and loan associations of this state. Money is essential to the success of farming, and if we are to succeed in a large way we must have larger capital. This cannot be if the banks take the attitude which they have in several counties. The expense of making a loan is prohibitive, and as recently said in the San Francisco Chronicle: "This will continue until a sufficient number of farmers obtain Torrens titles to create a real demand for loans upon land whose title is established in that way. At present the number of farmers who have secured Torrens titles in this state is negligible. The cost of a Torrens title should not exceed that of having the title passed on by an attorney preliminary to obtaining one mortgage loan. It is improbable that much progress will be made in securing Torrens titles until some one finds a way to make money by promoting the movement. It will doubtless require a full generation to complete the change."

**SOME TRUST**

Federal investigation is developing the fact that the present prices of print paper demanded of every publisher are entirely unjustified in view of any actual increase in cost of manufacture. It must be admitted that nearly all costs have advanced, but in the manufacture of print paper, not to 100 or 150 per cent. Publishers of the United States are being forced to pay unjust prices, but we do not believe it will be permitted many months longer.

**PREMIUM ON BONDS**

We note in daily press a quarter-page ad of "Federal land bank 4½ per cent farm loan bonds," with extended description of the bonds such as "interest payable semi-annually," "denominations \$1000, \$500, \$100, \$50, \$25," etc. "Price \$1. 01½ and accrued interest." These bonds are not offered in this advertisement by the federal land bank but by various financial and bonding institutions and the question naturally comes to producers, "Why 1½ premium? In other words, why may not any of us go to the federal land bank and purchase these bonds at par? Why should an expensive advertising campaign or commission to brokers be necessary? If the bonds are worth above par why may not this fund go to benefit the borrower that ultimately a lower rate of interest may be granted to him?" We admit we may not be long on financial matters but it appeals to us that the people should have the benefit of the premium.

**LOAD AND UNLOAD**

There is an appeal that loading and unloading of freight cars be expedited. There is a shortage and it has been found upon investigation that freight cars are on sidings, and practically idle, more than half the time.

In Spain they control this matter of freight congestion by the government authorizing the railroad to sell at auction all merchandise not withdrawn by the consignee within five days from date of its arrival. This would hardly be tolerated in the United States unless, possibly, war time practice might justify it.

**Agricultural News Notes**

The government of New Brunswick is encouraging agriculture by the appointment of experts to advise farmers as to best cultural methods.

England is contemplating the substitution of syrup from grapes as sweetening for jams and marmalades. Extensive experiments have been carried on to work out the best process.

Of the loans to farmers approved by the farm loan banks up to July 1, Texas has the largest amount, a million and a quarter. Oklahoma comes next. California is third with \$956,000.

Bulk shipments of wheat are being made from Australia to European ports. The elevator method of handling wheat is new in Australia, bagged shipments having prevailed in the past.

Canned salmon will be admitted to Britain in one-half the quantities which were imported during 1916. There has been complete prohibition on imports of salmon since February 23rd.

Twenty-three states of the United States went "bone dry" on July 1 when the federal law went into effect prohibiting shipment of liquor into any territory where its manufacture or sale is prohibited.

There are 756 mills in the United States which crush cottonseed for oil. A billion and a quarter pounds were produced during the season ended April 30. Of olive oil last season a million and a quarter pounds were produced.

Forty-nine per cent of the total sugar consumed in the United States is produced in seven Western states, two Southern states and insular possessions. The remainder, or more than half, comes from Cuba and other foreign countries.

There are 3141 Philippine Islands with an area of 119,542 square miles. The six principal crops are grown on 8.5 per cent of this area. The greatest crop is rice, next in order, abaca (Manila hemp), corn, coconut, sugar cane, tobacco and maguey.

A market news service for grain, seed and hay has been established by the office of markets of the United States department of agriculture. Reports will be made every two weeks on stocks in hand, shipments, demand and prices in various sections of the country.

There has been an improvement in general crop conditions the country over since June 1. The composite condition of all crops was on July 1, 2.1 per cent of their ten-year average. The total acreage in cultivated crops this year is three per cent greater than last year.

We have surely planted corn this year—over 121 million acres for the United States. The entire acreage in winter and spring wheat is 46,692,000. The July forecast for the corn crop—by the United States bureau of crop estimates—is 3,124,000,000 bushels. Only 23 states are included in these totals; California does not figure at all.

Before the war the United States imported most of its wool from Australia and New Zealand. Last year the wool importers of this country had to scour the world to keep the mills of New England busy and supply the needs of tailors and clothing manufacturers. We bought nearly 160,000,000 pounds in Asia, 79,000,000 pounds in South Africa and a little over 121,000,000 pounds in Australasia. The remainder came from various corners of the world, picked up in small quantities by alert Yankee commercial agents.



# Agricultural News Notes of the Pacific Coast

## Northern California

Plumas County farmers are appealing for more help.

Humboldt County is appealing for a live stock inspector.

The Yuba City, Sutter County, cannery, opens this week.

Yolo County warehouses are already filled with grain.

One Sutter County grain farmer marketed over 90,000 sacks of grain.

The Placer County farm bureau is discussing the holding of a county fair.

Glenn County's output of barley and wheat will be 20 per cent greater than normal.

New rural carriers are to be on the routes from Biggs and Paradise. Butte County.

A canning club has been formed amongst the high school girls at Gridley, Butte County.

Lumber mills near Oroville, which have been closed for six years, are again in operation.

One holder of a quarter section in Butte County sold his crop of grain this year for \$16,000.

All citrus sections of the northern valley report serious losses to Washington Navels from the heat wave.

One implement dealer of Butte County recently sold in one day 29 binders, 20 tractors and three gang disks.

Olive growers of Butte County have formed an association and propose to build a large factory for curing and packing olives.

The Paradise Irrigation District, near Oroville, Butte County, will soon have water on a large tract of land not heretofore cultivated.

The Placer County farm bureau has organized a purchasing and marketing association, articles of incorporation for which have been filed.

The Stanford Ranch, near Vina, has the heaviest crops for years. Twenty-three thousand acres of wheat and barley are now being harvested.

## Central California

A general squirrel campaign is to be prosecuted.

The Prune and Apricot Growers Association is asking for additional capital.

Kern County farm bureaus are pulling off a farm bureau membership contest.

The growing of Jimson weed is becoming a great industry of the Porterville section.

Yosemite Valley gets a \$250,000 appropriation for improvement the coming year.

Lindsay, Tulare County, will soon have a new plant for processing and packing olives.

Kings County's output of table grapes will be immense, aggregating about 5000 tons.

Santa Clara Valley prune pickers propose a wage of three dollars for ten hours' work.

Tomato canning will begin at Lindsay about August 1st. One plant there will handle 1500 tons.

The West Side Irrigation District of San Joaquin County has just marketed \$295,000 worth of bonds.

Independent peach buyers have contracted for cured peaches at around nine and nine and a half cents.

Horticultural Commissioner Howard of Kings County is supplying ranchers with poisoned grain, two pounds for 25 cents.

"Twenty per cent above normal" is the report received from many of the table grape districts of the central part of the state.

The Valley Fruit Growers' Association of Fresno is arranging with school boys of various sections to aid in harvesting fruit.

The California Peach Growers', Inc., is discussing the matter of 1917 prices. Orders have already been received for several hundred tons.

The apricot season just closed at Selma, Fresno County, has shown a crop much larger than anticipated. The quality was first class.

## Southern California

Pomona canneries are employing about 800 helpers.

Hay balers are busy in all parts of Southern California.

The Yucaipa Apple Association is planning for the coming season's pack.

One tract of 150 acres is to be planted to onions at Nuevo, Riverside County.

Santa Barbara County has some of its first cured apricots ready for the market.

Palo Verde will show some of its own growing of cotton at the Riverside fair.

The cherry crop of Beaumont was 300 per cent greater than any preceding year.

One refrigeration plant at Brawley can supply ice for 100 carloads of cantaloupes daily.

The Coachella Valley of Riverside County is to have a local agricultural fair November 1-3.

The San Fernando Valley reports abundant help in the harvesting of its apricot and small fruit crops.

A train of 30 cars with beef cattle is being shipped from Imperial Valley to Kansas City packing houses.

The cannery at Arlington is having a full run on apricots. Its principal helpers are women and children.

The Imperial County farm bureau is planning for a \$25,000 fund to be used in bringing agricultural help into the county.

The sealer of weights and measures of San Bernardino County is making a campaign against short weight berry boxes.

There has been organized in Riverside County the Allah Date Gardens, which will plant a large tract in Coachella Valley.

The Southern California Poultry Producers' Association has compromised with members who had been sued because of marketing outside of the association, contrary to contract. The association hopes to work harmoniously.

## The Coast

Bellingham, Washington, is marketing its largest raspberry crop.

An Arizona honey producer recently sold a carload of honey at \$3660.

Erection of an immense grain elevator is under way at Portland, Oregon.

Arizona farmers have planted extensively to tepary beans and grain sorghums.

Farmers of Lewis County, Washington, report crops maturing the latest of any season.

Walla Walla, Washington, has been selected as a place of meeting for the 1918 state grange.

Arizona is having fine summer showers, the precipitation at Willcox last week aggregating 1.10 inches.

Three hundred thousand pounds of wool produced in Umatilla County, Oregon, recently sold at 60½ cents.

A drainage project of Pierce County, Washington, if carried out will reclaim hundreds of acres of rich land.

One Oregon wool sale is reported at 72½ cents. The amount reported in the one sale aggregates 65,000 pounds.

A large manufacturer of York state has arranged a plant for the handling of flax in the Willamette Valley, Oregon.

One Yuma Valley, Arizona, rancher recently took a carload of hogs to Los Angeles and sold them for nearly \$1400.

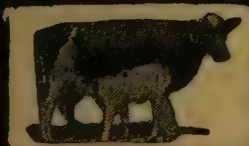
Immense vegetable and fruit drying plants have been erected at Wenatchee, Yakima and Spokane, Washington.

Labor troubles are not only affecting copper mines of Arizona but producers fear the losses will be heavy in all lines.

Continued rains in Whatcom County, Washington, have waterlogged many of the lands and some crops have suffered.

The community packing of apples being tried out in the Pacific Northwest apple growing sections is proving satisfactory.

## ABORTION IN CATTLE



**PREVENTED AND CURED PERMANENTLY**  
**YOUR COWS MADE PROMPT. REGULAR BREEDERS BY**  
**STERILOID**

### STOP LOSING CALVES

**TREATMENT:** If STERILOID is used at the first sign of

have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for FREE BOOK. It explains the causes and symptoms of Abortion and tells how to cure Abortion, and make your cows regular healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

**GUARANTEE:** We will refund money in every case when STERILOID FAILS to make good. Price \$1.00. Mail postpaid, in plain wrapper. Dept. L, 898-408 Columbus Ave., New York City. Reference, Colonial Bank

**MARTIN REMEDY CO.**

## AYRSHIRES

The Economical Breeds  
when Feed is High

## CHESTERS

A Few Would Give You  
A Good Start

Melone Co. Oak Knoll Napa, Cal.

## Hauser's Digester Tankage

GIVES GREATEST VALUE FOR LEAST MONEY.  
IT MAKES THEM FAT.

Hauser Packing Co. Los Angeles

## WE MAKE LOANS

on beef breeds of cattle in amounts from \$5000 up,  
and invite you to correspond with us.

### Southwest Cattle Loan Company

JNO. L. KNORPP, Pres. and Gen. Mgr.

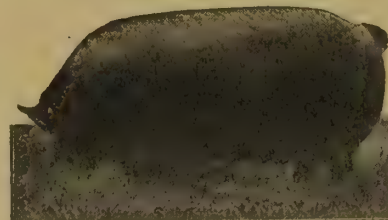
915 Citizens Nat. Bank Bldg. LOS ANGELES, CAL.

## BERKSHIRES

A few fine fall pigs, strong in Bandmaster, Masterpiece and Rival's Champion blood. They are strong and active with good top lines, heart girth and moderate heads. Glad to show them or send full particulars and prices.

### MAPLEWOODE RANCH

E. M. HOLGE, Owner HOMER HEWINS, Jr., Manager  
Callistoga, Cal.



Forest Grove Duchess 5th

## Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count Glory 426982, grand champion at the California State Fair, 1916. Berkshire herd won Premier Exhibitor's banner at P. P. I. E.

513 Hearst Building  
San Francisco

CARRUTHERS FARMS  
Mayfield, Cal.





## Security Calf Food

Will Bring You \$27.80  
Estimated Profit on Each Calf

Same Principle as  
Baby Foods are Used

### The Old Way

Cream Used in Six Weeks, \$16.80  
Veal Calf Sells for 15.00  
Loss 1.80

### The New Way

Cream Saved in Six Weeks, \$16.80  
Veal Calf Sells for 15.00  
Total 31.80  
Cost Security Food 4.00  
Profit 27.80

These are figures you can depend on and we absolutely guarantee you satisfaction or money refunded. Ask your dealer or write

**SECURITY REMEDY CO., MINNEAPOLIS, MINN.**



## Santa Anita Rancho

Anoakia Breeding Farm



**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by Imported Stallion Ibn Mahruus, head of our Arabian stud. Dams are the choicest thoroughbred mares of Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahruus, world renowned Imported Stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the very best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted California State Record Cows. Write for details.

Correspondence Invited

**Anita M. Baldwin**

W. H. TAYLOR, Superintendent

Santa Anita, Cal.

## WHY NOT?

WHY NOT?

BUY A BULL, from one of our tested cows to head your herd?

DO A LITTLE FIGURING, and see just what you are losing by using a bull at the head of your herd that should have been sold for veal in the first place?

STOP THE LOSS NOW, by buying a good bull? GET INTO THE PROFIT PRODUCING CLASS?

WRITE NOW FOR DESCRIPTIVE BOOKLET OF A REMARKABLE OFFERING OF MALES AND FEMALES?

**Gotshall and Magruder**

The Home of the State Champion Two Year Old

RIPON

CALIFORNIA

## Poland Chinas, Medium Type

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain. 12 firsts, Junior Champion and Reserve Grand Champion Boar, Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

**M. Bassett**

Hanford, Kings County, Cal.



## Shorthorn Bulls and Heifers

We have twenty bulls and ten heifers for sale at present. This is the best lot that we have ever had for sale. Mostly two year olds, registered, tuberculin tested and all reds in excellent condition and splendid individuals. Write for prices or better come and see them.

**H. L. & E. H. Murphy**

Six miles from Sacramento

Perkins, Cal.

When writing advertisers, mention The Cultivator.

## Vaccination Against Anthrax



LOSSES from anthrax, or charbon, which at the present time is responsible for the death of large numbers of live stock in low, moist

lands of a more or less mucky character, may be minimized, according to specialists of the United States department of agriculture, by the proper use of protective vaccine and the proper disposal of the carcasses of infected animals. This disease affects chiefly cattle and sheep, but none of the domestic animals is exempt, and even man is sometimes a victim. Some centuries ago it is known to have caused the death of more than 60,000 persons in southern Europe. Since that time the disease has apparently become less virulent but it is still the cause of considerable loss to stock owners.

The preventive vaccine is a development of the method devised about 25 years ago by Pasteur. Since that time scientists have succeeded in removing many of the objections to Pasteur's vaccine, and the new method is less dangerous and surer.

In a new publication, Farmers' Bulletin 784, detailed directions for treatment are given. It consists in ordinary cases of an injection under the skin on one side of the animal of ten cubic centimeters of anti-anthrax serum, followed immediately by a similar injection on the other side of the body of one cubic centimeter of spore vaccine. In the case of sheep, which are peculiarly susceptible to the disease, the quantity of vaccine is reduced to one-fourth of a cubic centimeter.

Stock owners are warned to obtain the serum and vaccine from reliable manufacturers only and not to administer the treatment unless the disease has already appeared in the vicinity or the pastures on which the animals are to be turned out are known to be infected. Careless handling of the vaccine may result in spreading instead of controlling the disease.

The principle underlying this treatment is the same as that which in man has resulted in the minimizing of death from smallpox, typhoid, and other diseases. It consists in conferring an artificial immunity to the infection. The introduction into the body of a very much weakened form of the germ that causes the disease will build up in the body resistance to subsequent attacks of the same disease. A fly can easily carry a sufficient quantity of blood from an animal infected with this disease to kill a horse. Nevertheless, by repeated inoculations, scientists have succeeded in developing such a high degree of immunity in a horse that the animal has been able to withstand the injection of more than a pint of the

most virulent anthrax culture obtainable. This, of course, is a much higher degree of immunity than is required to insure an animal against ordinary infection.

The cause of anthrax is a minute germ which multiplies rapidly in the body, especially in the blood, and produces poisonous substances which ordinarily cause death. The symptoms of the disease resemble those of tick fever and blackleg. The differences which will enable stock owners to distinguish it from them are described in detail in the bulletin already mentioned. In acute cases treatment is seldom effective. For this reason the best methods of combating the disease are to vaccinate all animals likely to be exposed and by deep burying or cremating of infected carcasses, to make certain that the infection is not allowed to establish itself in pastures.

It is a well known fact that under certain conditions and in certain forms the germs of the disease are remarkably resistant to heat, cold, and drouth. They will remain for a long time in a pasture and be capable of infecting any animals turned out on it. Ordinarily the disease is taken into the body through the mouth with food. It may, however, be absorbed through a wound scratch. It is in this way that human beings usually become infected, and the name "wool-sorter's disease" is derived from the fact that men engaged in sorting wool are particularly liable to contract the disease through infection of small wounds on their hands.

Experiments have shown that if the carcass of an infected animal is buried promptly, without having been opened to permit the entrance of air, the anthrax germs die within a short time. If, on the other hand, the carcass is allowed to remain in the field or is thrown into a nearby stream, the gradual decomposition favors the transformation of the germs into minute spores. It is in the form of spores that the disease persists so long. For this reason great care should be taken never to skin or to cut open the body of an animal killed by anthrax. The blood that flows out when this is done is one of the most dangerous means of spreading the infection if it is taken into the soil where the conditions favor the development of the spores. In burying carcasses a useful precaution is to cover them with quicklime.

Where the bodies are burned instead of buried great care should be taken to see that the operation is thoroughly done. Even the earth upon which the carcass has lain should be thoroughly and deeply burned over so that the heat will penetrate to a depth sufficient to kill the germs that may have passed into the soil with fluids from the body.

## Pure Breds Pay

Written for California Cultivator by A. M. Nelson



WARDS by the American Jersey Cattle Club for 1916 records have just been made, the only medal going to a Californian being that to Frank H. Vanderpoel, a director of the Imperial County Farm Bureau. He has received a gold medal in class one, being for "superior dairy performance in one year with calf," by Fern Silver Ray, who finished an official test with 700.72 pounds of butter fat. In order to qualify for class one,

cows must drop a living calf carried at least 155 days during the test period.

In this classification Fern Silver Ray ranked twentieth among the cows of the country. She had a butter rating of 824.37 pounds and there were but six cows higher than the 800 pound class. Fern Silver Ray is continuing on official test. She started on January 17 and is now 50 pounds ahead of her record for a similar period last year. In March she gave



90.1 pounds of butter fat. The highest month of last year's test was 81.28 pounds.

Mr. Vanderpoel says Fern Silver Ray's showing is evidence of the favorable feed and climatic conditions of the Imperial Valley for dairy cows. The record last year came within two pounds of the state Jersey record and was remarkable in that Fern was given ordinary ranch feed and had no shelter other than cottonwood trees in the barnyard. Last year Mr. Vanderpoel had but five pure bred cows and these gave an average of 567.14 pounds of butter fat. The 566 five-year old cows which were entered in the Jersey lists last year for Register of Merit produced an average of 487.33 pounds, or 59.81 less than Vanderpoel's average and he points to this showing as another evidence of the valley's excellence as a dairy country.

## Keeping the Milk

Two conditions are necessary for keeping milk and cream sweet—cleanliness and low temperature. Souring is due to germs so small that 25,000 can lie on the head of a pin, yet these germs double in number every 20 minutes in warm milk. Starting with one, in 20 minutes there will be two; in 40 minutes, four, and in one hour, eight. This rate kept up would develop enough offspring from one germ to fill the Atlantic ocean in five days.

These germs exist in the filth on the cow's body and in the barnyard and stable, in the dust in the feed and in unclean dairy utensils. A very small piece of manure, falling from a cow's flank into the pail of milk, contains several million of these filth germs, and they start propagating the

moment they touch the warm milk, doubling every 20 minutes. Dusty feed, stirred up just before the cows are milked, furnishes tens of thousands of these souring germs, ready to fall into the warm milk in the pail.

The cow should be kept clean and milked in a clean place, and should not be fed until after being milked. It is a good plan to dampen udder and flank slightly just before starting to milk. This will prevent dandruff and dirt, with their millions of souring germs, from falling into the milk.

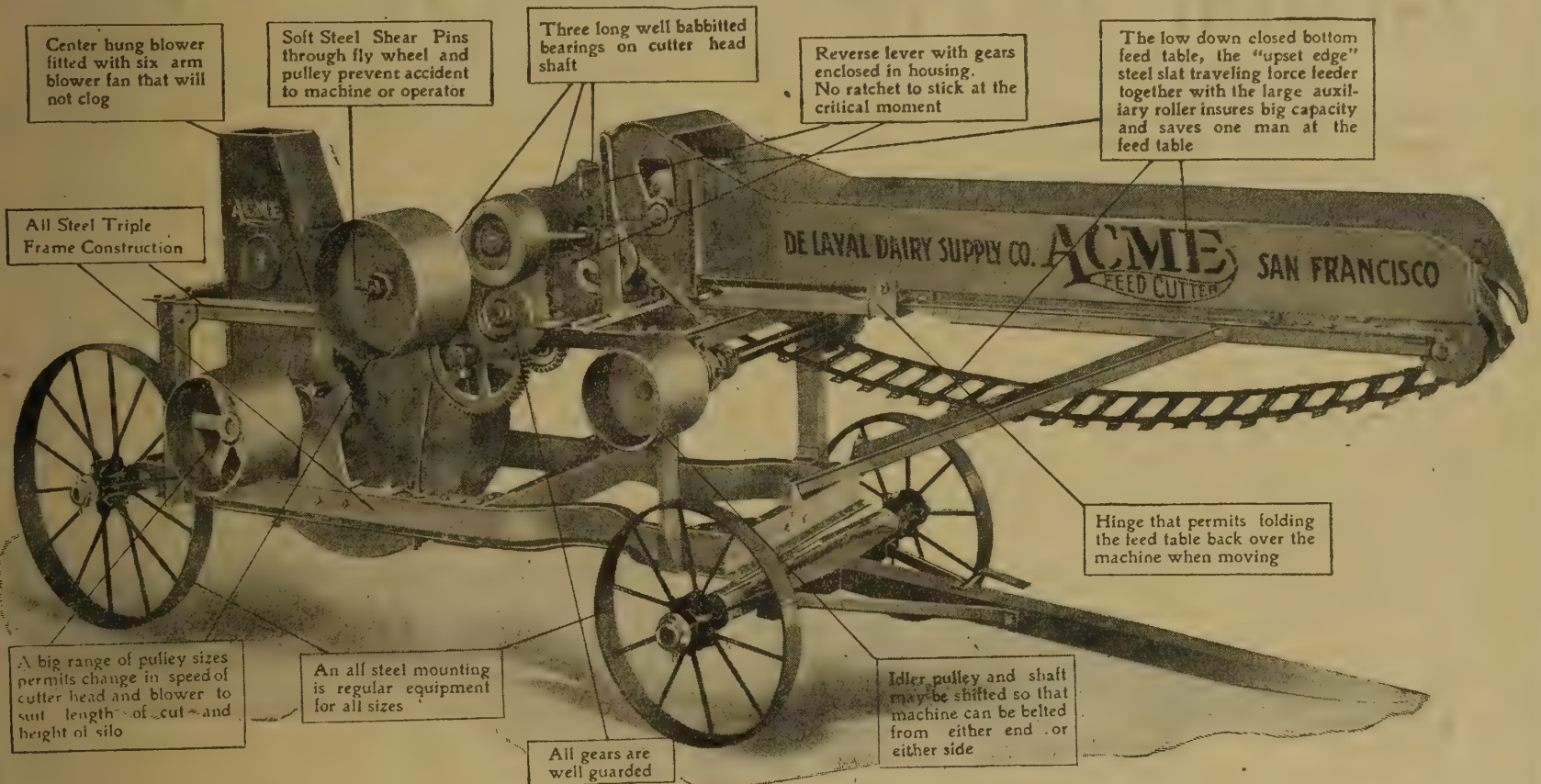
All tinware touched by the milk should be first washed in lukewarm water, then in water that is boiling, and afterwards thoroughly exposed to the sun. When a milk pail is first washed in boiling water the heat coagulates the milk left in the seams and the coagulated milk stays in the seams, protecting underneath it mil-

lions of germs that spread through the warm milk at the next milking. Smell a milk pail that is not washed in lukewarm water first, and the foul odor will convince you that there are plenty of germs in the seams. All the milk in the seams soaks out when lukewarm water is used for the first washing. The boiling water that follows sterilizes the pail and sunlight is sure death to all germ life.

Milk from a clean cow, drawn in a clean place, into a clean covered pail is nearly pure. A few germs will always get in. To keep these few from increasing and turning the milk sour, chill the milk from each cow as soon as you have finished milking.

At bloodheat the souring germs double every 20 minutes; at 40 degrees they do not increase at all and many die; at 50 degrees they increase so slowly that clean milk held at this temperature will keep sweet five to eight days. Milk coolers can be bought cheaply, and with these each separate drop of milk is thoroughly chilled as soon as it passes over the cooler.

## Dairy Profits Can Be Made as Certain as Tomorrow's Sun by Cutting Down Feed Costs. This Machine Will Help You Do It.



### THE LIGHT RUNNING

## ACME FEED CUTTER AND SILO FILLER

BUILT IN SEVEN SIZES, CAPACITIES 3 to 30 TONS PER HOUR

Use this machine to fill your silo and then throughout the year in cutting dry feed and making alfalfa meal. Why buy a cutter that can only be used for silo filling when the same money invested in an Acme Combined Silo Filler and Feed Cutter will yield big returns at all seasons of the year.

#### SILAGE AND SILO FILLING

The ensilage cutter, in connection with a good silo, provides the means of utilizing to the fullest extent and in the most economical manner the FULL FEED VALUE of the entire crop, including grain as well as forage. To get the full value out of your silo you must have a good cutter. The Acme Ensilage Cutter, with the downward shearing cut of its knives produces a clean, evenly cut silage that packs well and keeps properly in the silo. It cuts everything—alfalfa, soy beans, cow peas, sorghum, Kaffir corn, Egyptian corn, milo maize and corn.

#### The Acme is the Only All-Steel Frame Cylinder Cutter on the Market

The Steel Frame is securely riveted—no bolts to jar loose. It can't warp as does the old-style wooden frame. All bearings and shafts are held in permanent alignment. Vibration and wear are reduced to the minimum. We fully guarantee every Acme Cutter.

BUY AN ACME NOW AND HAVE YOUR CUTTER ON HAND WHEN YOU NEED IT

Send for Complete Catalog

It describes and illustrates each of the 7 machines.

**DE LAVAL DAIRY SUPPLY CO.**

EVERYTHING FOR THE DAIRY

61 BEALE ST.

SAN FRANCISCO, CAL.

#### CUT DOWN FEED COSTS BY CUTTING UP YOUR DRY FEED

Cutting up your dry feed will make it go about 25 per cent farther in the feeding of stock. The coarse hay is usually nosed out and discarded by the animal. By cutting all the hay the entire amount is consumed as feed, and less energy is expended by the animal in chewing and assimilating it. With alfalfa valued at \$16.00 per ton this will mean a saving of \$4.00 per ton. If molasses is mixed with cut feed, more of it is eaten, with consequent better results in beef and milk production. Full information on cutters fitted with molasses mixer gladly mailed on request.

#### MAKE YOUR OWN ALFALFA MEAL WITH AN ACME CUTTER

The Acme Alfalfa Meal Attachment enables the making of an excellent grade of meal from alfalfa hay, clover, bean straw, pea vines, oats or barley, hay, milo maize, Kaffir corn, Egyptian corn, at a cost for power and labor of about \$1.00 per ton. Alfalfa meal mixed with skim milk or butter-milk and let stand 12 hours before feeding will produce growth in stock hogs at less expense than any other feed or combination of feeds known. The alfalfa meal attachment is operated independently of the blower and can be attached in 15 minutes' time.

Send for free sample of alfalfa meal made with the Acme Meal Attachment.

Send me, without obligation on my part, the books I have checked.

ACME CUTTER CATALOG  
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DE LAVAL DAIRY HAND BOOK

Name .....

P. O. ....

(Pencil will do)

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DE LAVAL DAIRY SUPPLY CO., 61 BEALE ST., SAN FRANCISCO, CAL.



# HOGS & CATTLE

1800 Head of Pure Bred Live Stock

MAMMOTH CREDIT

## Auction Sale

OF THE STOCK OF THE WELL KNOWN  
CHAS. W. BRYSON RANCH

ANGIOLA, TULARE COUNTY CALIFORNIA

Santa Fe Cars take you direct to Ranch, 6 miles South of  
Corcoran, 18 miles West of Tulare

### SATURDAY, JULY 28

PROMPTLY AT 10 A. M.

This will be one of the Largest Sales of Pure  
Bred Hogs and Registered Cattle ever  
held in the San Joaquin Valley

### Big Barbecue and Free Lunch at Noon

I am instructed to sell 1800 head of Pure Bred Hogs and Cattle. Stock consists in part, as follows:

Fifty head Pure Bred Boars, Duroc-Jerseys, Yorkshire and Poland China; 700 Gilts; 400 Shoats; 300 Sows with Pig; 200 Sows with Litters; 120 head Feeders; 30 head Registered Durham Bulls; 25 head Registered Hereford Bulls; 25 head Registered Hereford Heifers.

Every Rancher in the Valley should avail himself of this opportunity to get this Pure Bred Stock at your own prices. This stock is all bred in the Purple and will positively be sold to the highest bidder and must be seen to be appreciated.

The Chas. W. Bryson Ranch at Angiola, California, is over-stocked with pure bred, registered, or eligible for registration, HOGS AND CATTLE. The foundation herd was placed on this ranch at great expense, pure bred gilts and boars were purchased in the East and Middle-West, from the best known breeders in America, Duroc-Jerseys from Chas. Stith of Eureka, Kansas; Yorkshires from the premier herds of W. F. Fisher of The Cedars, Columbus, Ohio, and Thos. H. Canfield of Lake Park, Minn.; registered Poland-China boars from Linquist Bros., and John Kincaid of Bakersfield; Brookside Farm of Stockton, and Geo. V. Beckman, of Lodi, Cal. These boars and gilts were selected especially for the foundation herd on the Bryson Ranch, no expense being spared in the selection of this stock, which was shipped across the country to the Bryson Ranch where they were raised and bred with scrupulous care.

The bulls and heifers are thoroughbred of the Hereford and Durham strains, in fact all of the stock on the Bryson Ranch are "bred in the purple," the purest strain that flows through the veins of aristocratic thoroughbreds is found on this ranch, and "blood tells" in hogs, in cattle, and in all other stock.

We are not selling "pork" at this sale, but we are selling just what we advertise, pure bred hogs and cattle. THE BRYSON RANCH IS NOT GOING OUT OF THE STOCK BUSINESS, but going into it on a larger scale than ever; we want to help make the San Joaquin Valley the greatest hog and cattle raising valley on the Pacific Coast, we want every farmer to start hog raising. We are over-stocked, we want you to start in right. No one man can buy these herds, they are going to be sold, in small lots, to hog and cattle raisers, and every farmer should breed thoroughbreds, pure, or cross them to suit his fancy. Hog and cattle raising is a necessity. Pork prices are the highest ever known. Look out for "twenty dollar a hundred pork" this fall. The world is short of pork, which is a necessity, not a luxury.

COME TO THIS SALE, buy some thoroughbreds and start RIGHT and NOW, nothing should go to waste on your farm, feed it to hogs and into the bank. Men are growing rich in the stock business, why not you? When you see these thoroughbred mothers with their litters, "bred in the purple", you will buy them and breed them again and you will be amazed at the results. Let nothing keep you away from this pure blood stock sale and you will come again.

**Terms** All sums under \$100 to be Cash. Over that amount 60 days time will be given on approved Bankable Paper, at 8 Per Cent or 2 Per Cent discount for Cash.

For further particulars, call on or address

**CHAS. W. BRYSON, Owner**  
Angiola, Cal.

or **Sam Watkins, Auctioneer**

Phones: Main 1856; A-4991 Los Angeles, Cal.

Do not forget the date, Saturday, July 28, 1917,  
promptly at 10 a. m.

## Field Notes from the Live Stock Men

The final shipment of T. T. Miller's great herd of Shorthorns arrived from Chicago last week, completing one of the very highest class herds of registered beef cattle in the West. Mr. Miller was fortunate in securing Andy Simpson from Bellows Brothers, Missouri herd to handle and fit his cattle for the fall fair circuit.

California Polytechnic School, San Luis Obispo, has in Susy's St. Mawes one of the grandest young bulls of the Jersey breed. The school purchased this bull from Ed Carey, the noted Oregon breeder, last winter as a yearling, and at 28 months he is fulfilling expectations. Mr. Hemmerich, the dairy superintendent, has bred this bull to 13 head of his finest heifers, including two daughters of Marquis Foxy Belle, the former state record cow who made 756.11 pounds butterfat in a year. This bull's sire was Poppy's St. Mawes, and his dam, St. Mawes Susy, a cow that ranks among the world's best Jerseys, with the remarkable yearly record of 1190.3 pounds butter from 15,732.4 pounds milk at ten years of age. He is a fine individual and will be a candidate for championship honors if he is exhibited this fall.

W. T. Sesnon, the San Francisco millionaire who has extensive cattle interests along the California coast, reports his bunch of registered Hereford heifers doing finely under range conditions. This lot of stuff was brought from Missouri shortly after the close of the world's fair and is the foundation with which the owner plans to produce his range bulls. The herd bull is a line bred Don Carlos, Anxiety bred animal of high merit and is giving splendid service. His name is Demonstrator and he was purchased from Harris and Sons. The "White Face" cattle are making rapid strides in the favor of California cattle men.

Vall and Gates recently shipped a trainload of grade Hereford steers to the Kansas City market, which weighed 1380 pounds on board cars and were said to be the heaviest bunch of grass beef ever shipped from California. They were ranged on the Santa Rosa Islands off the coast of Santa Barbara.

Jackson Lowe, San Luis Obispo County cattleman, has been buying quite a bunch of pure bred Shorthorn cattle for his range. He has about 4000 acres of fine range which is covered with a wealth of feed which is abundant even this year when the coast pasture is unusually poor.

The big Rodeo at Salinas the past week was the biggest and best ever. This is an event in cattle circles every year and the boys gather from far and near to witness the great sport furnished by the cow boys and to talk over cattle affairs.

Norman Hale is getting the Pacheco Cattle Company's herd of Shorthorn cattle in San Benito County ready for the fairs, and they are nearly ready to step into the show yard and worry the judge. The Hawkins entry will be hard to beat this year, especially in the young stuff. Here is a remarkable herd of beef cattle which has been bred entirely by Mr. Hawkins along practical and utility lines, and demonstrates both the ability of the breeder and the ideal environment of our California hills for the production of beef animals.

The Barco Ranch in San Benito County is developing a nice bunch of red, roan, and white calves. It will be

remembered by fair goers last year that the Barco Ranch yearling heifer won grand championship honors and its other entries finished well up in the money. The ranch will probably not show this year as the cattle will not be ready in time.

C. T. Colombet and Son of Santa Clara County have been selling large numbers of Hereford bulls to the range cattle men. They brought over 1100 head from Texas the first of the year and after selling this big lot off brought in a couple of hundred more. This stock is pure bred but not registered, the class of stuff most of our California cattle men have been asking for, and as the quality of the Colombet stock is of the best their repeat orders have been large. If the average run of our cattle men would use better judgment in selecting bulls to run with their herds in the mountains we would have an improved quality of beef.

With a 12,000 acre cattle ranch in Lake County and another of 36,000 in Monterey County R. S. McCreery of San Francisco ranks among our largest operators. He likes the Shorthorns and has been using good bulls for a generation.

Paicines Rancho, San Benito County has what is considered by cattle men as fine a herd of Shorthorns as can be found in the entire country. It is a matter of regret that this concern does not fit a show herd each year so that the public would have the opportunity of seeing these cattle. D. J. Stollery, the sales manager of the Paicines cattle, has been at the business end of this herd for years, and system in breeding, feeding, and selection is found here at its best. All the registered cows are hand bred to the best American and imported bulls obtainable. Probably the reason for the wealth of bone and scale in the Paicines cattle is that the breeding cows have never been pampered for show purposes; they are not put through the strain of fitting and letting down. The same is true of the bulls. The Imp. six year old senior herd bull, Champion of Scotland, would be hard to duplicate anywhere, while there are a number of other bulls of equal quality. One could close his eyes and pick out a hundred females which would be hard to match. The proof of the individuality and breeding is in the calves and in the ever broadening market for the Paicines product.

A meeting of the California Shorthorn Breeders Association is scheduled to be held in the office of the secretary, D. J. Stollery, San Francisco. Every Shorthorn man in the state should try to arrange his affairs to attend this meeting. "In union there is strength," and the more members in an organization working for the common good of the breed, the stronger and greater its influence.

### Bemmerly HEREFORDS

Perfection and Beau Donald breeding. Noted for their size, bone and quality. Now booking orders for service bulls for future delivery.

Visitors always welcome.

W. J. BEMMERLY, Woodland, Cal.

### Foundation Herds

of any size our specialty. Best blood lines.

Write to

**Butte City Ranch**

The Home of Good Berkshires

Butte City, Cal.





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Will Increase Your Profits  
by Keeping Live Stock  
and Poultry Healthy.

### Kreso Dip No. 1

Easy to Use. Efficient. Economical.  
Kills Sheep Ticks, Lice, Mites and Fleas.  
Helps Heal Cuts, Scratches and  
Skin Diseases.

### Prevents Hog Cholera.

Experiments on live hogs prove that  
a 2% dilution of Kreso Dip No. 1 will  
kill virulent Hog Cholera Virus in 5  
minutes by contact.

#### We Will Send Free Booklets on

The treatment of mange, eczema or  
itch mange, arthritis, sore mouth, etc.;  
How to build a hog wallow which  
will keep hogs clean and healthy;  
How to keep your hogs free from  
insect parasites and disease.

#### WRITE FOR THEM.

Kreso Dip No. 1 in Original Packages.

FOR SALE BY ALL DRUGGISTS.

**PARKE, DAVIS & CO.**

Department Animal Industry.

DETROIT, MICH.

## Shorthorns

### Paicines Ranch Company

Offers for summer and fall delivery  
both registered and unregistered  
weanling bull and heifer  
calves.  
For prices and particulars apply  
to

**DAVID J. STOLLERY**

320 Sharon Bldg. San Francisco, Cal.

## Holstein Bulls

Well bred, vigorous, registered  
Holstein bulls of good type for sale.  
Steady sales have moved all our  
bulls of service age, but we have  
a few unusually good calves to offer  
at moderate prices.

**The McCloud River  
Lumber Company**

McCloud, California

**Don't Cut Out  
A SHOE BOIL, CAPPED  
HOCK OR BURBITIS**

FOR

**ABSORBINE**

TRADE MARK REG. U.S. PAT. OFF.

will reduce them and leave no blemishes.  
Stops lameness promptly. Does not blister  
or remove the hair, and horse can be  
worked. \$2 a bottle delivered. Book 6 M  
free.  
W. F. Young, P. D. F., 244 Temple St., Springfield, Mass.

## El Dorado Holsteins

Headed by

SEGIS PONTIAC DE KOL BURKE  
LUIT.

Out of a 32.76-pound 4-year-old. His  
sire is a son of Riverside Sadie De  
Kole Burke, 32.29 pounds butter in 7  
days.  
Herd officially tested for 7 and 30  
days.

**Alex Whaley, Tulare, Cal.**

### ATTRACTIONS AT STATE FAIR



AMONGST the attractions at  
the State Fair at Sacramen-  
to, which opens September  
8 will be a temporary struc-  
ture 150x100 feet to house

the county and fruit exhibits. This  
will take the place of the Horticul-  
tural Pavilion which was burned last  
year.

The famous Yakima herd of Aber-  
deen Angus cattle from Eastern  
Washington may be seen at the Cali-  
fornia State Fair this year. There will  
be a number of high class county fairs  
in California this year, and as the  
dates have been arranged to allow  
time for shipments, many herds of  
live stock will be seen throughout the  
circuit.

The showing of poultry, pigeons,  
and pet stock will excel any previous  
effort in this line. The California  
Pigeon Club members have already  
taken steps for a proper show of their  
birds.

The dairy cattle division this year  
will make the strongest showing on  
record. Additional show sheds will be  
erected to accommodate this stock.  
Many prominent breeders have asked  
for reservation of stalls, and the ani-  
mals shown will equal the best seen  
in the country.

The swine breeders of the state  
have made such demands for space at  
the coming fair that Secretary Paine  
has a force of carpenters erecting  
four new swine sheds. The porker is  
king in the solution of the meat food-  
stuffs problem, and the thousands or  
more pure bred hogs at the fair will  
be an exhibit worth seeing.

The Pacific Coast Hereford Cattle  
Breeders' Association, which was or-  
ganized at the University Farm at  
Davis in May, has aroused much in-  
terest among the followers of the  
"White Faces." A number of leading  
Hereford breeders have commenced  
to fit their stock for the state fair to  
compete for the premiums offered by  
the state and the liberal special prizes  
to be given by the national associa-  
tion. The exhibit of Herefords will  
be the best seen at the state fair for  
years, if not the best ever seen there.

### CONSTRUCTIVE METHODS

The broad course adopted by the  
American Shorthorn Breeders' Asso-  
ciation two years ago, intended to  
further support and safeguard the in-  
terests of every breeder of Short-  
horns, is having a definite, construc-  
tive effect wherever Shorthorns are  
being produced. It should not be un-  
derstood that the general policy of the  
association has been any other  
than progressive for many years, but  
the larger conception of the needs  
and opportunities by the present  
board of directors and officials has  
enlarged the scope of the associa-  
tion's purposes and influence.

It is a strong army of men, 25,000  
in number, who are breeding and re-  
cording purebred Shorthorns, and the  
progressive methods employed by the  
association are reflected in the con-  
fidence and enthusiasm of this nu-  
merous and prosperous host, and  
through them activity is stimulated  
among the infinitely larger number,  
producers of grade Shorthorns.

Appropriations for fairs and shows  
were increased to include futurity  
classes and numerous state associa-  
tion combination shows and sales, ag-  
gregating over \$50,000 annually.

A publicity bureau was inaugurated  
for the purpose of furnishing reliable  
information concerning the breed's  
affairs and progress, the main fea-  
ture of this being the quarterly pub-  
lication, "The Shorthorn in Amer-  
ica." This 48-page magazine presents  
contributions from recognized author-  
ities in all parts of the country. It  
is beautifully illustrated and is one  
of the most informing and readable  
publications of its class. The July  
1st number, just off the press, com-  
mends itself as one of the most in-  
teresting and instructive yet issued.  
—F. D. T.

# 2nd Annual Sale BERKSHIRES

**CARRUTHERS FARMS  
MAYFIELD, CALIFORNIA**

**WEDNESDAY  
AUGUST 1st**

1917

Sows are bred to Ames Rival 100, son of Rival's Champion Best;  
Iowana Rival Majestic 3d, a son of Rival's Champion; and Mayfield  
Champion, son of Ames Rival 70th.

## 44 Sows and 6 Boars

In this sale will be included ten sows and two boars, comprising the  
best show herd that has ever left Carruthers Farms.

## Entire Show Herd will be Sold



## Elliott-Brant Rancho Guernseys Are Persistent Producers

The results of our first two years of official testing show our herd to  
average 10,172.28 Pounds of Milk and 507.97 Pounds of Fat. One half of these  
cows were heifers with first calf who averaged 8,670.24 Pounds of Milk and  
436.01 Pounds of Fat (only 7 pounds under the average of all A.R. records).  
Our mature cows averaged 12,710.5 Pounds of Milk and 621.52 Pounds of Fat  
(120 pounds over the average of the mature cows of the breed).

A bull from these cows will increase the production of almost any herd.

**Elliott-Brant Rancho, - Owensmouth, Cal.**

## KINGS COUNTY

### JACK RANCH

Breeders and dealers in American  
Jacks and Jennets.

Jacks and Jennets for sale at all  
times. Come and see them.

**John Burrell**

R. F. D. B. Box 74

Hanford, Kings County, Cal.



California Wonder

## Tulare Guernsey and Holstein Farm

Guernsey herd of A. R. cows headed by  
DAIRYMAID'S PRINCE 26352, whose  
sire is a son of Dairymaid of Pinehurst,  
A. R. record 17,235 pounds milk and 910  
pounds butterfat in one year. His dam is  
POLLY'S BEAUTY, A. R. record 16,629  
pounds milk and 774 pounds butterfat in  
one year as a 4-year-old.

CHOICE BULL CALVES OF

Holstein herd of choicely bred females,  
many with good A. R. O. records, headed  
by PRINCE RIVERSIDE WALKER,  
whose sire is Prince Gelsche Walker, and  
whose dam is Aaggie Acme of Riverside,  
808.82 pounds butter in one year, and she  
has a 3-year-old daughter that made  
1095.1 pounds butter in one year.

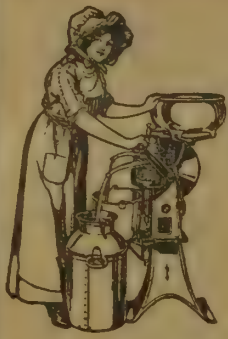
BOTH BREEDS FOR SALE

W. J. HIGDON

TULARE, CAL

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# BUYING A DE LAVAL SEPARATOR NOW

## Is real thrift and genuine economy

"THRIFT" means saving wisely. "Economy" means spending wisely.

There is no economy in going without money-saving and labor-saving equipment.

It is poor economy to try to do without a De Laval Cream Separator—a machine which would not only save a lot of time-wasting work, but would add from 15 to 25 per cent to your cream crop by putting a stop to your butter-fat losses.

This country is at war. The nation cannot afford, and you as an individual cannot afford, to allow the present enormous waste of one of our most valuable foods—butter-fat—to continue an unnecessary day.

See the local De Laval agent today. Get him to explain to you how the De Laval saves butter-fat that is lost by gravity skimming or the use of an inferior or half-worn-out separator. If you do not know the De Laval agent, write to the nearest De Laval office for new catalog or any desired information.

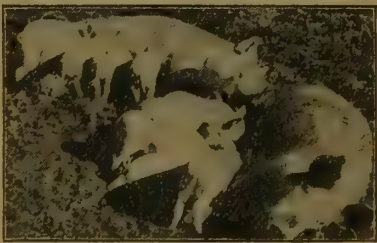
Every New De Laval is equipped with a Bell Speed Indicator.

## DE LAVAL DAIRY SUPPLY CO.

LARGEST DAIRY SUPPLY HOUSE ON THE PACIFIC COAST. Alpha Gasoline and Distillate Engines, Ideal Green Feed Silos, Acme Ensilage Cutters and Blowers, Irrigation Equipment, Centrifugal and Deep Well Pumps and Alpha Spraying Outfits. Send for special catalog.

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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER



Raising the Standard of California Bacon

## MONTELENA HERD Large Yorkshires

Have large litters. Service boars of exceptional quality, in best breeding condition. They are strong, active, long, deep fellows, with big bone and splendid heart girth. Come and see them, or write to

A. L. TUBBS CO.  
Callstoga - California

## HOLSTEIN-FRIESIAN CATTLE

Registered young bulls from best families. Some of serviceable age.

### REGISTERED BERKSHIRE PIGS

Masterpiece, Longfellow and Robin Hood Strains. Fine individuals of both sexes—we pay registration fee. Careful attention given to mail orders.

Whittier State School  
Whittier, Calif.

## Papec Cutter and Blower

Save Money, Power, Expense of Upkeep and Labor. It lasts always and has a positive guarantee. Ask for Catalogue.

SIMPLEX SILO  
The Best That Money Can Buy  
SANTA FE LUMBER COMPANY  
16 California St. San Francisco, Cal.

Main 1259 Home 25679

## Rhoades & Rhoades

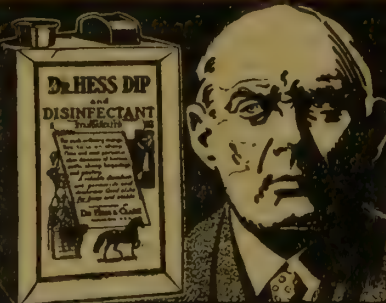
Expert Live Stock Auctioneers  
Pure Bred Stock Sales a Specialty  
Sales conducted in all parts of California and Adjoining States. 25 Years' Experience.

BEN A. RHOADES, Auctioneer  
1301-3-5 So. Main St., Los Angeles, Cal.

## Berkshire Hogs—Milking Shorthorns

Breeding Stock For Sale  
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The advertisers in the California Cultivator are known to be reliable and we recommend them to our many subscribers.



## Kill Disease Germs Purify the Air

## Dr. Hess Dip and Disinfectant Means Animal Health

Use about the barn, pens, chicken yards; use at the house on garbage cans, sinks, drains, cesspools. It cleanses and purifies—keeps down bad odors and smells and destroys disease germs. Dip your sheep to eradicate scab and kill ticks. Dip or spray hogs to kill lice.

### Sold on Money-Back Guarantee

Pint bottles, quart, half-gallon and gallon cans and barrels.  
Dr. Hess Fly Chaser protects animals from flies. Does not gum, blister or discolor hair.

If not at your dealer's, address

DR. HESS & CLARK, Ashland, O.

## COW TESTING IN ARIZONA

Continued from Page 51

realize that his herd was not producing as much as his neighbors' was naturally a little jealous and afraid that his neighbors would find it out, and it required no little tact to keep his enthusiasm up to the 100 per cent mark. So all in all the difficulties of the tester in a new and rapidly growing dairy section are far greater than in the older and more staid dairy communities.

In the personnel of the two young men the Salt River Valley dairymen were peculiarly fortunate, for both of them in addition to their agricultural college training had been brought up on farms in the Southwest and therefore had experience in the work which was being done on the farms as well as their own work of testing the herds. They were both tactful, one of the most valuable assets of any man who must come in contact with a large number of men, whether they are farmers, lawyers or laborers in factories or mines. I have seen numbers of agricultural teachers and agents that have failed because of lack of that peculiar ability to read and understand human nature which we call tact. Without that characteristic there would be no cow testing associations in the Salt River Valley today, and these young men would not have been advanced to more responsible, better paying positions of larger usefulness.

To the ability of these young men is due almost entirely the credit for completing the first year's work with credit and signing up the owners of 85 per cent of all the cows that finished the test, collecting all back dues and securing new members to take the place of the few that sold or dropped out for some other reason. The associations were therefore turned over to their successors stronger than ever before.

The herd records revealed nothing especially remarkable. One herd made a record of 328.6 pounds butter fat for each cow. Several cows produced more than 400 pounds of butter fat; one cow produced 12,448 pounds of milk. Good records, and particularly so as little or no grain was fed. The average herd profits for each cow run from \$26 to \$150, counting only the feed against the product. The last figures are from a dairy that retailed milk. One herd of 15 cows from which cream was sold as sour cream returned \$52 above the cost of feed. One dairyman who made butter and sold it wholesale had a profit of \$83 for each cow over the cost of feed.

The testers were not satisfied with merely the work of weighing the milk and figuring out the totals. This was a small part of their work, although that of course was what they were paid to do. In tactful ways they taught better methods. By figures and logic they proved the value of better stock, better equipment and the advantage of silos. As proof that their work was practical they can show eight new milking barns erected during the past year; four silos have been built and at least two more will be built soon; three new milking machines have been installed, making eight now in successful operation.

The testers probably earned their salaries in the one item of keeping the hand separators in good working order. Most dairymen sell cream which is gathered by trucks sent out by the creameries, and consequently there is a hand separator on nearly every dairy farm. Many dairymen

unfortunately are not mechanics and give the separator very little attention. It is not surprising therefore to find many separators not properly adjusted. The testers took samples of the skim milk at each farm once each month and tested it at once. If the test revealed too large a loss the separator was at once inspected and the necessary adjustments made. The saving effected in this way is of course impossible to estimate, but as some of the samples showed a high test the loss prevented is necessarily large.

Early in the work the testers realized that they were at a serious disadvantage in having no means of conveyance, except the dairymen who were often busy, so out of their salaries, which by the way were by no means large, they bought Fords. The members of the associations were willing to pay for the gasoline. With these machines they were able to pack all the necessary equipment, such as scales, extra bottles, Babcock tester and their personal belongings, and move on to the next dairy farm whenever the work was completed. This resulted in not only a saving of time all around and consequently better service, but it made it pleasanter for the testers and more convenient for the dairymen.

There was another feature of the advantage of the Fords which should not be overlooked. In this Western country, which has been reclaimed from the desert within the past few years, there is on many farms a lack of the conveniences found on some of the farms in the Eastern states. In this mild climate cows and hired men sleep out of doors all the year. Most dairymen tried to give the testers the best they had, the best room as well as the best of food, but in many instances, particularly among tenant farmers where houses are small, it made it inconvenient and resulted in a hardship to the dairyman's family. To overcome this the Ford was slightly remodeled. The back of the front seat was hinged and could be dropped back. With a canvas side tent and a roll of bedding this made a very comfortable sleeping place, and saved any annoyance to the housewife or embarrassment to the tester.

The first year's work has been completed with credit, and the second year's work has been taken up by two other young men from the state college of agriculture. The two testers are advanced to larger and broader fields where their ability, training and experience will be more useful to the state and more remunerative to themselves. Mr. Pickrell has been selected as the agricultural agent for Pima and Pinal Counties, and Mr. Scheerer goes to Yavapai County for the same class of work. The year's training as testers was a severe test, but no training for their present work could have been better.

## MILK FEVER

Often the heaviest yielding cow in the herd will be suddenly stricken, fall and soon become unconscious. This is milk fever, and unless prompt treatment is given results in sudden death.

Thoroughly sterilize a common bicycle pump in boiling water, connect the tube of the pump with an ordinary German silver milking tube that is inserted full length in the teat. Fill the quarter of the udder with all the air it will hold, gently manipulating the flesh. Do this with each teat and repeat the process. Cows that show no signs of consciousness will frequently get up after an hour of this treatment and go to eating and not again show signs of ever having been sick.



## Classified Liners

The direct selling method from producer to consumer, and a clearing house for over 31,000 readers, weekly.  
Liner rates: Single insertions 3c per word;  
yearly contracts 2½¢ per word. 35c per issue minimum charge.

### TREES

Here is Your Opportunity to Secure All citrus trees. We offer several thousand 2-year-old lemons; Eureka and Villa Franca, also Washington navel; also several hundred Valencia on sweet root. We call these good trees and we know whereof we speak. ALBERT JACKSON, Upland, Cal.

By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator. The cost is only 3 cents per word per issue, with a minimum of 35 cents.

For Acacias, Avocados, Budded Loquats, Citrus trees, Evergreens, Feijoas, Palms, Roses and all kinds of trees, shrubs, vines, etc. Write for our new catalogue. Robertson Nurseries, Fullerton, Cal.

Eureka Lemon Trees—Best quality. Fine root system. No frost trees. Grown at San Dimas. Special low price. Smith Citrus Nurseries, 320 Marsh-Strong Building, E. 2729, Los Angeles.

Citrus Trees—All kinds, any quantity. Butler's Morning Side Nursery, Laramanda Park, Cal.

Avocado Seedlings, in flats. Write for prices. Newberry-Sherlock, R. D. 2, Pasadena, Cal.

Citrus Nurseries, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

Quality Trees—Prune trees 10c each. Cash Nurseries, Sebastopol, Cal.

### WANTED

Wanted—Working foreman for alfalfa and grain ranch completely stocked with high class dairy cattle and hogs. Want ambitious, energetic man of sterling character and brains fully capable of taking entire charge. Prefer married man with Agricultural College training supplemented by thorough experience. Give age, qualifications and experience. Address W. Cultivator.

Wanted—Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' travel to right parties. Address J. H. Yetter, Sales Department, 810 Santa Marina Building, 112 Market St. San Francisco, Cal.

One of the Most perplexing problems to farmers and ranchers is that of help. A small liner ad in California Cultivator is the quickest and easiest means of securing farm help.

We Buy Weed Seeds—Mustard, rape, anise, bitter clover, etc. Send samples. Write us, stating quantity and price. Globe Mills, Los Angeles.

Wanted—Second-hand Holt caterpillar, 60 or 75 h. p., two speed transmission. Will F. Phillips, Terra Bella.

Wanted—To buy "ewes." Healthy, 150 yearlings or about 125 2-3-4 year. G. Holst, Redwood City, California.

Wanted—Thirty Duroc Jersey weanling sows. J. L. Brodie, Dutton's Landing, Cal.

### FARM LANDS FOR SALE

For Sale—A Bargain!! In the great Antelope Valley: 80 acres of fine soil within ½ mile of best producing hay and bean ranches. Good 3 room house, young orchard, 1¼ acre, with water piped to it, barn, horse, cow and chicken corrals. Windmill on good domestic well. Water at 18 feet. Fine shade trees. Nice home to move into. \$45.00 per acre, no less, no trade. Owner, Box A, Rosamond, Cal.

160 acres irrigated land in center of developed Porterville district, ½ mile to good town and railroad. Surrounded by orange groves. Price \$100 per acre, one-half price adjoining land. One crop beans pays for property. Frank Thornburg, 533 Union Oil Building, Los Angeles, Calif.

For Sale or Exchange—74 acres sandy loam, planted to alfalfa and beets, near factory and towns on good roads, near school. Splendid water, modern buildings, electric lighted, ornamental shade and fruit trees. F. G. Easton, Manteca, Calif.

Oregon, California Government Lands. Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

### POULTRY

Poultry Wanted—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We recruit immediately. National Poultry Co. 607 E. Third St., Los Angeles, Cal.

200-290 Egg Leghorn, Wyandottes, Rocks, Reds, Anconas, Orpington Pullets, Cockerels. Breeders. Guarantee profit makers at bargain. C. Beeson, Pasadena, Cal.

"Eastman's Bred-to-Lay" Barred Plymouth Rocks. Fairmead Poultry Farm, Fairmead, Cal.

### MISCELLANEOUS

Slacked Lime—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road Pasadena.

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

Send One Dime, receive 25 cent cake best skin and scalp soap, postpaid. Healing Soap Co., 1704 Oregon St., Berkeley, Cal.

### RABBITS

Raise Rabbits For Us—We sell you foundation stock and buy back what you raise, paying \$1.75 and \$2.00 each for them. Send 25c for our proposition, our book on rabbit culture and our supply catalog. Gilmore's Rabbit Farm, Dept. C, Santa Barbara, Cal. (The rabbit farm of international reputation.)

### HOGS

Chester Whites, the Billiken Brand.—Your duty is to raise more hogs and increase the meat supply. The demand for pork exceeds the production. Get started with some of these Chesters; 3 bred sows farrowed in April, 1916, due to farrow in September, and October; 18 October gilts bred to farrow in October; 3 October boars ready for service. All first class in every respect and good enough to fit and show at the different fairs this fall. All are cholera immune and will be registered free. Write for price list and booklet. C. B. Cunningham, Box C, Mills, California.

Grape-Wild Farm Berkshires—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

Large Yorkshires—Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington, Sta., Riverside, Cal.

Rancho Rubio Durocs. Only a few September gilts left. One carking good fall boar by Orion Model, son of the last International grand champion. Place your orders now for weaned boar pigs. Best I ever raised. Elmer Lamb, Ceres, Cal.

Wanted—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

Duroc Jerseys—Grand Golden Model is sired by the Champion Grand Model. His dam is by Golden Model 2nd. Peters, Lamson & Walker, Devore, San Bernardino County, California.

Big Type Durocs. Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

Cholera Immune Duroc-Jerseys. Big type. Weaned boars and gilts from 500 to 700-pound sows. Prize winning stock. Derryfield Farm, I.O.O.F. Temple, Sacramento.

Crawshaw's California Chinas are prolific and profitable. Weanlings \$15.00, boars \$25.00. Dr. J. A. Crawshaw, Hanford, Cal.

Poland-China Swine Recorded. Stock for sale at all times. We please you or refund your money. W. A. Young, Lodi, Cal.

Most Money In Duroc-Jerseys. Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

Choice Boar Pigs for Sale. Sired by Superba 220620, champion Poland boar at San Francisco. Prices right. C. R. Hanna, Riverside, Cal.

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.

One Large and two medium type boars, extra choice, 9 and 10 months old. W. Bernstein Ranch, L. C. Trewitt, Mgr., Hanford, Cal.

Model Herd Berkshires bred for size and quality. Weanlings and gilts. J. L. Gish, Laws, Calif.

Carruthers' Farm Berkshire Hogs. Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

Berkshires—Two hundred pounds at six months. Ray C. Hannan, Corning, Cal.

Poland-Chinas—A few good breeding boars. S. F. Williams, Orland, Cal.

### AGRICULTURAL IMPLEMENTS

Large Assortment slightly used and agents' sample plows, harrows, cultivators, wagons. Call and see them before buying. Save 50 per cent on some. Four floors. Largest stock. Arnott & Company, Ranchers' Supply House, 112 to 118 South Los Angeles St., Los Angeles.

### LUMBER

Lumber—Sash—Doors—Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. A. R. W. Shingles 50c per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.

### HORTICULTURAL PRINTING

Catalogues—Good Printing. Specialists in preparing nursery, seed, poultry and live stock catalogues and all kinds of commercial printing. For prices and information address WOLFER PRINTING CO., 115 No. Broadway, Los Angeles.

### PATENT ATTORNEYS

Patents that protect are secured through the PACIFIC COAST PATENT AGENCY, INC., Savings & Loan Building, Stockton, California; send for our little booklet on "PATENTS".

### LIVE STOCK

D. E. Kellher, importer and breeder of Hampshire sheep, Eugene, Cal., offers for sale a choice lot of Hampshire ram lambs, sired by Walnut Hall and Butterfield Rams, purchased at Salt Lake, August, 1916. Lambs ready for delivery after July 15th, 1917. Inspection and correspondence invited.

Feeder Hogs For Sale—Eighty-five choice Poland-Chinas by registered boars and out of nearly pure sows. The fast growing, quick fattening kind. Call at Whittier Ranch, Saucelito School corner, between Pixley and Terra Bella, Tulare County, or write owner, R. H. Whitten, 610 Security Building, Los Angeles.

Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

At Last the Perfect Silo—the Stay Round. No hoops, no bolts. No experiments. Any one can erect. Close price. Address D. O. Lively, 125 Hobart Bldg., San Francisco.

Milch Goats—Grade and pure Anglo-Nubians; cross bred and grade Swiss. G. G. Stevens, late of Oakland, Cal., please write. R. M. Cartwright, 1061 Laguna Ave., Los Angeles.

Registered Shires—Blackhawk Stock Ranch. Importers and Breeders. Easton & Ward, Burlingame, Cal.

### CATTLE

Holstein Herd for sale: Herd consists of seven females and five bulls, including a splendid cow, her four daughters and a grand daughter, all registered stock of good breeding. Priced for quick sale. F. A. Hogaboom, Route A, Fair Oaks, Cal.

D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.

Registered Holsteins out of ARO Dams. Grandsons of Pieterje Malt Ormsby, 35.55 pounds average 5.31. Geo. Kounias, Modesto Farms, Modesto, Cal.

Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Calif.

N. H. Locke Co., Lockeford, Cal.—Choice young Jersey bulls for sale

Holstein Bulls from record cows. Prices right. A. M. Bibens, Modesto, Calif.

### MACHINERY

WHY BUY NEW? SAVE HALF  
Material guaranteed. It's second hand after used few times, but not worn out.

PIPE  
250 feet 8-in. galv. irrigating pipe 35c; 250 ft. 6-in. irrigating pipe 18½¢; 400 ft. heavy 4-in. riveted 16c.

WINDMILLS  
Let the wind do it. 8-ft., \$27.50; 10-ft., \$35; 12-ft., \$55; 16-ft., \$125, cost new \$285. Pumps as much as 4 h. p. engine for nothing once installed. Why buy gas?

TANKS—TANKS  
New, used tanks, guaranteed; 1500-gal. galv. with cover, \$22.50; 16,000, \$250; 10,000 redwood, \$75. SOME TANK. Big 100,000 gal. redwood storage tank, round lug hoops, cost \$1200, our price \$400 before we move. Has mile of hoops alone on tank, also has low stand. Be quick. See who's cheapest.

ENGINES, PUMPS, PIPE  
Centrifugal pumps; plunger pumps, \$5 up; Big Bulldozer single acting jacks, \$68; double-acting No. 3 Ames, \$225; cost \$660; Means double-acting deep well pump, \$275; Large Addison double-acting plunger pump complete with 85-ft. 10-in. pipe, 9-in. swell brass cylinder, double rods, pumps 50 in.; outfit cost \$1500; snap at \$475; 9-h. p. Foos, \$135; 8-h. 12 Fairbanks, \$165; 6-h. Stearns, \$89. Many other first class engines very cheap.

Brass cylinders, plunger rods, pipe. Fittings, Ranch Machinery, Sundries. Fine, 2-gang mouldboard plow, \$45; 3 or 4-gang disc tractor plow; alfalfa renovator, \$25; 24-disc, 4-horse harrow, \$38; mowers, buck rake, feed cutter, \$8.50; Bulldozer pump jack, \$42; bone grinders, \$6 to \$12; feed mill, \$10.50; water trough, \$4; cement mixer, \$25; sprayer, \$19.50; new discs, \$1 each.

Wanted to buy first class material. No junk wanted. Pioneers in our line. DEMMITT CO., Office Upstairs, 120 N. Main, Yards, 816 Yale, Los Angeles.

Several new and slightly used engines at a bargain. Best makes. 1 to 35 h.p. Arnott & Company, Wholesale Machinery and Implements, 112 South Los Angeles St., Los Angeles, Cal.

### SEEDS AND PLANTS

Tepary Beans for Sale—Twelve pounds will plant an acre. Will mature in 65 days from seeding. Seed very scarce. We have on hand a limited quantity which we offer, ten pound lots at \$2.50; hundred pounds \$20.00 F. O. B. Tucson. Tucson Seed Company, Dry Climate Seeds, Tucson, Arizona.

\*\* ORDER YOUR SEEDS NOW \*\*  
If you are going to need any seeds for next season now is the time to render your orders. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbuckle, Cal.  
\*\* ALFALFA SEED OUR SPECIALTY \*\*

Six Sacks Sudan Grass Seed—Absolutely pure. For quick sale 40 cents per pound. Imperial Valley Seed House, El Centro.

### MONEY TO LOAN

Money to Loan—On improved farms, city property or for building loans, also on cattle or cotton crops. C. G. Paul, 204 North Glendale Ave., Tropic, Cal.

A new cheese factory has been erected at Patterson, Stanislaus County.

### Book Review

#### "PRODUCTIVE PLANT HUSBANDRY"

"Productive Plant Husbandry," by Kary C. Davis, Ph.D., professor of agriculture, Cornell University, published by J. B. Lippincott Company, Philadelphia, \$1.75 net.

This is a textbook for high schools and covers the subjects of planting, propagation, plant breeding, soils, field crops, gardening, fruit growing, fertilizing, insects, plant diseases and farm management. There are 312 illustrations in the 462 pages, and while it is a textbook for schools it is a book in which there should be great interest on the part of up-to-date farmers. In the preface we note:

"A glance at the table of contents will show that this book treats, first, the subject of plant life and growth, and methods of improving plants. A preliminary study of botany is not essential to the understanding of these lessons. Soils and their improvement and maintenance are next considered. The treatments of the various farm crops, including fruits, vegetables, field crops and forestry, are given in much more detail than in texts which attempt to include also the study of livestock. The latter is omitted from this book except as it enters into the discussion of the principles of farm management, the business of farming, or the principles of breeding. The enemies of crops—weeds, insects and diseases—are considered somewhat fully. Much emphasis is laid upon the improvement of the home and the community.

"The field and laboratory exercises at the close of each of the chapters are given so fully that it is believed they will be easily understood and may be readily followed."

#### KEEP YOUR CHICKENS!

Can't you look into the future and realize the serious mistakes of those poultrymen who are now disposing of their flocks?

A scarcity of chickens this fall means nothing more than a falling in the production of eggs. That means that eggs are going to sell at higher prices than ever.

That's why we are telling you to keep your chickens. Here is a chance to benefit yourself by the mistakes of others and plan to have laying hens later on when they will not be so plentiful. Fortunately some of the wide-awake, far-seeing poultrymen are holding on to their chickens as they never have before. For them we prophesy a most successful future. Are you one of them?

On account of the apparent high cost of feeds some poultrymen think that no money can be made in the poultry business, but the following experience of the members of the Tulare Cooperative Poultry Association proves otherwise: Assuming that it takes two pounds of wheat, two pounds of bran and two pounds of Surelay to produce a dozen number one eggs, this mixture in 1916 cost—Wheat \$.032; bran \$.035; and Surelay \$.05; total \$.117. Eggs were selling for \$20 a dozen, leaving a profit of \$.083 per dozen. This same mixture the past May cost—Wheat \$.085; bran \$.05; and Surelay \$.0625; total cost \$.1975, to produce one dozen eggs. Eggs in May sold for \$.31 a dozen, leaving a margin of \$.1125 per dozen, or nearly \$.03 more profit per dozen than the 1916 eggs netted.

Could anything be more convincing? Aren't these sufficient reasons for you to want to keep your chickens, and can't you well imagine what the future profits will amount to? Therefore, it is to your interest to retain your fowls, not only from a money making standpoint, but also to show patriotism in this hour of need when the world is crying for food.

#### A KNOWLEDGE OF MACHINERY

Just as the little boy should learn to read and write so should the big boy learn to work with machinery. This is a mechanical age and there is a big demand for skilled machinists. The salaries paid are particularly good and will continue to be so for years to come. The opportunities are many and varied and mechanical positions lead to some of the big engineering achievements. The possibilities are limited only by the scope of one's ability.

The Polytechnic College of Engineering at Oakland is fully equipped to prepare young men to hold good, well paying positions in mechanical lines. The demand for skilled mechanics is always greater than the supply.

A catalogue issued by this school gives full information concerning the course, the cost and the opportunities. It will be mailed free for the asking. Mention the Cultivator and get one.



## PREPARE For the ANNUAL INVASION



**KELLOGG'S ANT PASTE  
MAKES ANTS DISAPPEAR  
25¢ AT ALL  
DRUGGISTS**

**The Cultivator costs  
only one dollar yearly**

## Household Department

### THINGS THAT COUNT

Not things we have, but what we use;  
Not what we see, but what we choose—  
These are the things that mar or bless,  
The sum of human happiness.

The things near-by, not things afar;  
Not what we seem, but what we are—  
These are the things that make or break,  
That give the heart its joy or ache.

Not what seems fair, but what is true;  
Not what we dream, but the good we do—  
These are the things that shine like gems,  
Like stars in fortune's diadems.

Not as we take, but as we give;  
Not as we pray, but as we live—  
These are the things that make for peace,  
Both now and after time shall cease.  
Selected.

### MY TRUSTY HELP

Written for California Cultivator  
By Mrs. A. Stainton



**B** EING a practical housekeeper having the same daily problems to solve that you have, has taught me the value of a fireless cooker.

No woman who has not used a fire-

less cooker can begin to realize what it will mean to her to have one of them, and especially during the hot months. It is such a relief to get away from the hot stove and out into the garden or on to the shady porch, knowing that while you are cool and comfortable or busy with other duties the cooker is cooking the food perfectly, that there will be nothing burned, overdone or spoiled.

All cooking is done by the application of heat in some form. The fireless cooker is not a generator of heat, neither does it provide a place where heat can be generated. It is just a contrivance to conserve heat that has been produced elsewhere. On the same principles that the cooker conserves heat, it conserves cold also. The advantages of cooking certain articles by long continued slow process is well known to practical cooks and right here is the usefulness of the fireless cooker.

When it comes to canning time the cooker means hours of release from standing over the hot stove. It means you can put up dozens of cans of fruit and make jams and marmalades that you would not bother with if you had to do it over a hot stove.

The saving of fuel is a big item, but I pass that over and speak of the relief that comes from not having the whole house heated from the cooking. It is easy to keep a house cool, but to cool it after the day's baking is through is not so easy. You know the fruit and vegetables are at their zenith during the busy season, and to can them in the "spare time" always meant one of two things: getting the fruit, etc., prepared and started and then rushing off to other duties only to find on your return the fruit had boiled over on the stove. The kitchen was in a sticky mess, or it was time to start the dinner for the men and the canning had to be left until a few more minutes of spare time, or else you must get additional help and this is not always possible. I gave it up entirely and bought anything I needed. Think of it—a farmer's wife buying farm produce, and time and material on a farm are too valuable to throw away. So I got a fireless cooker. Now whenever I have fruit or vegetables, just a little maybe, only enough for two or three jars, I put it up for my emergency shelf. I don't use a lot of fuel and I do have my own vegetables, etc., when I need them.

There is some misunderstanding about fireless cookers but it is from people who have not used them. A neighbor said to me "Where is the use of a fireless cooker. The food has to be started and I guess you might as well finish it." Of course the food has to be started, but all you do is to get it heated clear through. Then put it in the cooker and forget it. Once cooking has been thoroughly begun it will continue as long as heat is retained, and the food will be cooked better than by the continuous process. It certainly saves the hanging over a hot stove and waiting around in a hot kitchen and that is what tires a woman so much.

Another thing that bothers some women is the browning of foods. All I can say is: the heat is so confined; it is so intense that foods cooked in a fireless cooker brown more regularly than when cooked in the oven. The chief reason why I like a fireless is the freedom it gives. Whenever I want to be absent from home I start the meal to be cooked, put it in the cooker and go out. When I come back I find my dinner or whatever meal I prepared piping hot and done to a turn waiting for me. This alone is worth the price I paid for it. It is so easy. Follow your own favorite recipes. This trusty help never gets tired, nor careless, nor wants to leave, but relieves you of much of your kitchen work, saves fuel and utensils and cooks to a "T."

### SAVE TIME BY WAITING

If the flat irons are not as hot as they should be, stop ironing at once, no matter how anxious you are to finish in a certain time. If you do nothing but sit down and read for a few minutes while the irons are heating, you will be the gainer thereby; for it is a waste of time and energy trying to work with irons that are not hot.

### SOME TIMELY RECIPES

From "Globe Household Helps" issued by the Globe Mills twice a month we take the following timely recipes:

#### Parker House Corn Rolls

Three-fourths cup yellow corn meal, 1½ cups flour, 4 level teaspoons baking powder, ½ teaspoon salt, 1 tablespoon sugar, 2 level tablespoons shortening, 1 egg, ½ cup milk, 1 cup chopped dates. Sift together corn meal, flour, salt, sugar and baking powder; rub in shortening; beat egg well and add to milk; stir into flour; turn out on floured board and knead dates in; roll out and cut; put butter in center; fold over and bake 15 minutes in hot oven.

#### Hot Water Pie Crust

One cup shortening in warm bowl, add ½ cup boiling water, mix well, add 3 cups flour, sifted with ½ teaspoon each baking powder and salt; allow to cool before rolling out. This pie crust is very tender.

#### Delicious Macaroni Salad

✓ Cook one pint macaroni slowly in 1½ quarts boiling water with 1 teaspoon salt about 30 minutes; drain in colander; put into dish; add 1 teaspoon sugar, 1 tablespoon vinegar from can sweet stuffed pickles, 2 teaspoons thick cream, 1 medium-sized, stuffed, sweet pickle; mix well.

Dressing: Yolks of 2 eggs, 1 scant teaspoon powdered mustard, 1-3 teaspoon white pepper; beat, adding a few drops of salad oil at a time until you have used ½ pint of oil; when very thick add 2 teaspoons of lemon juice; beat, adding 1 teaspoon salt; let stand ½ hour; mix 2-3 of it in salad; use balance for garnish when serving. Macaroni must be in small pieces. Sweet pickles can be used.

#### French Cream Cake

One cup white sugar, 3 eggs, 1½ cups flour, 2 tablespoons cold water, 1 teaspoon baking powder; bake in long pan, split while warm and cut into 4 squares, spread hot custard between layers.

Custard: One pint milk, large, 2 eggs, 1 small cup sugar, 1 teaspoon vanilla, ½ cup butter, 2 tablespoons cornstarch. Dissolve cornstarch in little milk; heat rest of milk, when boiling add sugar, cornstarch and beaten eggs, stirring briskly, add butter, stir until dissolved, flavor and spread on cakes while warm.

### NEW WAYS TO USE COTTAGE CHEESE

#### Boston Roast

One-pound of kidney beans or equivalent quantity cooked beans. One-half pound cottage cheese. Bread crumbs. Salt.

Mash beans or put through meat grinder. Add the cheese and enough bread crumbs to make the mixture sufficiently stiff to be formed into a roll. Bake in a moderate oven, basting occasionally with butter, or other fat, and water. Serve with tomato sauce. This dish may be flavored with chopped onions, cooked in butter, or other fat, and a very little water until tender.

#### Pimento and Cottage-Cheese Roast

Two cups cooked lima beans, one-quarter pound cottage cheese, 5 canned pimentos, chopped. Bread crumbs. Salt.

Put the first three ingredients through a meat chopper. Mix thoroughly and add bread crumbs until it is stiff enough to form into a roll. Brown in the oven, basting occasionally with butter, or other fat, and water.

#### Cottage-Cheese and Nut Roast

One cup cottage cheese, 1 cup chopped English walnuts, 1 cup bread crumbs, 2 tablespoons chopped onion, 1 tablespoon butter. Juice of half lemon. Salt and pepper.

Cook the onion in the butter or other fat and a little water until tender. Mix the other ingredients and moisten with the water in which the onion has been cooked. Pour into a shallow baking dish and brown in the oven.

#### Cheese Sauce

One cup milk, 1 tablespoon cottage cheese, 2 tablespoons flour. Salt and pepper to taste.

Thicken the milk with the flour and just before serving add the cheese, stirring until it is melted.



## COMFORT

Cook in a cool, comfortable kitchen this summer. An oil cook stove is comparatively inexpensive to buy and it will soon pay for itself in comfort and lower fuel expense. Meals in a jiffy, and a cool kitchen in summer.

Bakes, broils, roasts, toasts. Better cooking because of the steady, evenly-distributed heat. More convenient than a wood or coal stove for all the year 'round cooking, and more economical.

The long blue chimneys prevent all smoke and smell. In 1, 2, 3 and 4 burner sizes, with or without ovens. Also cabinet models. Ask your dealer today.

## NEW PERFECTION OIL COOK-STOVE

STANDARD OIL COMPANY  
(California)

## Don't Waste Food

Get a Stephenson Patent Cooler and have everything cool and wholesome.

### NO ICE USED

#### Low Temperature Maintained

by a patented water absorption process which cannot fail. It works according to an established LAW OF NATURE.

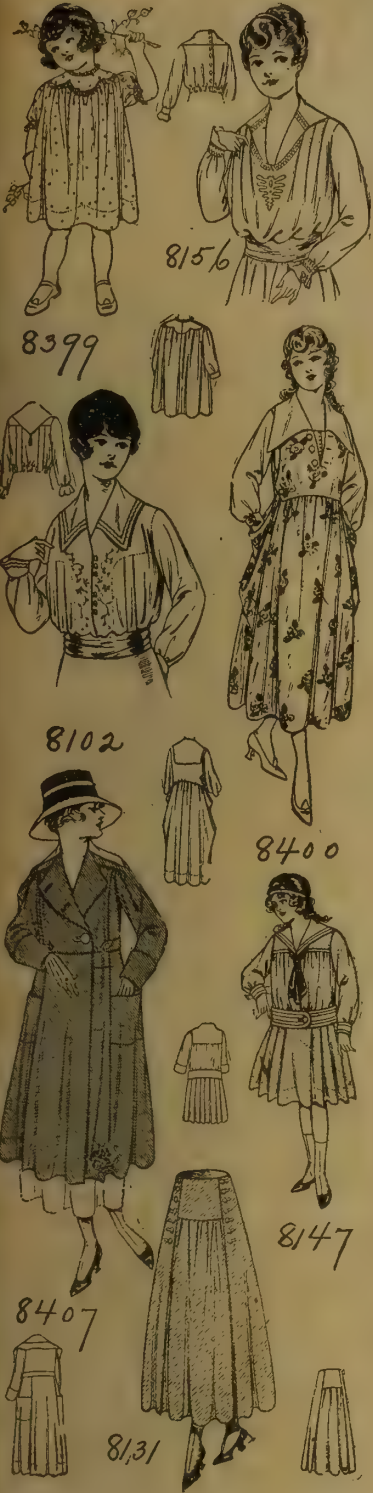
Write for interesting catalogue and prices.

**L. Anderson Co., Mfrs.**  
MARTINEZ, CAL.





## The Cultivator Patterns



8399—Children's Dress. Cut in sizes 2, 4, 6 and 8 years. The dress has a straight lower edge and high or low neck.

8156—Ladies' Blouse. Cut in sizes 34 to 40 inches bust measure. Linen, madras, crepe de Chine or taffeta can be used to make this blouse.

8102—Ladies' Waist. Cut in sizes 36 to 44 inches bust measure. Centre front and front yoke are cut in one.

8400—Misses' Dress. Cut in sizes 16, 18 and 20 years. The dress slips on over the head, has separate guimpe and straight, gathered skirt.

8407—Ladies' Coat. Cut in sizes 36 to 42 inches bust measure. The coat may be made in the 45-inch or 53-inch length.

8147—Girls' Dress. Cut in sizes 6 to 12 years. The dress has a yoke waist and a plaited skirt.

8131—Ladies' Skirt. Cut in sizes 24 to 30 inches waist measure. The skirt is cut in four gores.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

### HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send ten cents in coin or (1 or 2c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department

California Cultivator

Los Angeles

This sauce may be used in preparing creamed eggs or for ordinary milk toast. The quantity of cheese in the recipe may be increased, making a sauce suitable for using with macaroni or rice.

### HELPFUL IN THE HOME

Written for California Cultivator  
By M. A. H.

**W**HEN a housekeeper has learned the art of coloring successfully she can save many a dollar, and this is an art that any one can learn. Children's gingham and muslin dresses are often faded and outgrown when the material is still good, and a good way to lengthen their days of usefulness is to piece them out to make them plenty large enough and then color them a dark blue or brown with a good dye for cotton. Boy's waists and faded housedresses can be renewed in the same way.

A faded straw hat can be made to look like new by squeezing a tube of oil paint of the same color as the hat into a cup of gasoline and stirring until dissolved, then painting the hat with the fluid.

A faded and worn Brussels carpet was given a fresh, new appearance after it had been cleaned and mended by wiping off with vinegar and water and allowing to dry and then going over it with a dark green dye for wool, and this was applied evenly with a large paint brush.

There is nothing more helpful in the home than some good remedies ready for instant use, and among these none are more useful than a bottle of boric solution, or the granulated boric acid can be kept on hand and the solution prepared as needed. This is easily done by dissolving one-half ounce of the acid in one pint of boiled water. When you have a bottle of this solution you have an excellent remedy for sore eyes, sore mouth and for all skin eruptions, and for small cuts and wounds. To keep a child's mouth in a hygienic condition and the gums healthy, wipe the mouth out daily with a soft cloth dipped in the solution, and apply the solution to a child's tender skin after its bath and it will prevent chafing and heal all soreness of the skin. Common alum is another useful article to have in the home. Bathe tender, sensitive feet in alum water. This will relieve the trouble if done every day for several weeks. There will be no trouble from bed sores if a person confined to the bed is bathed with it every day. Weak alum water used as a gargle for a cough will give great relief. Strong hot alum water applied with a brush to the pantry shelves, floors and baseboards will kill all small insects and destroy their eggs and larvae.

### THE BATTLE CRY OF FEED 'EM

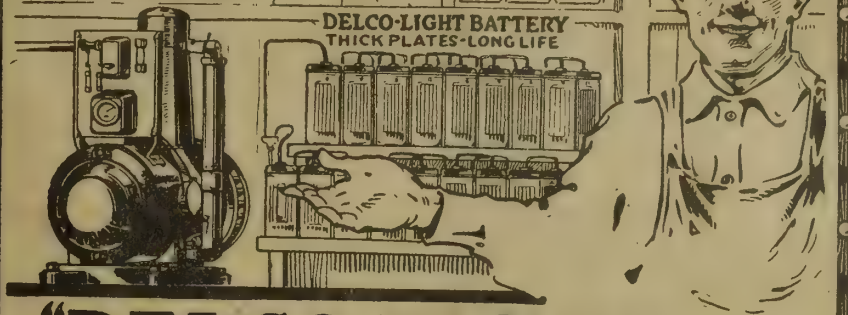
Recently the state council of defense, in its publicity propaganda for increased crop production, sent out the suggestion that home guard companies throughout California shoulder a hoe instead of a gun, and that they undertake systematic cultivation of vacant lots in the cities and towns where they were located.

Commending the suggestion and citing President Wilson's declaration that "Every one who creates or cultivates a garden helps, and helps greatly, to solve the problem of the feeding of the nations", Edward Staton, of Fullerton, sent the following poem to Governor Stephens:

#### THE BATTLE CRY OF FEED 'EM

We'll rally round the hoe, Boys, and join the ranks of toil,  
Shouting the battle cry of "Feed 'Em!"  
We'll train the crops to grow, Boys, as tillers of the soil,  
Shouting the battle cry of "Feed 'Em!"  
Where there is work to do, Boys, we'll gather on the spot,  
Shouting the battle cry of "Feed 'Em!"  
To duty we'll be true, Boys, and till the vacant lot,  
Shouting the battle cry of "Feed 'Em!"  
Nature, kind mater, will aid in our need!  
Down with the tater and out with the weed!  
So we'll rally round the hoe, Boys, and train the crops to grow,  
Shouting the battle cry of "Feed 'Em!"

**DELCO-LIGHT**  
SELF-CRANKING  
SELF-STOPPING  
BALL-BEARINGS  
AIR-COOLED  
BURNS KEROSENE



## "DELCO-LIGHT"

works for me every day in the year,  
furnishing electric light and power."

"When I want light I just press a button. There are no lanterns to carry. There are no lamps to clean.

"I have running water in the house and barnyard, pumped by electricity. The churn, cream separator and washing machine are run by a small electric motor.

"The entire family is delighted. And what appeals to me is the fact that Delco-Light is rapidly paying for itself in time and labor saved."

Jacob Stine, R. R. 4, Lewisburg, O.

Thirty thousand other users are finding Delco-Light to be a good investment.

Two sizes, \$350 and \$420 f. o. b., Dayton, Ohio, except Western U. S. and Canada.

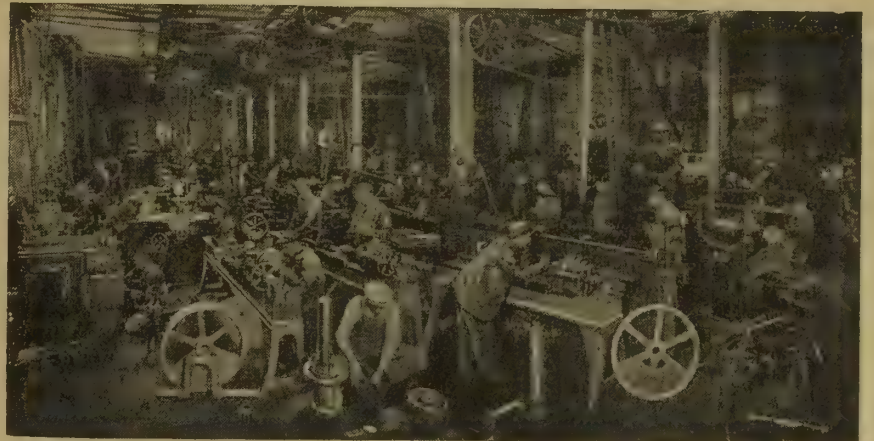
There is a dealer near you. Write for his name and descriptive booklet.

THE DOMESTIC ENGINEERING COMPANY  
DAYTON, OHIO, U. S. A.

#### DISTRIBUTORS:

Modern Appliance Co., E. H. Epperson, Pres., 606 Mission St., San Francisco, Calif.  
Modern Appliance Co., E. H. Epperson, Pres., 314 East Pike St., Seattle, Wash.

## To Fathers of Boys



This picture shows one section of our large machine shop where many ambitious boys are being fitted for the Battle of Life. They are being trained to use the greatest instruments of human progress—machinery. Good positions await them.

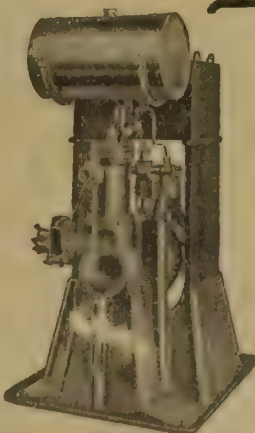
### How About Your Boy?

A six months' course in our machine shop will give him a knowledge of machinery and develop skill so that he may go out as an expert mechanic. THE DEMAND FOR AMBITIOUS AND PRACTICAL MECHANICS IS GREATER TODAY THAN EVER BEFORE.

The indications are that every piece of machinery in this country will be running full capacity and full time for years to come. This is an age of machinery and men who are trained along mechanical lines are to be rewarded with excellent salaries.

### WRITE FOR OUR CATALOGUE TODAY

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SAN FRANCISCO, CAL.



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from your own generating plant

The UNI-LECTRIC lighting system will put electric light in every room in your house, will run your sewing machine, electric iron, vacuum cleaner, churn, washing machine, etc.

It is Economical and Efficient—Always Ready

Operates with a silent gasoline engine of high speed, generator and automatic governor. Uses standard globes and fixtures. Is easy to install.

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**Factory Distributors:**  
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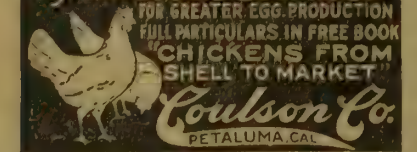
## DRY MASH

### The Best Feed on the Market

Has the highest protein at the lowest price, \$2.65 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or

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**Try COULSON'S EGG FOOD**  
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 FULL PARTICULARS IN FREE BOOK  
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Lice and Mites

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use DEVIL'S DUST  
 and Kill Lice and Mites

Devil's Dust is a deadly poison to all insects. Safe, harmless to poultry, stock, plants.

**Globe Mills**  
 Los Angeles, Cal.

Extra parts are always available without delay for standard advertised machinery. This class always found in the California Cultivator.

# A War Time Poultry Ration

**E. QUISENBERRY**, in charge of the American Egg Laying Contest at Leavenworth, Kansas, writes of a poultry ration which he has found under his local conditions to produce eggs at a feed cost of about 14 cents per dozen. Note that he says: "In some sections you may buy good commercial feed cheaper than you can mix your own." His article follows.

It has been truly said that "Necessity is the Mother of Invention." The present high prices of food stuffs has had a tendency to discourage some poultrymen. But there is no reason why eggs cannot be produced almost as economically now as formerly if the right ration is used, and the selling price of eggs is at least two-thirds more than in former years at this season.

We have been making some tests of various rations on the experimental farm of the American School of Poultry Husbandry at Leavenworth, Kansas, with a view of compounding a ration which would bring the same results and greatly reduce the cost. We realize that available foods and prices vary in different localities so this ration is based upon the feed found in Leavenworth and in the Central States. Grains and ground feeds are constantly varying in price, but at the present time are selling here at the following prices per 100 pounds: Cracked corn, \$3.40; wheat, \$3.67; oats, \$2.50; bran, \$1.65; shorts, \$2.25; beef scrap, \$3.50 and corn meal, \$3.80.

The ration which we are now using in the American Egg Laying Contest and which is producing practically as good results as any we have ever used, which contained a large per cent of wheat, is as follows:

Scratch feed.—Four hundred pounds cracked corn, \$13.60.

Dry Mash.—One hundred fifty pounds wheat bran, \$2.48; 150 pounds wheat shorts, \$3.38; 100 pounds beef scraps, \$3.50; four pounds fine charcoal; three pounds fine salt. Cost of 800 pounds feed, \$22.96. Cost of 100 pounds feed, \$2.87.

If the above feeds are not available it might pay you to have your local dealer import them for you if possible and the prices justify. We have found no other combination that would compare with this ration in price and results. The fact that there is a shortage of wheat, but a large acreage of corn and prospects for an abundant crop indicates that this will be one of the cheapest rations that can be used for many months to come. Whenever wheat is as cheap as corn, wheat should be added to the scratch feed.

The cost of this feed can still be reduced to about \$2.70 per 100 pounds by feeding sprouted oats. We feed equal parts of the above scratch feed and dry mash. For every 100 pounds of the corn chop which is fed we feed one bushel of oats which have been sprouted. Then after they are sprouted it makes over two bushels of feed. We soak the oats from 12 to 24 hours, spread them out in trays until they are about one inch in depth, sprinkle them each day to keep them moist and feed them when they are about one week old. Don't use any artificial heat in sprouting and the oats will not mold. If you feed the oats when they are about a week old from the date you started to sprout them, you get the benefit of the oat grain as well as the tender succulent sprouts. These offset the "all corn"

scratch feed. We feed some of the dry mash in a moistened state each afternoon. Give all the moist mash the hens will eat in about 30 minutes. Moisten it with water or milk. Feed the dry mash in a hopper or box and keep it before the hens so they may help themselves at any time. Feed about an equal amount of the dry mash and cracked corn and regulate the quantity of cracked corn which you throw into the litter for the hens by the amount of dry mash each hen consumes. The nutritive ratio of this feed is about 1:4.5, if the oats are used as directed. This is about right for laying hens or growing stock. This will reduce the cost of this feed at the above prices of the ingredients so that the cost will not exceed \$2.70 per hundred pounds. If this is used for growing stock add five pounds of bone meal to each 100 pounds of ground feed.

On the basis of a dozen eggs being produced on five pounds of feed, each dozen eggs cost us about 14 cents per

dozen when this ration is used. This leaves 21 cents per dozen for labor and profit when eggs are selling at 35 cents per dozen. In the face of these figures there is no reason for any poultryman to be discouraged. If you use this ration at the present prices of eggs you will clear more on your hens than in any previous year because of the increased price of eggs. In the above ration, the succulent oat feed and the wheat products and beef scraps in the mash offset the fattening and heating effect of the "all corn" scratch feed. Corn products are eliminated entirely from the mash, except that the cracked corn is screened and the meal and fine particles of corn are sifted out and put in the mash; otherwise this would be wasted. Keep grit and oyster shell constantly before the fowls. This is cheaper than any ration which we have seen recommended by any government or state experiment station. In some sections you may buy good commercial feed cheaper than you can mix your own.

There is not the least reason for any poultryman to become discouraged with poultry conditions at present. The wise thing to do is to "keep cool, play safe and hold tight."

# A No-Yard Poultry House

Written for California Cultivator By Jean A. Koethen

**S**HALL laying hens have large yards, small yards or no yards at all? The pros and cons of this question have been argued at length by poultrymen of all sizes, and the only conclusion so far seems to be that more depends on the man who uses the yard than on the yard. Some men are successful with no yard at all; others fail to succeed when their hens are given the most ample range.

So far the no-yard system has had a much larger following in the East than in California. Naturally it would seem rather better adapted to a cold climate than to a warm one. How largely it is used in the northern part of the state I do not know, but one man, at least, has made a conspicuous success with it. This man is Charles Weeks of Palo Alto, one of the largest White Leghorn breeders in the state. His system of housing hens is so unusual and so efficient in its results that the house he uses has come to be known as the Charles Weeks house.

To introduce such a house as this to Southern California, and at such a time as this, requires a little courage, but Frederick T. McLoughlin of Gardena, a poultryman whose years of experience belie his youthful appearance, has had the courage to do it, and two long, neatly finished Charles Weeks houses, already filled with contented pullets, bear witness to his faith in the new system.

The central idea of the Charles Weeks system is the keeping of the hens in small flocks. Twenty hens or twenty-five pullets is considered a sufficient number to be housed together. Mr. Weeks claims that pullets kept in this way are more healthy and more productive than when kept in the large flocks one sees on most poultry ranches.

The two houses Mr. McLoughlin has just completed are each 400 feet long and divided into 50 compartments. With from 20 to 25 pullets in each apartment, from 1,000 to 1,200 birds can be accommodated in each house. Each house faces the east and is five feet high at the rear and seven feet high in front, with a three-foot pro-

jection to keep out sun and rain. The entire front is inch-mesh wire. As the house is only eight feet deep this open front admits the sunshine to every corner and keeps the air practically as fresh as if there were no walls. To make perfect ventilation a certainty at all seasons there is a small window under the droppings-board of each apartment.

The apartment allotted to each flock of hens is 8x8, and is separated by a board partition from the apartments on each side, so that every flock is as completely isolated as if it were by itself. Roosts and droppings-boards are quite high, so that every inch of the floor may be available for scratching. Mash hopper and automatic water fountain inside and a wide trough for greens outside the wire complete the very comfortable furnishings of this little apartment.

The problem of scratching litter, which in these times of high grain prices is a serious one, is very neatly solved. There is no litter at all, but sand, clean beach sand on floor and droppings-boards. This is not a cheap covering, but is permanent and sanitary. Mites will not breed in it as they do in straw, and the droppings are cleaned from it by lightly scraping the top each day. The layer of sand on the floor is eight inches deep and that on the droppings-board four inches deep. This is expected to last a year.

The cost of building this house is about that usually allowed for an ordinary house—perhaps a trifle less. Whether hens can be fed as cheaply in such a house as where double yards make the growing of a forage crop possible is a question that would probably be answered in the negative, but the fact is very few poultrymen make any attempt to grow greens in their yards. If hens must be given their greens cut up, it makes little difference whether they have a dirty yard to run in or none at all, and such a house as the one described, if it is kept clean, is more sanitary than the common run of chicken yards. Certainly the system is worth trying. It seems hardly suited to the hot climate of our inland valleys, but near the coast it should work well.



Los Angeles Market

LOS ANGELES, July 18, 1917.

Table with 2 columns: Item and Price. Includes BUTTER, EGGS, and CHEESE sections.

Table with 2 columns: Item and Price. Includes POULTRY and LIVE STOCK sections.

Table with 2 columns: Item and Price. Includes POTATOES, ONIONS, and VEGETABLES sections.

Table with 2 columns: Item and Price. Includes CITRUS and HONEY sections.

Table with 2 columns: Item and Price. Includes NUTS, RICE, and BEANS sections.

Table with 2 columns: Item and Price. Includes FRESH FRUIT section.

Table with 2 columns: Item and Price. Includes DRIED FRUITS section.

Table with 2 columns: Item and Price. Includes CITRUS FRUIT section.

Table with 2 columns: Item and Price. Includes SEEDS section.

Table with 2 columns: Item and Price. Includes FEEDSTUFF section.

Table with 2 columns: Item and Price. Includes GRAIN section.

Table with 2 columns: Item and Price. Includes MANCHURIAN REDS section.

Table with 2 columns: Item and Price. Includes QUOTATIONS BY NICHOLS-LOOMIS COMPANY section.

Table with 2 columns: Item and Price. Includes GRAIN AND FEEDSTUFFS section.

Table with 2 columns: Item and Price. Includes BUTTER, CHEESE, and EGGS sections.

San Francisco Markets

SAN FRANCISCO, July 17, 1917.

Table with 2 columns: Item and Price. Includes BUTTER, CHEESE, and EGGS sections.

Table with 2 columns: Item and Price. Includes POULTRY and LIVE STOCK sections.

Table with 2 columns: Item and Price. Includes POTATOES and ONIONS sections.

Table with 2 columns: Item and Price. Includes VEGETABLES section.

Table with 2 columns: Item and Price. Includes CITRUS and HONEY sections.

Table with 2 columns: Item and Price. Includes NUTS, RICE, and BEANS sections.

Table with 2 columns: Item and Price. Includes FRESH FRUIT section.

Table with 2 columns: Item and Price. Includes CITRUS FRUIT and DRIED FRUITS sections.

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Table with 2 columns: Item and Price. Includes DRIED FRUITS section.

Table with 2 columns: Item and Price. Includes CITRUS FRUIT section.

Table with 2 columns: Item and Price. Includes BEANS section.

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Table with 2 columns: Item and Price. Includes SEEDS section.

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Citrus Fruit Market

LOS ANGELES, July 18, 1917.

A material shading in price is noted in both oranges and lemons. This is especially true in the auctions. This is in part at least due to the heavy deciduous and small fruit season. Also cantaloupes have been poured into the market as never before. In addition the shortage of box shoo and cars has complicated the fruit shipping season on all sides.

The cool weather has induced withholding of orders for lemons and in addition foreign lemons have been received in large quantities.

Shipments of oranges from Southern California since November 1, 1916, 33,710 cars, lemons 6427, total 40,137; to same date last year oranges 26,217, lemons 5373, total 31,590. From Central California to date this season oranges, 4977, lemons 164, total 5141; to same date last year, oranges 5394, lemons 146, total 5540. From Northern California to date this season, oranges 845 cars; to same date last season, oranges 610, lemons 1.

FROM THE AUCTION

Table with 2 columns: Item and Price. Includes July 12 and July 16 sections.

Table with 2 columns: Item and Price. Includes July 17 section.

HIGHLY ESTIMABLE

"Half a loaf is better than no bread, said the philosopher.

"There's no doubt about the respect to which half a loaf is entitled," replied the plain person. "It costs as much as a whole loaf used to."

BIG OFFERING OF PURE BREDS

Live stock men of Central California will have great opportunity to secure Poland-China, Duroc-Jersey and Yorkshire hogs; also some magnificently bred Hereford and Shorthorn bulls and heifers, at the Charles W. Bryson Ranch at Angiola, on the Santa Fe, Tulare County. The ranch is six miles south of Corcoran and 18 miles west of Tulare. This is announced as the largest sale, over 1800 head of pure bred hogs and cattle, ever held in the Valley. The sale will be held Saturday, July 28, and the noon-day feature will be a barbecue and free lunch.

The Bryson Ranch has spared no expense in securing some magnificent stock and has been termed the largest ranch of pure bred hogs west of the Mississippi.

WEATHER CONDITION

Table with 2 columns: Item and Price. Includes For the Week Ending July 14, 1917 section.

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Brentwood Irrigated Farms
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Mercer Pacific Coast Agcy,  
San Francisco—"Zerolene  
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# ZEROLENE

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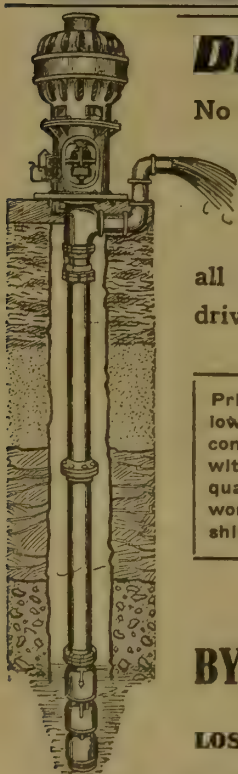
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ly refined from California asphalt-base  
crude, gives perfect lubrica-  
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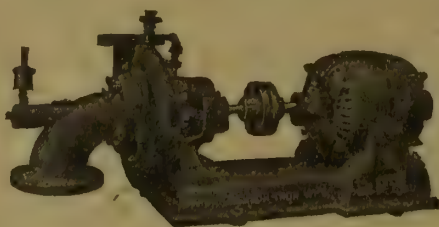


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No valves to pack or plunger rods to get out of  
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A complete line of irrigating pumps of  
all descriptions, horizontal and vertical for belt  
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Prices as  
low as are  
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Made from APOLLO-KEYSTONE COPPER STEEL Galvanized  
Sheets—the most durable, rust-resistant galvanized sheets  
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below regular Apollo brand—it indicates that Keystone Copper Steel is used. Demand  
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plans, information and instructions for the application of metal roofing and siding.  
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Accustomed to doing things  
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ity, upon economy, upon  
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No. 136, for the name of  
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Send for a new  
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July 28, 1917

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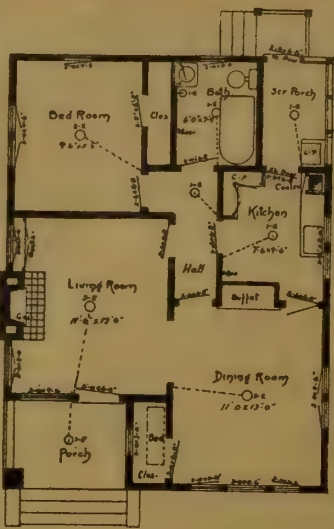




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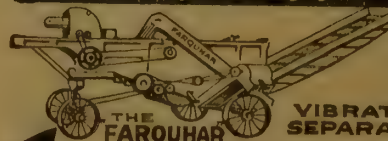
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# California Cultivator

Vol. XLIX No. 4

LOS ANGELES: July 28, 1917

One Dollar Yearly

## Sudan Grass a Big Producer of Forage

A. M. Nelson Writes for Cultivator Readers of the Culture and Production of Sudan Grass in Imperial Valley

ONE of the chief qualities of Sudan grass is its resistance to drouth. Sudan hay has not the feeding value of alfalfa, therefore the question arises, "Is there a place for Sudan grass in drouthless alfalfa stronghold?"

Imperial Valley, having 120,000 acres in alfalfa, leading county in the state in this respect, is qualified to answer. That answer would be that there is a place, and an important one. But should the question take this turn; "Will Sudan hay compete with alfalfa?" the chances are that the reply would be in the negative.

Grover Lofftus, president of the Imperial County farm bureau, last year made four cuttings, obtaining an average total of 16 tons of cured hay per acre. Fred Gunterman of Calexico and other valley ranchers report that they have carried Sudan grass through the winter and made good second year yields. But Sudan grass must be classified as an annual, and yields such as obtained in Imperial Valley as exceptional. With yields more closely approximating those of alfalfa, and the necessity of reseeding annually, what is the place of Sudan grass?

Sudan grass makes a place for itself by its adaptability to the wide variety of soils in which it may be profitably grown, because of its quick growth and its heavy yield.

In this age of rotative planting programs, there is room for a "catch" crop that can be put in and taken off in comparative quickstep time, and Sudan grass fills that need. The first cutting may be made around 70 days and one to three additional cuttings made during the summer. It will yield a crop that is palatable to all classes of stock.

Where alfalfa is thin or has been scalded out Sudan grass may be sown

and the feed-producing capacity of the land materially increased.

But probably one of the chief values of Sudan grass is that it may be planted on soils unadapted for various reasons to other forage crops. In every arid country the land contains various degrees of salt. Generally compact soils are also to be found. Sudan grass has been found to flourish in salty ground where it was impossible to get a stand of alfalfa.

"If you have any land that is of a nature that you have not been able to

The yield of 16 tons per acre made in Imperial Valley by Mr. Lofftus was made on hard soil, the cheaper type of soil which is unadapted to alfalfa. In preparing the land he first saturated the ground, disked and then seeded with a pressed drill planter, after which he dragged the field.

One of the pioneer Sudan grass growers in the valley is Sam E. Robinson, whose place is east of Imperial. His first planting was from a package of seed received from C. V. Piper, in charge of forage crop investigations of

used for planting milo and double the rows, in moist soil. By the first plan I got a good stand with about 15 pounds of seed. I thought it was really too thick. By the second plan I have what I think is a satisfactory stand. I have a preference for the latter plan and believe in soaking the ground thoroughly before planting and doing all the cultivating before the seed is in the ground."

Paul I. Dougherty, Imperial County farm adviser, will advocate that all valley planters who do not get their milo in by July 20 plant Sudan grass until August 15.

"The value of Sudan grass in the Southwest has been demonstrated," Mr. Dougherty says. "On the best alfalfa land it will figure only as a 'catch,' or rotation crop, but on lands where alfalfa is grown only with difficulty or where it is scalded out Sudan grass will add materially to the feed production. The yields in the Southwest equal those of alfalfa but the feeding value is not so great. It is eagerly eaten by stock and is a good supplementary feed. It is noticed in the case of dairy animals that the results of feeding Sudan hay are not as good as with alfalfa, although a mixture makes an excellent feed. In analysis, Sudan hay closely resembles barley hay but of course the yields per acre are very much greater."

The seed yield in Imperial Valley is also high. Dee Turner, a pioneer Sudan seed grower in Oklahoma and western Texas, is growing a field of 450 acres near Mt. Signal, Imperial Valley. He expects a seed harvest of 2,000 pounds to the acre. The Imperial Valley Sudan acreage this year is approximately 1,500 acres. The ranchers have been watching it this summer and the indications now point to plantings next spring totalling between 10,000 and 15,000 acres.



Sudan Grass in the Imperial

get any kind of a crop from it, try Sudan grass," advises Mike Liebert, a rancher near Seeley, "I have seen Sudan grass grow 20 inches high, with but little water, on land that formerly would not sprout anything. It was planted on this barren spot as an experiment. Nothing else had ever been grown on this particular spot.

"I also know of a case where Sudan grass was planted at the end of a cotton field, the end being used to drain water from the field and of course making it impossible to bring a cotton plant up. The grass was cut last fall, was pastured in the winter and this year went to seed at a good height. It received no water after the last cotton irrigation which was in October."

the department of agriculture, the man who introduced Sudan grass from Egypt in 1909.

"Sudan grass is so similar to sorghum and the milo group that anyone having experience in planting these will have little difficulty in getting 'a stand,' says Mr. Robinson. "The only difficulty I have experienced in securing a stand has been when I planted it in thin alfalfa in the spring. I think one reason for my failure to get a better stand was that I was a day or two late in giving the second irrigation.

"I have used two methods of planting, one being to sow broadcast and harrow and then irrigate as I would for milo maize, the other being to use a corn planter with plates such as are

## Safeguarding Water Rights

Attorney George E. Farrand Calls Attention to the New Law Affecting Water Rights

ernor May 5. The law is quoted in full:

Section 1. (a) The term "private irrigation plant," when used in this act, shall be construed to mean a water system which is not operated by a mutual water company as herein defined or by a public utility as defined in the public utilities act, approved December 23, 1911, and acts amendatory thereof, or in the act entitled "An act providing for the regulation of water companies, defining the powers and duties of the railroad commission with reference thereto, and defining the conditions under which such water companies become subject to the provisions of the public utilities act and the railroad commission of the State of California," approved April 25, 1913.

(b) The term "mutual water company," when used in this act, means any private corporation or association organized for the purpose of delivering water solely to its stockhold-

ers or members at cost.

Sec. 2. For the sole purpose of increasing the output of agricultural products in this state during the time the United States is a party to war or to a state of war, the owner of any private irrigation plant or any mutual water company may at its option deliver water to others or others than its stockholders or members, with or without compensation, without becoming a public utility subject to the jurisdiction of the railroad commission of the State of California; provided, that no delivery of water to others than stockholders or members shall be authorized until the orders for water of all stockholders or members made in accordance with the constitution, by-laws, rules or regulations of such mutual water company have been filled; and provided further, that the temporary service herein authorized shall not be construed as granting any right to render or receive such service more than six

months after such war need has ceased; and provided, further, that after June first, one thousand nine hundred seventeen, no such temporary service of water shall be made unless a statement is first filed with the railroad commission stating the private irrigation plant or mutual water company rendering such service, the party receiving such service, the lands irrigated and the rate, if any, charged for such service.

Sec. 3. This act is hereby declared to be an urgency measure, and under the provisions of section one of article four of the constitution of the State of California shall take effect immediately. The facts constituting such urgency are as follows: The United States is now in a state of war and there is a shortage of crops in this state and throughout the nation generally. It is therefore necessary for the immediate preservation of public safety that this act take effect immediately so that the use of water in the irrigated area and the resulting crop returns of the state may be increased to the maximum output without delay.

Attorney Farrand warns: "Please note carefully that under Section 2 no temporary service of water shall be made unless a statement is first filed with the Railroad Commission."

SOON after the declaration of war committees were appointed in every county of California to survey agricultural resources and secure as large production of staple foods as possible. To that end it was urged that surplus water not needed in one section or on one farm might be transferred to another and every available drop be turned to use. There was, however, the legal obstacle of possible clouding title to the water right if its use were permitted on other lands.

To overcome that on April 18 the directors of the California Fruit Growers Exchange, in conference with Doctor H. J. Webber, who was chairman of the committee conducting the survey for Southern California, upon suggestion of Attorney Geo. E. Farrand, recommended to the state council of defense that certain emergency legislation be enacted whereby persons owning private water rights and mutual water companies could permit portions of their water supplies to be delivered to and used by others without such conduct affecting their status as private owners and without such action operating as a dedication of their waters to the public use. A bill was passed and approved by the gov-



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## Predrying of Grapes

By W. Flanders Setchel Before Grape Growers' Conference at Fresno



THE subject with which I have to deal is one to which little, if any, consideration had been given by grape growers prior to the latter part of the season of last year, when early rains resulted in the loss of many thousands of dollars worth of grapes, a large proportion of which rotted upon the vines, whilst others were shipped in a weak condition, due to abnormal water content and exterior moisture. Many cars of these latter grapes were leaking grape juice before arrival at destination. Emperor grapes valued in excess of \$100 a ton, failed to realize freight and refrigeration upon arrival at destination.

Coming to my actual experience in the predrying of grapes, it should be understood that this was limited to last season and confined to experimental proportions. The experiments were, however, conducted under conditions such as to positively establish the practicability of predrying grapes for Eastern shipment upon a commercial scale.

A raisin dryer in first-class condition, and practically air-tight save for the vents, was used for the purposes of the experiment. Heating was obtained by a boiler plate oil furnace, air circulation was secured by a three-foot fan placed over furnace, the return-air system being used. The grapes experimented with were picked wet with rain and atmospheric moisture, being in a condition entirely unsuitable for Eastern shipment. They were carefully laid upon raisin trays, the bunches not being allowed to touch each other. Car strips with small wooden blocks attached gave the needed clearance between trays in the stacks. The grapes were placed at the rear end of the dryer, the fore part being filled with wet raisins in various stages of drying. The grapes were subjected to a circulating air heat of 100 degrees for between three and four hours, and when removed the skins and stems of the grapes were entirely free of external moisture, whilst the flesh on the berries was firm. The grapes were then placed in standard picking boxes and stood in the packing house about 30 hours before being packed and put into iced cars. This fruit was distributed over four cars, the bulk of which consisted of nonpredried fruit. The predried grapes were packed under a separate mark, but bore no indication to buyers by which they could be identified as different from the balance of the grapes, nevertheless the predried fruit without exception realized higher prices than the nonpredried, the average increase being 15 cents per crate. The cost of predrying figured out at slightly less than \$10.00 per ton. In the case of a dryer specially equipped to handle table grapes the cost would be materially reduced. A successful predrying plant for grapes must embody in its operation, first, a minimum of handling of the grapes and minimum of cost in operation. To this end the dryer should be an integral part of the green fruit packing house. The grapes should be picked in boxes having open sides so that no further handling of the grapes will be necessary from picking to packing, provided the boxes are dry to commence with.

In estimating the economic value of this experiment, insurance against loss through a recurrence of the

early rains of last year represents but a fraction of its real significance. With a predrying plant as part of the equipment of the green fruit packing house late grapes can be harvested during the entire working day, notwithstanding the morning dews which commonly necessitate postponement of picking until 10 a. m. and frequently later. Further, grapes can be gathered and shipped after rains when those without predrying facilities must wait for their grapes to dry on the vines, thus affording bare markets for those more fortunately situated through possession of a predrying plant. Even under circumstances where the condition of grapes makes it possible to ship them with but a slight risk of decay, predrying will pay liberal dividends upon its cost, owing to the greatly improved carrying qualities of the grapes if predried. Toward the latter part of each year fear of rain causes grape growers to hasten the completion of their season's shipments, regardless of market conditions, through concern as to the possibility of a rain, whilst where a predrying plant is available the period of marketing can be safely and materially extended, thereby improving market prospects, both for the nonpredried and for the predried grapes, the former being freed of the competition they would otherwise experience from the predried grapes were they marketed at the same time.

In the case of Emperor grapes it is now an established principle that packing in drums or kegs must be completed prior to the coming of the early morning dews. With a predrying plant there is no such limitation, and should at any time the sugar content of Emperor grapes under the standardization law be raised, a predrying plant would become a requisite of every packing shed handling this variety of grapes. The Eastern trade, owing to their severe losses last year upon drum Emperors purchased f.o.b. California, will approach these grapes more warily in the future, but one can predry his drum Emperors for less than \$10.00 per ton and either guarantee their condition to the purchaser or ship East and carry in cold storage at one's own risk, with the assurance of extremely gratifying results.

Railroad rates are about to be increased substantially. Every cent of increase in freight and refrigeration rates is a direct loss to the grower because the Eastern trade figure their cost of our products on a delivered basis, whether they buy f.o.b. California or through their auctions. Inversely, therefore, every decrease in freight and refrigeration charges puts money directly into the pockets of the growers.

The orange growers now effect a material saving on a portion of their shipments by precooling and using dry cars which are iced at a designated icing station en route to destination, the shipper assuming responsibility for deterioration of the fruit. It is my opinion that future experiments in the predrying of grapes should be conducted along such lines as would demonstrate the practicability or otherwise of packing and shipping predried grapes in ventilated dry cars without cooling, to be iced at a designated icing station under similar conditions to those obtained by the orange growers. The commercial value of predrying under any of the beforementioned conditions would then be fully established and a very material saving in refrigeration charges would be insured, resulting in direct annual saving to grape growers and, equally important and remunerative to growers, a higher standard would be established as regards condition of fruit at delivery in our Eastern markets.



## Marking Contents of Fruit and Vegetable Containers



THE office of information of the United States Department of Agriculture has issued a ruling as to the Net Weight Amendment to the Federal Food and Drug Act. The net Weight Amendment provides that all packages of food entering interstate or foreign commerce must be plainly and conspicuously marked with the quantity of the contents in terms of weight, measure, or numerical count. From this ruling we quote:

The articles listed below may be marked by either weight or dry measure, or, when packed in barrels, in terms of the United States standard barrel and its lawful subdivisions, the third, half or three-quarters:

Apples in barrels, boxes, cartons and hampers. Cases or cartons containing graded apples may, if desired, be marked in addition with the number of apples per package.

Apricots, prunes and plums in baskets, boxes and cases. (When packed in small open containers inclosed in crates, see paragraph relating to small open containers).

Beans (in pod) in baskets, boxes and hampers.

Berries and currants in baskets. (When packed in small open contain-

ers inclosed in crates, see paragraph relating to small open containers).

Cherries in boxes and baskets. (When packed in small open containers inclosed in crates, see paragraph relating to small open containers).

Cucumbers in barrels, baskets, hampers, boxes and crates. Containers of graded cucumbers may, if desired, be marked in lieu of weight or dry measure, with the number and length of the cucumbers.

Grapefruit in sectional cases. If desired, cases may be marked by dry measure and count; or by count and average diameter in lieu of weight or dry measure.

Grapes in baskets. (When packed in small open containers inclosed in crates, see paragraph relating to small open containers).

Lemons in sectional cases. If desired cases may be marked by dry measure and count; or by count and average diameter in lieu of weight or dry measure.

Okra in baskets, boxes and hampers.

Onions in crates, baskets and hampers and in sacks of uniform quantity of contents. Cases containing graded onions may, if desired, be marked in addition with the number of onions per case.

Oranges in sectional cases. If desired, cases may be marked by dry measure and count; or by count and average diameter in lieu of weight or dry measure.

Oranges, satsumas and tangerines, in half boxes. If desired, cases may be marked by dry measure and count; or by count and average diameter in lieu of weight or dry measure.

Peaches in boxes, cases, baskets and hampers. Boxes and cases of graded peaches may, if desired, be marked in addition with the number of peaches per package. (When packed in small open containers inclosed in crates, see paragraph relating to small open containers).

Pears in barrels, boxes, baskets and hampers.

Peas (in pod) in baskets, boxes and hampers.

Peppers in barrels, baskets, boxes and hampers. (When packed in small open containers inclosed in crates, see paragraph relating to small open containers).

Potatoes in barrels, crates and hampers, and in sacks of uniform quantity of contents.

Quinces in barrels, boxes, baskets and hampers.

Squash, (Southern) in crates, boxes, baskets and hampers.

Tomatoes in boxes, "lugs" and baskets. (When packed in small open containers inclosed in crates or "flats," see next paragraph).

### Small Open Containers

Pending a determination of the question as to whether the quantity of the contents must be marked on small open containers, inclosed within crates or "flats", in which small open containers are packed apricots, berries, currants, cherries, grapes, peaches, plums, prunes, peppers and tomatoes, and unless public notice of not less than two months be given, the department will not recommend proceedings under the Food and Drug Act solely upon the ground that such fruits and vegetables in such small containers bear no statement of the quantity of contents. The crates inclosing such containers should, however, be marked with the number of small containers and the quantity of the contents of each.

Also for the present and until further public notice to the contrary of not less than two months, the department will not recommend proceedings under the Food and Drugs Act solely upon the ground that the quantity of the contents is not marked upon the containers of the following articles, packed as described below. No objection will be interposed by the department to any trade marking which is not false or misleading.

Asparagus in boxes and cases.

Beets with tops, bunched, in drums and hampers.

Cabbages in crates.

Cantaloupes and casabas in crates and baskets.

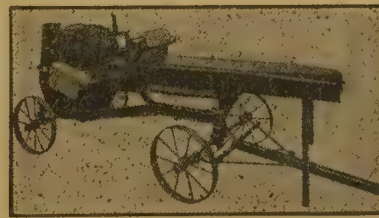
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## M. A. Hayes

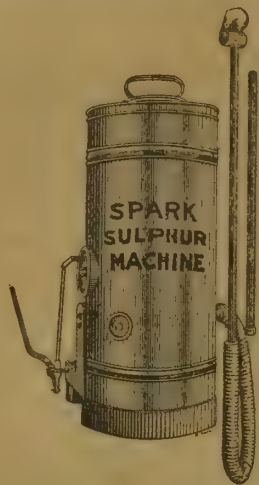
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Carrots with tops, bunched, in drums and hampers.

Cauliflower in crates and hampers.

Celery in boxes and crates.

Egg plant commonly wrapped in paper and packed in crates.

Kale in barrels, baskets and hampers.

Lettuce in barrels, drums, baskets and hampers.

Onions with tops, bunched, in drums and hampers.

Pineapples in crates.

Radishes, bunched, in drums and hampers.

Romaine in hampers.

Spinach in barrels, baskets and hampers.

Turnips with tops in drums and hampers.

Regulation No. 29 relating to marketing the quantity of food in pack-

be reduced to their lowest terms; decimal fractions shall be preceded by zero and shall be carried out to not more than two places.

(e) Statements of weight shall be in terms of avoirdupois pounds and ounces; statements of liquid measure shall be in terms of the United States gallon of 231 cubic inches and its customary subdivisions, i.e., in gallons, quarts, pints, or fluid ounces, and shall express the volume of the liquid at 68 degrees Fahrenheit (20 degrees centigrade); and statements of dry measure shall be in terms of the United States standard bushel of 2,150.42 cubic inches and its customary subdivisions, i.e., in bushels, pecks, quarts, or pints, or, in the case of articles in barrels, in terms of the United States standard barrel and its lawful subdivisions, i.e., third, half, or



Sugar Beets in San Fernando

Since irrigation has been made possible in San Fernando Valley the increase in the planting of sugar beets has been wonderful. It is now one of the great industries of that valley.

age form should be consulted. Special attention is directed to paragraphs (d) and (e) of that circular which are as follows:

(d) If the quantity of the contents be stated by weight or measure, it shall be marked in terms of the largest unit contained in the package, except that, in the case of an article with respect to which there exists a definite trade custom for marking the quantity of the article in terms of fractional parts of larger units, it may be so marked in accordance with the custom. Common fractions shall

three-quarters barrel, as fixed by the act of March 4, 1915 (38 United States Statutes at Large, page 1186): Provided, That statements of quantity may be in terms of metric weight or measure. Statements of metric weight should be in terms of kilograms or grams. Statements of metric measure should be in terms of liters or centiliters. Other terms of metric weight or measure may be used if it appears that a definite trade custom exists for marketing articles with such other terms and the articles are marked in accordance with the custom.

## Necessity of Vine Disease Control and Better Field Observation

By Chas. F. Collins, Horticultural Commissioner, Tulare County, before recent Conference of Grape Growers at Fresno.



WHEN the writer made his advent into Tulare County 31 years ago it was a vast grain field with a bountiful crop ready for the harvester.

Much of this crop was "volunteer" and produced simply by harrowing or disking into the soil the shattered grain of the previous year's harvest and trusting Providence for results. Under conditions then existing the almost virgin soil would yield a profit provided sufficient rain fell at opportune times.

Unfortunately a continual sapping of the energies of Mother Earth for a third of a century produces very similar effects upon her as upon us who till her surface, namely, we are depleted, and numerous weaknesses and ailments develop which require the attention of a specialist to correct or alleviate. It is our opinion that the time was ripe several years ago for the services of such a specialist in Tulare County.

For the past 15 years or more a trouble known locally as "black mildew" or "Spanish measles" has been

found to a greater or less extent in the vineyards of our county. It is characterized by a blighting or drying up of the fruit at any stage before it reaches maturity, this depending upon the time of its attack, or in mild cases by a spotting which greatly injures the appearance and commercial value. There is usually little apparent injury to the vine. This trouble has gradually increased in virulence and area with time and the increased acreage until it has in the past few years become a serious problem in many of what were once our best vineyards.

Both the federal bureau of soils and of plant industry have declared after careful examination of samples from the worst affected of these vineyards that no disease is present, hence we must conclude that this trouble is due to some abnormal condition of the soil.

About five years ago another vine trouble of a different nature made its appearance, which destroys not only the fruit, but in many cases the vine itself succumbs. This, like the so-called "Spanish measles," has mani-

festated itself in various sections of our vine growing district and become a menace to many vineyards.

At the request of the writer and others, members of the university staff and federal department of agriculture have on various occasions visited these affected districts and without exception pronounced the trouble serious, but no attempt was made at anything more than a superficial examination. As the owners of the affected vineyards, as well as many others were not only willing but anxious to cooperate in every possible way with anyone capable of rendering assistance much dissatisfaction was expressed at the inability to even secure an attempt at investigation.

In September of last year J. W. Jeffrey of the state viticultural commission was in our county on a tour of inspection of the grape packing houses, and the writer called his attention to the conditions existing as stated. He expressed great surprise that no action had been taken in a matter which was obviously of such vital import to at least the various owners of the already affected vineyards and indirectly to the grape industry of the county, and promised to take up the matter of an investigation with the state viticultural commission.

This promise was promptly fulfilled, and after a preliminary investigation by officials of the commission Mr. Jeffrey was detailed to locate in our county and study the problem during a term of months. Mr. Jeffrey contended from the first that the trouble was soil conditions and not a specific disease, as was at first feared, and arranged with the federal department at Washington for analysis of soils and samples taken from the various infected districts.

With the aid of the knowledge thus gained he has conducted experiments in the application of fertilizers, lime and gypsum, as well as drainage and irrigation where necessity seemed to require, and the result is that in less than six months from the time of starting this work we have good evidence that he is on the high road to a successful solution of some of our problems, the result of which may mean the saving of many thousands of dollars to the grape growers of this and adjoining counties.

Nor are these all of our troubles. A fine young apple orchard in a district far removed from our vineyards and a peach orchard still more remote from either of these are slowly succumbing to some unseen, adverse influences. These orchards have been given a superficial examination by soil experts and entomologists and the trouble pronounced serious, which is plainly apparent to the most casual observer, as evidenced by the many vacancies already existing and areas filled with dead and dying trees, but no solution has been suggested.

These are cases which like our grape trouble require study and investigation for an extended period of time by someone trained in this line of work.

I could relate many instances of this kind occurring in Tulare County, and the same conditions prevail in any of the more important horticultural counties of the state.

It is my opinion that the cause of 50 per cent of our horticultural troubles is beneath the surface of the earth. This statement is made deliberately and advisably after years of experience and observation. It may be too much or too little water or water applied at the wrong time or in the wrong way. It may be an excess



or deficiency of certain elements of the soil causing malnutrition, or in other words, an unbalanced ration for the plant.

Whatever the cause may be the effect is much the same. The plant becomes unproductive and, unless remedial measures are adopted, eventually loses its vitality and dies.

Although the law governing the office of county horticultural commissioner defines his duties as purely executive, I know I am safe in saying that there is not a commissioner in this state who will not gladly assist to the utmost of his ability in this or any other work that will in any way aid the fruit growers; but there are some very good and sufficient reasons why he can not do all that is required for success in this line.

This is the age of the specialist and this work requires special training to fit the investigator for it. Furthermore, no commissioner of any of our more important fruit-growing counties, if he possessed all the available knowledge in the world on this subject, could possibly find the time to devote to investigations of this kind in addition to his regular duties.

Many cases are referred to us which are easy. The work of a few moments will reveal malignant root knot or crown gall strangling the life of the tree, or oak fungus sapping its vitality. Perhaps a gopher with no regard for the high cost of living, has been subsisting for days on the succulent bark of its roots.

Often a little questioning and a very superficial examination of the soil will plainly indicate that extremes in

moisture conditions or excess of alkali is the cause of all the trouble. While it is true that cases of this kind are of almost daily occurrence, it is also true that there are many of such an obscure, enigmatical and doubtful nature as to challenge the skill of the trained soil technologist and require his most careful observation and study for weeks, months or even years before definite conclusions can be reached.

The little leaf of the peach and other deciduous fruits has been studied for four years by the best authorities the federal agricultural department can furnish with almost no results to date.

We have long believed and are continually becoming more confirmed in our opinion that a specialist in this line of work would be a valuable asset and worth many times whatever salary his position may command to any of our fruit-growing counties.

We are living in strenuous times and facing an apparently inevitable world shortage of food supplies in the near future. The farmer is being coaxed and urged to produce every possible pound and meet, in so far as he can, this deficiency, and all available assistance should be at his command.

I think you will all agree that in many cases increased efficiency offers a safer and saner solution of this problem than increased acreage.

There are many hundreds of acres of trees and vines in Tulare County from which the owners are not securing the profits they might if soil conditions were improved, and they should be taught how this may be done.

## When to Prune Avocados

**R**EGARDING pruning of the avocado tree we note in the proceedings of a former meeting of the California Avocado Association C. P. Taft said that the Taft had been heavily pruned, but in order to obtain bud wood rather than for shaping the tree. He was in doubt as to whether this had delayed the fruiting or lessened the amount of production. Along this line he said a medium sized tree that had borne fruit was badly damaged by a wind storm—one side blown off—and that for the next three and a half years it devoted all its energies to rebuilding wood. Last year it regained its normal size and now has one thousand fruits on it. He will prune only when he thinks it necessary, perhaps only in shaping the tree. Disastrous experiences from pruning in August have convinced him that the trees should not be cut back in the very hot weather. He prefers the early spring or November. This applies to nursery stock as well as older trees. He considers spring or fall as the most desirable for pruning. After a bud has taken hold and is ready to grow, Mr. Taft does not cut the top of the seedling back until cool weather, leaving it to protect the young tree from the sun.

J. T. Whedon advised protection for

the trunks by encouraging downward growth of foliage as with oranges. He believes in waxing the cuts regardless of how smooth they are. D. W. Coolidge agrees as to this method, and advises systematic pruning for the first few years, but differed with Mr. Taft as to the season for such work, advising cutting back in the vigorous growing season, when the high flow of sap will heal the cut more thoroughly.

E. S. Thacher's experience tends to favor pruning. His trees are seven years old and all bushy, some of them threw out high limbs in the center and these were cut back, giving his trees a uniform appearance. His theory is that it does not hurt to cut them any more than any other tree, and later he believes the production will be increased by pruning. He advises waxing the cuts.

Referring to the Harman variety and its inclination to grow in large umbrella form, Mr. Coolidge stated that it could be shaped up to form a perfect pyramid, which resists heavy winds and protects its body from the hot sun. In his estimation a great deal of fruiting space is gained by such treatment. He said he could show limbs two inches in diameter that had been pruned without any die-back. All Mr. Coolidge's pruning is done in the vigorous growing season. He says that he has known them to die back in many instances, when cut in the early spring or the fall. He had never trimmed back a Taft or any of the other thick-skinned type.

## Tractor Demonstration at Los Angeles

Written for California Cultivator

**O**WING to the success of last year's demonstration, which was held at Puente, the Traction Engine and Implement Dealers Association of Southern California have laid plans for what they are terming "The Second Annual Demonstration."

The location is changed this year, they having secured the Vail property on Telegraph Road, two miles east of the end of the Stephenson Avenue car line from Los Angeles. Telegraph

Road is to the right of and parallels the Whittier boulevard. There are 650 acres in the tract so the farmer who attends the demonstration will have ample opportunity of being shown just how much the various tractors and implements can do. The association has secured several new members this past year, so that the number of tractors and appliances in actual working demonstration will be infinitely larger. In addition they are planning on a comprehensive exhibit of all accessories pertaining to trac-

tion engines, farm implements, automobiles, trucks, in fact almost everything that may have the slightest interest to the rancher, orchardist or grower who may attend. The wife, daughter and sister have not been overlooked either, and there will be exhibits of all the latest household equipment necessary to modern life, from the latest washing machines and churns up to the wicker living furniture and player pianos. There will be public demonstrations of the tractors and implements in action, plowing, harrowing, etc., every afternoon from two to four. For those who are interested, the demonstrations at any time during the five days meeting, and the most exhaustive and minutest criticism is invited, for only the machines and appliances that can stand such a test are entered.

It is especially asked that the visitor bring with him any and all questions concerning tractor farming that may have puzzled him, either as regards the mechanism of the tractor or the best way of using them on the individual's piece of ground. There are men thoroughly skilled in mechanics and conversant with the many problems that the agriculturist, orchardist, and grower has to contend with and it is the business and pleasure of these men to put the rancher on the right track.

The gathering together of such thousands of men, whose sole business is to get Old Mother Earth to yield the greatest harvest possible, whether it be beans, beets, potatoes, wheat, citrus fruit, or grapes, is bound to result in a splendid intermingling and exchanging of ideas that are the result of the best of all teachers, "experience." Combine this with the fact that one is to be shown a gathering of that which represents the highest form of modern farm appliances, and the educa-

tional value can not be, over estimated.

The falsity of the idea that a man of moderate means with a small acreage can not afford a tractor has frequently been proven. In fact such a man can't afford not to have one, and this demonstration is going to prove to him as well as to the owner of thousands of acres that the day of the tractor is here.

Not only has Old Dobbin been superseded by the tireless tractor, but the plow and the harrow and the cultivator, and all their kindred of 20, yes, ten, years ago have been so greatly improved and outclassed that comparison is impossible. And the visitor at the Second Annual Demonstration of the Traction Engine and Implement Dealers of Southern California will be shown the most highly perfected model of each. All the railroads will have summer rates of a fare and one-third, for the round trip. There will also be a first class restaurant where the visitors can get the best of food and service at moderate prices.

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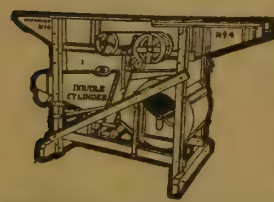
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# Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

### Weevil in Beans

Please give method of keeping weevil out of beans after they are harvested.—Subscriber, Yorba Linda.

The only way is to treat the beans when harvested with carbon bisulphide, one pint to 1000 cubic feet, treating in an air-tight bin 24 hours or more, as has often been described in these columns. Remember that carbon bisulphide gas is explosive and no light or fire must be brought near. Afterward keep the beans in containers which are weevil proof.

### Uncle Ben Plum

I have heard of a plum named Uncle Ben, grown principally in Vaca Valley, and commonly called the "Thanksgiving plum" because it ripens about that date. Can you tell me anything about it, and if it would be adapted to this locality where can I get trees?—Subscriber, Long Beach.

This question was referred to M. Sharpe of Vacaville who writes:

"The Uncle Ben plum is a fair sized plum, packing probably 5x5. It is of the Domestica group, yellow skin, yellow flesh, freestone, and very prolific. There is no reason why this plum should not be a profitable market variety, owing to its season and to the fact that it is unlike most very late plums, it being juicy and extremely delicious. This plum is ready to ship during the first part of November. It should not be called the Thanksgiving plum as there is already a plum by that name in the East. You may pick ripe plums of the Uncle Ben for your Thanksgiving table, however, and I have frequently pruned the tree when it was without foliage and loaded with fine plums. It seems to work well on all stocks but sizes better on peach. A small orchard of this variety should pay well.

"There is one other late plum called the Primate. This plum is not as late as Uncle Ben but late enough to be shipped in straight cars of grapes when there is no other plum. This is a large blue plum of the Domestica group and introduced from England. There should be a good local market for these plums also."

### Limberneck

I am writing to see if you can tell what is the matter with my hens. Their heads drop clear to the ground, neck is entirely lifeless. Seems to be a thick slime in the mouth. Don't eat. Once in a while they jump and flutter, then lie flat and lifeless. They live a day or two, then die. Some have diarrhea. Is it limberneck or a poison? Feed has been barley, milo, a little milk, clabbered, fresh greens, wild radishes. Have given turpentine and permanganate of potash crystals in the water. They were parked but now I let them run.—Subscriber, Redondo.

"The condition known as limberneck," says Dr. Salmon, "is in reality not a disease, but is a symptom of several diseases which are characterized by a paralysis of the muscles of the neck which makes it impossible for the bird to raise its head from the ground. This condition is due to the absorption of poisons from the intestines, which act upon the nervous system and cause paralysis. It is generally associated with indigestion, or the eating of moldy grain or putrid meat or with intestinal worms." Does this describe the condition of your

hens? If so, what is the cause? If they have been yarded they are not likely to have had access to putrid meat. Their ration of barley and milo could hardly have been moldy at this season. Intestinal worms they may have. You can find out only by inspection of the droppings whether this is the cause. But what about that unbalanced ration, hard grain only, no mash, no meat, no animal food save a little clabbered milk. The loading of the digestive organs with hard grain, and especially a grain with so much hull as barley in its natural state, might easily, it seems to me, produce such a condition as that described. The first step in a cure is to get rid of what is clogging the intestines. Castor oil is best for this purpose. Mix a third of a teaspoon for each pullet or half a teaspoon for each old hen in a little moist mash, and feed early in the evening. Feed no grain that day, but give plenty of water and green feed. The following day resume the regular ration, but you will do well to make a change in your method of feeding. Instead of making barley and milo the whole of your grain ration, make half of it dry mash. Bran and corn meal, which have been the standbys for this purpose, are too expensive at present, but you can make a fair mash out of the oat chop which is now sold at \$2 per hundred, alfalfa meal and beef or fish scrap. Three parts by weight of the oat chop and one each of the alfalfa meal and meat scrap makes a fairly well balanced mash. Keep this before them during the day, give plenty of grain at noon and also in the morning if you have it, and make the evening meal a light feed of milo or sprouted barley, and I think your hens will improve in health and egg production.

### Potatoes for Stock Feed

Can you tell me the German process of making potatoes into stock and chicken feed by cooking and then drying?—Subscriber, Santa Rosa.

Eugene Grubb in "The Potato" says that potatoes and potato products for stock feed are much more used in Europe than in America. What is used as stock feed is usually the waste from processes of manufacturing desiccated potatoes, starch meal, etc. for human consumption. The pulp, somewhat similar to the beet pulp produced in beet sugar factories, is then fed to stock. Where prepared directly for stock two methods are used. In one the sliced potatoes are exposed to hot gases from furnace; in the second the potatoes are finely crushed and dried by heat from steam coils at a lower temperature. A method for cooking and drying sweet potatoes is given in the Cultivator of July 21 by Prof. Wm. V. Cruess. Potatoes are boiled until nearly done, then sliced or chopped and dried in the sun. In the same article he gives directions for drying Irish potatoes without cooking.

## Veterinary

Answers in this column by Dr. Wm. Petrie, 2714 South Harvard Blvd., Los Angeles, are without charge. For immediate mail answer remit \$1.00. In writing questions give full symptoms or particulars of injury of animal. Unsigned communications receive no attention.

### Skin Trouble

My horse has numerous pimples in the skin but no pus gathers. He scratches himself a great deal. His shoulders become sore very easily. He is fat; nine years old; well otherwise and has work only part of the time. Feed oat hay chiefly. What will help him?—Subscriber, Artesia.

It is probably due to too thick

blood. Reduce the feed and give plenty of water to drink. Mix three pounds of epsom salts and one pound of common salt. Give him a handful once a day. If he will not eat it in the feed put it in a long neck bottle, add a cup of water and give as a drench. When this is used get a pint of Fowler's solution of arsenic and give him half an ounce on the tongue or in the feed once a day while it lasts. This should clear up the skin all right.

### Melanosis

I have a cow that has two growths on the udder in front of the teats. They looked like small teats at first but grew larger and broke, allowing a black substance to ooze out the sides. Lately numerous small bunches have formed on the udder the size of peas. The large ones are a little sore. She seems well otherwise and is a good milker. Would like advice as to treatment.—Subscriber, Murietta.

The tumors are probably caused by the gathering of a black pigment that is found in the blood and goes to color the hoofs, horns and hair. It is more common in horses, quite uncommon in cattle, but does occasionally occur. There is no remedy for it except to cut the tumors out, and then they are likely to form on some other place. Once there is an over secretion of the coloring matter in the blood and it starts gathering in places it is hard to stop. It will do no harm only a little inconvenience and soreness in the parts. You might try giving her iodide of potash. Dissolve two ounces in a pint of water and give a tablespoon of the mixture on a little feed once a day.

## Legal Queries

Louis B. Stanton, attorney, 243 Wilcox Building, Los Angeles, will answer legal queries in this department.

Immediate mail replies cannot be given except where fee to Mr. Stanton is paid. When replies are wished in Cultivator address query to 115½ N. Broadway, Los Angeles.

### Improvements on Property Bought on Contract

Is there a law in this state requiring real estate firms to pay a person for all improvements which he has put on a place if he is unable to pay for the place and has to give it up after he has put improvements on it up to one-fourth of the purchase price?—Subscriber, Orosi.

While there are some few cases where payment for improvements can be enforced they are rare. The rule is that such improvements are made at the risk of the installment purchaser.

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# Educational Gardening

Written for California Cultivator By E. Branton

**T**HOUGH history records that care and cultivation of ornamental plants has had a refining influence upon all races of people in all times, it is probably more marked today in our own race than at any time or place in the world's records. Observant writers, too, have noticed that the greatest number of true plant lovers are to be found among the educated and refined. By education is not necessarily meant graduation from either schools or colleges; nor by refinement those drilled in the laws of etiquette merely, but people who are both educated and refined by their very nature and who intuitively love nature in all her departments, being themselves, unconsciously perhaps, the most perfect specimens, mentally, of the highest type of animated nature.

A manifest desire of the American people to beautify their surroundings has become more general within the last decade than at any like period in history. We have awakened from the old stereotyped methods to realize the possibility of design in the adjustment of the house, roads, paths and other adjuncts necessary to the convenience and comforts of the home. We have found that we may have utility without sacrificing beauty; every feature is considered as to its particular fitness, and each arranged with regard to making a harmonious whole. Those of moderate means can never hope to rival the wealthy in interior decorations, such as sculpture, paintings and other works of art, but do not lose sight of the fact that trees and plants will grow as well for you as for a Vanderbilt or a Huntington. Your yard, though less in extent, may with a slight annual expenditure, and with 15 minutes each day devoted to its care, be made to look as beautiful as a like area in the estate of a millionaire.

As a rule remarkably good judgment is shown by most home owners of moderate means in the selection of plants and the placing thereof, but the wealthy man, he who purchases and improves large grounds, does not, as a rule, escape the gardener's art. He needs advice, for the costly features of his residence have led him to desire corresponding effects on his grounds, and too often he seeks to economize by procuring the services of an ordinary lawn builder—a fatal mistake. Luckily the great mass of our people escape such a fate and build on personal taste, and the number of good small gardens and of people brought under the uplifting influence of plant life is steadily on the increase. It cannot be too forcibly urged upon the attention of those intrusted with educational institutions that one of the most certain means of encouraging a desire for studies in natural history, and forming correct principles of taste in young minds is the school garden and landscape embellishment of school and college grounds, using for the latter largely native plants.

## A Few Street Trees

Next to the pepper tree in popularity, and preferable to it for some places and purposes, stands acacia dealbata, the silver wattle, a truly glorious tree when in bloom. Our second choice is acacia melanoxylon, the blackwood. This tree needs a rich, deep soil and will not withstand drouth. Many other acacias make

fine street trees but all may be seen in the nurseries and their chief points ascertained by comparison with the description of the blackwood. Jacaranda ovalifolia, if kept pruned, is very suitable for street purposes, and when in bloom would present a more beautiful sight than any mentioned, though somewhat tender. So too, will the oleander amply repay proper care, if trained as a tree, yet unpopular because always infested with black scale. For dry sections few will prove more popular than Ceratonia Siliqua, St. John Bread or carob tree. This tree is not yet thoroughly appreciated; it makes a marvelous growth under most discouraging circumstances and remains a very pleasing color. In extremely dry locations none will surpass the sugar gum, eucalyptus corynocalyx, and eucalyptus polyanthema, slower of growth but much hardier. In planting any of these trees you cannot make the holes too wide or too deep. If you have but one dollar to spare for each tree put three-fourths of it into digging the hole.

## The Redwood Tree

The redwood is not at all particular as to quality of soil so long as it is moist; it requires plenty of water. What has been said of the soil is equally true of the atmosphere. The moisture of the air seems to regulate its natural distribution, and the limits of the sea fogs are about the limits of the redwood. For these reasons the tree is not adapted to arid regions or far from the seacoast.

## Standardization of Names

At last we are to have a uniform understanding of botanical and popular names of plants. A national committee, while generally adopting Bailey's Cyclopaedia as a standard, has given us the first part of its findings. Old, well-known trade names for plants, names known from the Pacific back to the Atlantic, will not be changed, no matter what they may properly be in botanical science. This means that every nursery catalog may agree with the accepted list and no more confusion exist. Popular names, so far as they exist, will also be brought to a standard and all duplicates dropped. The new lists will no doubt be adopted by the California Association at its next convention at San Jose in October.

## MAKING FERTILIZER FOR FLOWERS

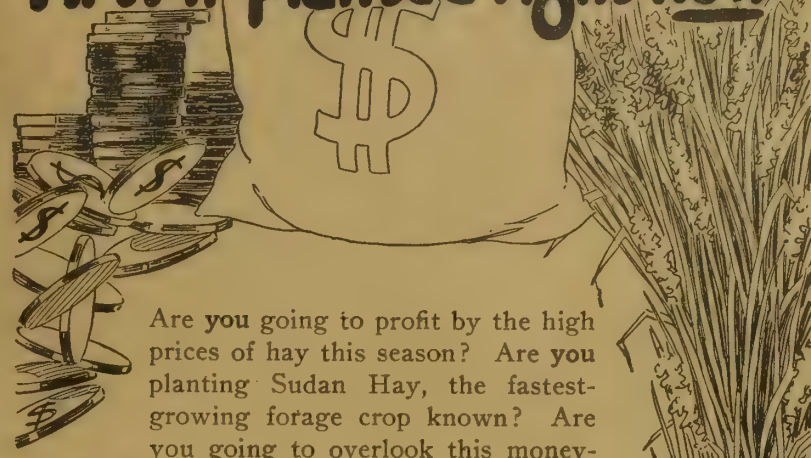
Those who desire their flowers to give the most satisfactory results should know how to make the most essential fertilizers for them in their own home.

Take an old earthen jar and break up a lot of bones in small pieces and place in the jar. Then make a strong solution of lye and pour this over the bones. After it has stood several days, stir with a stick or old iron spoon, and the mixture will become a sort of mush.

This when applied properly to the soil about the roots of flowers will supply every important need. Nitrogen, lime, phosphoric acid and potash are in this mixture. A teaspoon to a gallon of water is sufficient if applied twice a week. Plants that are in a sickly condition due to poor or unfit soil may be given a little more, or the application may be made a little more frequent.

A little soot taken from the kitchen stove will assist in providing nourishment to starved plants. It can be added to the above mixture.—J. T. T.

# "There's Money in SUDAN HAY if planted right now!"



Are you going to profit by the high prices of hay this season? Are you planting Sudan Hay, the fastest-growing forage crop known? Are you going to overlook this money-making opportunity?

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Single pounds (enough for 50x50 feet)—36 cents.  
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Enclosed find \$..... for which send me .....lbs. of Germain's Proven Sudan Seed.  
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Address .....

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Remember it is to your interest to buy tools from established home manufacturers on account of being near the factory and because we know the peculiar conditions of local soils. Catalogue and illustrations sent on request.

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Manufacturers and Dealers in Farm Implements for California Crops  
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 A Journal of Horticulture, Agriculture  
 and Live Stock

Rural Californian, Established 1877  
 Combined with California Cultivator 1914  
 Livestock and Dairy Journal, Established  
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**Saturday, July 28, 1917**

**OUR ADVERTISERS RELIABLE**

We guarantee our subscribers against  
 loss through dishonesty of any adver-  
 tiser in the Cultivator. We do not at-  
 tempt, however, to adjust trifling differ-  
 ences between subscribers and honest,  
 responsible advertisers, nor will we pay  
 the debts of honest bankrupts. Notice  
 of complaint must be sent us within 30  
 days from date of the transaction, and  
 the subscriber must have mentioned the  
 Cultivator when writing the advertiser.

**THIS WEEK'S COVER**

California breeding and Califor-  
 nia service is shown in the illustra-  
 tion on the cover. Perhaps Califor-  
 nia is not an ideal state for the breed-  
 ing of the very heavy drafter, but the  
 work of our farms, with now and  
 then a dependable animal for sale, is a  
 factor for every farmer to consider.  
 Gasoline will never do it all.

**PATRIOTS AND TRAITORS**

There are all kinds of believers  
 in peace. We believe it was ex-Presi-  
 dent Taft who said that he was a  
 peace-at-any-price man, but just now  
 the price of peace was war. The ma-  
 jority of the people of the United  
 States agree with our president and  
 ex-presidents in that the world needs  
 the best services of the people of this  
 nation to preserve democracy to the  
 earth. This is a country in which the  
 majority rules, and every true patriot  
 yields to the majority and does his  
 best. We believe the nation has no  
 more disloyal people than those who  
 are preaching the pacifist doctrine  
 so as to in any way lessen the most  
 efficient service of our army and  
 navy.

**BUY EARLY**

We have referred to the neces-  
 sity of anticipating another season's  
 needs in the matter of implements,  
 machinery and fertilizers by ordering  
 as early as possible: Now comes the  
 state council of defense and adds that  
 not only is it wise to have in hand  
 the original implements but a supply  
 of parts for repairs. Every day shows  
 the probability of still further exten-  
 sion of the war, and the demands up-  
 on America another year may be as  
 great, probably greater, than this  
 year, and even when the war ends the  
 demand upon agriculture will be  
 heavy. The nation is learning what

its unpreparedness means, and the  
 lesson should be taken by every pro-  
 ducer.

**SUDAN**

Note Mr. Nelson's article on  
 third page of this issue. Sudan hay  
 is not the equal of alfalfa, but under  
 California conditions it is proving a  
 remarkable feed producer. It is possi-  
 ble to sow it even yet and get heavy  
 return this season.

Our state university suggested sev-  
 eral weeks ago that as we were all  
 going to potatoes and beans it might  
 be well for some to stop and consid-  
 er that our live stock would need  
 some feed, and thousands of acres of  
 sorghum grains have been planted  
 as a result of that campaign, but sor-  
 ghum grains and even the fodder  
 which comes from the growth of sor-  
 ghums are not sufficient, and the sup-  
 plementing of that supply with hay of  
 the Sudan type will make wealth for  
 the growers.

**PRAY EXCUSE ME**

Citrus growers of Cuba and the  
 Isle of Pines have started a move-  
 ment to prevent the imposing of a ten  
 per cent duty on citrus fruits, as was  
 originally proposed in the war tax bill.  
 It was afterwards stricken out of the  
 bill and the United States citrus grow-  
 ers took steps to secure its return.  
 The Island growers thereupon peti-  
 tioned the president of Cuba "to take  
 up this subject with the department of  
 state at Washington and endeavor to  
 prevent grave injustice to the citrus  
 fruit growers of this republic, who  
 will be forced to abandon a business  
 still in its experimental stage, if fur-  
 ther burdens are to be placed upon  
 their shoulders."

It appears to us that the people of  
 the United States have taken upon  
 themselves some burden in the effort  
 to extend and guarantee democracy  
 and that our southern neighbors may  
 well afford a slight tax to aid in this  
 great movement.

**BANK INVESTIGATION.**

Investigation as to conditions in  
 the farm loan bank at Berkeley was  
 scheduled for last week. We believe  
 it has been finished, but no informa-  
 tion has as yet been given to the  
 public.

This institution was established for  
 the benefit of farmers, and farmers  
 and farm papers should be the last to  
 embarrass in any way the free action  
 which looks to the best interests of all  
 the producers, but the establishment  
 of a rural credits system to enable  
 greater production and improved prop-  
 erty is not a war measure, at least  
 not to the extent that we may appre-  
 hend an enemy lying in wait to se-  
 cure inside information and use it  
 against the nation. We are all vital-  
 ly interested in the success of the  
 federal farm loan bank located at  
 Berkeley. It is our institution and  
 should not be used as a politicians re-  
 ward, and if politics is not entering  
 into its management, why may we not  
 all be informed as to its innermost  
 workings?

**SPECIAL FAIR DAYS**

We note in many Eastern coun-  
 ty fairs the custom of devoting one  
 day to the agricultural specialty of  
 the section in which it is held. For  
 example, one county fair in Missouri  
 will observe Jersey Day when a pro-  
 cession of Jerseys parades the prin-  
 cipal streets, ending up in front of the  
 grandstand on the fair grounds. Oth-  
 er sections observe Cotton Day,

Strawberry Day, Guernsey, Holstein  
 Day, and so on. This not only appeals  
 to the pride of the people of the com-  
 munity but manifests the advantage  
 to come from community unity of ac-  
 tion.

This perhaps could not be so effec-  
 tive in a state fair, but in California  
 might not Yolo County well have her  
 Holstein or Almond Day, in which spe-  
 cial attention might be called to her  
 principal crops? Fresno would, of  
 course, have her Raisin Day, River-  
 side her Citrus Day, Imperial her Cot-  
 ton or Duroc-Jersey, or Cantaloupe  
 Day.

**FITTING LIVE STOCK**

There is no agricultural fair at  
 which live stock is exhibited but the  
 remark will be heard: "Yes, it is an  
 exceptionally fine animal, but look at  
 its condition." Many farmers are able  
 to raise a fine quality of stock but are  
 not able to make it show its better  
 points to others.

There has been complaint that over-  
 conditioning of hogs, taken often  
 great distances to fairs, is a mistake,  
 and it is perhaps true that some er-  
 rors are made on that side. One of  
 the best hogs in the state fair last  
 year, because of excess fat and the  
 hot weather, lay down and died. This  
 may be true in certain cases but  
 there are more unfitted animals than  
 there are those which receive too  
 much fitting.

We note in some Eastern fairs fit-  
 ting contests are becoming popular,  
 that is, individuality or breeding are  
 not considered in the judging, but  
 merely the ability of the stock breed-  
 er to put his stock in proper exhibi-  
 tion condition. These are proving  
 especially attractive to boys clubs.  
 Sometimes the condition of the ani-  
 mal before fitting is taken into ac-  
 count by the judge, then after proper  
 time is allowed for the fitting a score  
 card judging takes place. A point for  
 California fairs to consider.

**TRACTORS ARE COMING**

The tractor factories of the  
 United States will have an output for  
 1917 in excess of 67,000 tractor and  
 self propelled implements. This in  
 spite of high prices and almost im-  
 possibility of securing steel. This ef-  
 fort of these manufacturers is one re-  
 ason why the farmers of the country  
 have been able to respond so nobly  
 to the appeal for greater production.

California tractor manufacturers  
 and dealers are in the advance of the  
 procession. We note the California  
 Association, with headquarters at  
 San Francisco, is discussing plans for  
 attracting attention to their wares at  
 the state fair, and also already plan-  
 ning for a great demonstration to take  
 place at the university farm in the  
 spring of 1918.

The Southern California Associa-  
 tion, following up its successes of last  
 fall when it held one of the greatest  
 demonstrations of the West at Puente,  
 is now planning for a great demon-  
 stration to be held in the eastern out-  
 skirts of the city of Los Angeles. An-  
 nouncement of this is made on another  
 page of this issue, and from the par-  
 ticulars there given it may be seen  
 that all Southern California dealers  
 are united in a great event. In fact,  
 it will in part take the place of the  
 district fair which was to have been  
 held at Agricultural Park in Los An-  
 geles, for not only will there be dis-  
 plays and field demonstrations of trac-  
 tors and all kinds of farm machinery  
 and implements, but even furnishings  
 and appliances for the rural home.

**ENLARGING ITS SCOPE**

The California Milk Producers  
 Association, with headquarters at Los  
 Angeles, has an ambitious program  
 for benefiting milk producers' organi-  
 zations, which has been of great benefit  
 to the producers of Central and South-  
 ern California. Mr. Ayers has been  
 its secretary and manager for several  
 years, but on Tuesday reorganization  
 took place and Tom H. Brice is the  
 present secretary and manager.

**Agricultural News Notes**

The corn belt needs rain but as yet  
 the crop has not suffered.

This fall's International Dry Farm-  
 ing congress will be held at Enid,  
 Oklahoma.

The United States exported \$35,000-  
 000 worth of fruits and nuts in ten  
 months ending in April.

The Mexican government has in-  
 creased the export duty on wool to 40  
 cents Mexican gold per kilo.

A \$2,000,000 shipment of coffee has  
 been received in San Francisco for  
 supplying the American army.

The movement of Texas onions to  
 market is over and heavy shipments  
 are now commencing from New Jer-  
 sey and Kentucky.

Nearly 4,000,000 acres are cultivat-  
 ed to olives in Spain and the value of  
 the fruit and oil is estimated at \$40-  
 000,000 a year.

Careful comparison of figures from  
 various corn belt farms shows that it  
 costs to produce an acre of corn about  
 \$15, or 50 cents per bushel.

L. A. Goodman of Kansas City, Mis-  
 souri, for years secretary of the state  
 horticultural society, recently died at  
 his fruit farm at Goodman, Missouri.

President Wilson has issued an em-  
 bargo on exports from the United  
 States of coal, food, grains, meats,  
 steel and other products except by  
 license.

New Zealand is an apple producer  
 to be reckoned with. In May a Na-  
 tional Apple Show was held at Dun-  
 edin where more than 1000 entries  
 were made.

The United States exported more  
 foodstuff during the month of May,  
 1917, than any month in its history.  
 The value of the shipments for the  
 month was \$104,000,000.

Herbert C. Hoover has established  
 the fact that between wheat at har-  
 vest time and finished flour in con-  
 sumers' hands there are in this coun-  
 try \$159,000,000 in profits.

Shipments of cantaloupes from Cal-  
 ifornia and Georgia for the week of  
 July 3 to 10 were this year nearly  
 double last year's for the same period.  
 The total for the week was 1256 car-  
 loads.

Switzerland is experiencing an in-  
 creasing demand for Indian corn, ow-  
 ing to war conditions creating a short-  
 age of wheat and rye; also the Swiss  
 are beginning to learn that it makes  
 good eating.

Michigan will have an immense  
 grape crop. Its grape belt produces  
 about 3000 carloads of grapes an-  
 nually. There are more than 200  
 farm loan associations in the three  
 states of Missouri, Illinois and Arkan-  
 sas, served by the federal farm loan  
 bank at St. Louis.

Barbers of Indiana are suggesting  
 that some substitute for the egg sham-  
 poo must be supplied. One barber has  
 figured that there are about 300,000  
 barbers in the United States and that  
 each of them averages about one egg  
 shampoo daily which would mean  
 100,000,000 eggs wasted. Moral: Go  
 bald and win the war."

The Horticultural Club of Trinidad,  
 British West Indies, has arranged to  
 have loaves of bread baked from ba-  
 nana flour prepared at local bakeries  
 and offered for public sale in order  
 that the people may have an oppor-  
 tunity to know that a most palatable  
 bread can be made from banana flour.  
 The bread is made from two parts of  
 banana and one part of wheat flour.  
 The banana flour could also be used  
 as a substitute for oatmeal porridge  
 and for making puddings.



# Agricultural News Notes of the Pacific Coast

## Northern California

Eldorado County is organizing a farm bureau.

Yolo estimates she will produce 600 tons of sorghum grains.

A carload of spring lambs was sold at Wheatland recently at \$9.35 a head.

J. W. Adriance has been appointed farm adviser, his district to be assigned later.

Sack sewers are receiving five dollars per day. The heavy work makes his job a most strenuous one.

One apple grower of Butte County recently shipped 35 tons of apples, principally Astrachans and Gravensteins.

Sacramento Valley's output of grain this year will be greater than at any time since the days of the grain wars.

The Placer County Growers' Canning Organization at Lincoln has purchased 100 carloads of canning apples.

County Horticultural Commissioner Amiman of Shasta County proposes to start an active squirrel fighting campaign.

The Anderson-Cottonwood irrigation district six per cent bonds, totalling \$68,000, have been sold to a San Francisco firm at a premium.

Vacaville has shipped out nearly 600 tons of fruit for the season. This is more than 150 less than last year, largely because of the later season.

The state council of defense has notified Governor Stephens that plans have been formed for supplying labor to all sections of the Sacramento Valley.

It is claimed that beavers have made dams in the irrigation system of the Farms Land Investment Company in Yuba County so that dynamiting has been necessary.

A new forest ranger's station is being erected in the mountains back of Red Bluff, the original station having been destroyed by rocks from the water of Mt. Lassen.

Hauling of farm crops of Yolo County has put such a strain upon the bridges that the board of supervisors has instructed the county surveyor to inspect and report on their condition.

The Yolo Democrat says that Yolo County farmers' applications for federal farm loans have been held pending settlement of dissension within the management of the farm loan bank.

A conference of California agriculturists with Carl Vrooman, assistant secretary of agriculture, is being held this week in San Francisco. The effort will be to devise methods of marketing this season's crop.

The management is pushing for a county fair to be held at Auburn, Placer County, in September. J. A. Lagarden is chairman and J. A. Livingston secretary of the committee in charge of preparations.

An effort is being made to secure construction of a dam in Iron Canyon near Red Bluff through government and state appropriation. If carried out the plan will mean the reclamation of large tracts of rich land.

A farmer at Willits recently sold 600 pounds of wool at close to 60 cents. Because of shortage of labor thousands of acres of alfalfa are being stacked instead of baled. In fact, many fields make a showing of great quantities of hay still in cocks.

## Central California

Daily shipments of apricots are being made from Mountain View.

Stanislaus County farmers are paying 25 per cent increase in wages.

Several good catches of fine salmon are being made in the Kings River.

Madera County reports serious injury to ripening apricots by beetles.

Hanford, Kings County, says the 1917 county fair will be the finest ever.

Prune dryers and yards are being fitted for one of the biggest crops ever.

San Joaquin County potato growers report stock rotting in the ground for want of help.

Some farmers over the San Joaquin Valley are reporting excellent returns from Sudan grass.

The Associated Raisin Company and the Prune and Apricot Growers' Association are affiliating, the plants of the Associated being used to receive consignments for the Prune and Apricot Growers.

Mountain View, Santa Clara County, is planning for a prune and apricot show to take place September 21, 22.

The second animal live stock show and exposition is to take place at Modesto the week after the state fair at Sacramento.

The Prune and Apricot Growers' Association is conducting the largest business on the smallest capital of any institution in the state.

A Tulare County potato grower is suing a Stockton commission house because of failure to purchase potatoes at an agreed price.

The board of trade of Turlock, Stanislaus County, is making a survey of dairy cows within six miles of Turlock and finds there are over 3000.

The shipping of cured peaches from Dinuba, Tulare County, begins this week. Grape shipping from Tulare County sections will begin about the first of August.

The Oakdale Irrigation District of Stanislaus County has fixed upon an hour per acre as the unit for irrigation of alfalfa. Each rancher is entitled to 15 second feet.

Hog buyers in the central part of the state are urging farmers to produce more hogs, and the producers of "more hogs" are urging the hog buyer to produce fair return for the hogs already produced.

The state viticultural commission is giving Eastern fresh fruit buyers assurance that standardization of the California fruit pack will mean a dependable brand on every crate of Emperor grapes which goes out.

Seven hundred sixty-six cows of the Stanislaus Cow Testing Association won place on the honor roll of that association by producing 1.5 pounds of butter fat daily for the month of June. The best cow of the association produced 2.17 pounds, daily average for the month.

At the meeting of the directors of the San Joaquin County farm bureau early in July the matter of closing saloons as a war measure was discussed and the directors found themselves hopelessly divided. All agreed that it was the only way in which the farmer's interest could be protected.

## Southern California

A \$50,000 glaze fruit factory is being erected in Los Angeles.

Movies have been taken of the Imperial Valley apricot industry.

Potato growers are organizing in all sections to secure just returns.

Imperial Valley cantaloupe shipments will end within a few days.

Potato growers are greatly pleased at the present advance in prices.

J. D. Huston is said to be the first Torrens title owner of Imperial County.

Orange growers are planning for intercropping their orchards so far as possible.

Three thousand cutters are working in the apricot yards of Hemet, Riverside County.

Desiccated vegetables will be the output of a large plant being erected in Los Angeles.

Grover Loftus succeeds W. E. Packard as president of the Imperial County farm bureau.

Riverside County is running full handed on apricots while waiting for the tomato season to open.

Imperial Valley hog raisers are posting signs warning owners of diseased herds not to trespass on their places.

Grain producers of the Moreno, Riverside County, section are securing an average of 20 sacks of barley per acre.

Grain thieves are taking away truckloads of grain from some of the grain sections of Southern Riverside County.

War prices are making potash manufacture at the Riverside Portland Cement works one of its profitable features.

The long staple cotton gin at Blythe in Riverside County is installing new machinery to be ready for this fall's picking.

The farm centers at Jurupa and Glen Avon, Riverside County, are planning for exhibits at the coming Riverside fair.

Some apiarists near Highlands, San Bernardino County, lost heavily from "melting down" of honey comb during the recent hot wave.

Pomona dry yards, under control of growers and installed at the last moment to save local fruit, will handle about 400 tons of apricots.

Five associations have separated from the Semi-Tropic Fruit Exchange and organized the Northern Orange County Citrus Association, with headquarters at Fullerton.

Ventura County bean straw did not all go for fertilizer. Some of the black-eye straw goes for the manufacture of a fiber, one company making it a business to put out this material.

El Cajon, San Diego County, recently shipped a car of lemons to Chicago, which netted five dollars per box. Another car of Valencia oranges sold close to three dollars per box.

C. P. Claussen will soon be in charge of the state insectary at Alhambra. One of his first activities will be the installing of colonies of parasites for the citrus mealy bug.

Calipatria, Imperial County, has harvested 200,000 sacks of barley on land which a year ago was almost entirely desert. Besides this she has a grain sorghum acreage of about 11,000 and cotton acreage of 18,000.

## The Coast

Yuma, Arizona, is planning for a county fair.

Orange County's bean crop will be far above normal.

The Wenatchee Valley cherry crop is reported exceptionally large.

The Colorado River flood season is passing and the river is slowly subsiding.

The Coachella Valley has gone the pig clubs one better and is organizing calf clubs.

The stock range of Arizona is showing more serious loco poisoning than for several years.

It is estimated that Idaho will produce 1600 cars of prunes and 2500 cars of apples this season.

A live stock specialist of the University of Arizona is urging more general vaccination to prevent blackleg.

An association of Idaho wool growers has been formed, over 600,000 head of sheep being represented by the membership.

The state of Washington has a new forest control law requiring owners of forest lands who do not live thereon to employ a patrol.

A sale of pure bred Holsteins at Palouse, Washington, recently netted an average of \$225, with \$530 for the highest priced cow.

Citrus growers of San Bernardino County are taking steps to secure from the board of supervisors a lower valuation on citrus groves.

The official tester for the Chehalis district cow testing associations reports 600 cows averaging over 45 pounds for the month of June.

The board of supervisors of Yuma County, Arizona, has passed an ordinance providing for an expense fund for a county agricultural agent.

Owing to excessive rains many potato fields in Whatcom County, Washington, rotted before starting. The crop will be lighter than anticipated.

Oregon prune growers have decided to hold for six cents, and buyers have withdrawn from the market until a price more satisfactory to them can be named.

Obstructions in the bed of the Colorado River are diverting the channel to the Arizona side and away from the Hanlon heading which supplies Imperial Valley.

Redlands tomato growers are complaining because the price paid by canners is but little higher than that paid last year, while retail prices are immensely greater.

Twenty-six boys of Spokane County pig clubs have 156 pure bred pigs for sale. It is asserted these club members are giving points to the farmers of Spokane County.

Farmers of the Northwest are inclined to hold their wool for still higher prices and warehouse companies are urging immediate sales of at least a portion of the clip.

A county cow testing association in Idaho finds its average around 29 pounds per month. As some of the cows run above 50 pounds plainly there needs to be much elimination.

Water users under the Roosevelt dam in Arizona and owners of lands who have use of water only in seasons of excess are in conflict over use of excess waters for producing this year's crops.



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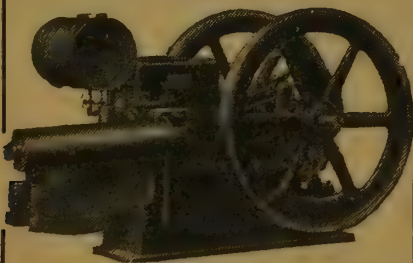
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## Borrow for 36 Years



**R**ECOMMENDATION has been made by the federal farm loan board that all of the federal land banks limit their mortgages, so far as possible, to 36 years. Under the law mortgages are permitted to run for five to 40 years at the option of the borrower, but the 36 year maximum has been recommended by the board because it will greatly simplify the keeping of records.

A mortgage given for 36 years at five per cent may be wiped out during that length of time by annual payments equal to six per cent of the principal. The average interest rate on farm mortgages throughout the United States, under the old regime, has been 7.4 per cent. That rate was for interest alone. At the expiration of those mortgages the entire principal fell due.

Under the farm loan act annual payments of only six percent will take care of both the interest and principal and the borrower will never have his mortgage fall due, and never be compelled to meet any payment in excess of six per cent of the principal.

The federal farm loan board has also recommended that these amor-

tization payments be made semiannually, which means that three per cent on the principal will be paid every six months.

The minimum loan granted under the farm loan act is \$100. To retire a mortgage of \$100 in 36 years the borrower would make semiannual payments of \$3.00 each. With that as a basis any borrower or prospective borrower in the United States is able to compute his semiannual payment on a mortgage of any size up to \$10,000, the maximum permitted under the act. For instance: If the proposed loan should be for \$1500, the borrower would simply divide \$1500 by 100. The result would be 15. He would then multiply 15 by \$3. The result would be \$45 as the semiannual payment to retire interest and principal, a 36 year mortgage of \$1500 at five per cent.

It should be borne in mind that any borrower under this act is permitted to pay off all or any part of his mortgage after it has run five years. So the borrower who takes his mortgage for 36 years gets the benefit of smaller payments during the first five years and then has the privilege, after five years, of paying all or any part of it in amounts of \$25 up on any interest paying date.

## Eastern Markets



**I**N the report of the bureau of markets as to conditions the country over we note:

The supplies of fruits and vegetables as a whole are abundant and steadily increasing as the season advances. The season in most producing sections is about a week later than last year. Prices are steadily declining. However, the level of prices is considerably above that of last year. This does not apply to cantaloupes, which are cheaper than last year, watermelons which are about as cheap, or homegrown vegetables, which are appearing on all markets in abundance and are as cheap as last year.

### Potatoes

Potato shipments from Norfolk and the Eastern Shore of Virginia continue heavy this past week, and with movements starting from Kentucky and Kansas, shipments were about 900 cars above those of last week. Potato prices rose during the middle of the week of July 10 to 17, but are now declining with prices about the same as a week ago. Norfolk and the Eastern Shore of Virginia potatoes are now jobbing on large markets at \$3.75 to \$5.75 per barrel, as compared with \$1.50 to \$2.75 last year at corresponding time.

### Georgia Peach Movement

During the past week 1409 cars of peaches were shipped out of Georgia, mostly Elbertas. So far this year 3252 cars of peaches have been shipped out of Georgia as compared with 2351 cars to corresponding date last year and 3087 cars, the total for the season last year. Peach shipments during the past week were nearly double those of the previous week. However, total peach shipments to date are below those of last year due to lateness of season in Arkansas and Texas this year. Georgia Elbertas are jobbing for \$1.50 to \$2.50 per crate, a drop of 50 cents from the price of a week ago and about 25 cents higher than last year at corres-

ponding time. The estimated production of peaches in the United States is 43,500,000 bushels, an increase of about 15 per cent over last year.

### Watermelons

Watermelon shipments for the past week were 3676 cars, or about three times as many as during the previous week or for the corresponding period last year. The heaviest movement was from Georgia and South Carolina. Total watermelon shipments to date were 11,824 cars as compared with 10,170 cars last year to corresponding date. With increased shipments prices have dropped markedly especially for small sizes.

### Cantaloupes Not as Plentiful

Cantaloupe shipments for the past week dropped off about 300 cars from the previous week. Total shipments of cantaloupes to date have been 6277 cars, or 431 cars less than last year at corresponding time. California cantaloupes movement is now declining. The shipments to date are 4855 cars as compared with 4646 cars last year to corresponding date. Shipments from Arizona, Georgia and North Carolina are now increasing. California cantaloupes are holding firm at about the same prices as a week ago, though still considerably less than last year at corresponding time.

### Bulk of Tomatoes From Tennessee

Tennessee shipped 284 cars tomatoes last week, which was considerably more than from any other section. Movement from Texas is about over. Texas tomato shipments to date have been 1287 cars as compared with 1140 cars last year to corresponding date and total for the season. The tomato movement is starting from New Jersey and East Shore of Maryland and Virginia.

### Onion Supplies Less Than Last Year

Shipments of onions for the past week were nearly double those of the previous week, but considerably less than last year at corresponding time. Texas onions continue to ap-



P. S. C.

## Rosin Spray

For Mealy Bugs, Scale, Aphids, etc.

Makes Good

### READ THIS LETTER

FREEMIRE & NICHOLS,  
Agents Pacific Soap Co.,  
Ontario, Cal.

Gentlemen—As you are handling the P. S. C. Spray in this territory I desire to advise you that I have used this spray in the past for black aphids in peach trees on my 20-acre ranch on Sixth street, and am pleased to state that I have been unable to find any aphids on the trees since the spraying.

If you desire I shall be very glad to have you bring any people, who may desire to look over results, out to inspect these trees, and can assure you that I can only speak the very best words for the Spray.

As far as I am personally concerned I believe this spray to be very effective for killing this black aphid.

Very truly yours,  
(Signed) J. W. MACRUM,  
805 N. Euclid Ave.,  
Ontario, Cal.

Try P. S. C. Rosin Spray for scale on citrus trees, Kentia Palm scale, or mealy bugs. Our representative will be glad to call on you to explain the merits of this Spray, or we will send a sample on request to responsible growers, if name of dealer is enclosed.

Sold in tins, kegs or barrels.

Write for prices and booklets.

**PACIFIC SOAP CO.**  
Inc.

5800 CENTRAL AVE., LOS ANGELES

## SULPHUR



Fleur de Soufre, Anchor Brand, Velvet Flowers of Sulphur and Eagle Brand.

Packed in barrels and double marks are the finest Sulphurs that money can buy; the best for vineyards; the best for bleaching purposes. LEAVENING. SEND FOR ILLUSTRATED BOOKLET, also PRICE LIST and SAMPLES.

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Let Us Figure on Your Requirements. Address Nearest Office

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Better service is assured by the advertiser if when writing you mention the California Cultivator.



pear in small lots, but movement is chiefly from Kentucky, Eastern Shore of Virginia, and New Jersey. F. o. b. prices of onions from the Kentucky producing section are reported \$2.65 to \$2.75 per barrel, a raise of about 40 cents per bushel from the previous week.

#### Other Fruits and Vegetables

Supplies of new apples are considerably heavier than last year with heavy movements from Delaware and Illinois.

Early cabbage shipments for the past week amounted to 224 cars, considerably more than last year for corresponding period.

These prices and shipments are for the United States as a whole and, unless otherwise stated, are jobbing prices, (that is less than carlot prices on large lots to jobbers) as received daily by telegraph from the principal markets of the country.

## Farm Names

**I**N the issue of June 16 the California Cultivator had an article regarding farm names and registering under the farm and villa act, also the trademarking of names. We now have further information from H. M. Standerwick of the department of state, giving list of names which have been registered under the farm and villa act. Those who may wish for their farms or homes a distinctive name will find this list of particular value.

Agua Tibia, Avon Stock Farm, An-

mont Stock Farm, Pilgrims Progress Ranch, Piedmont Ranch, Rancho Loma Alta, Rosemead Ranch, Rhinefarm, Roselawn Stock Farm, Ragged Robin Apple Ranches, Ramona Poultry Farm, Riverview Farm, Riverdale Farm, Riverside Farm, Rancho Aguas Frias Viejo, Rancho Aguas Frias Del Rio Picos, Rancho Aguas Frias De Los Robles, Rosedale, Ralm Villa of Marin, Rancho Rio Sacramento, Rancho Rico Vegas, Rancho Venadera, Ramona Springs, Rainbow Farm, Rancho San Ignacio, Rancho Mesa Vista, Sunnyside Ranch, Spring Val-



Intensive Interculture

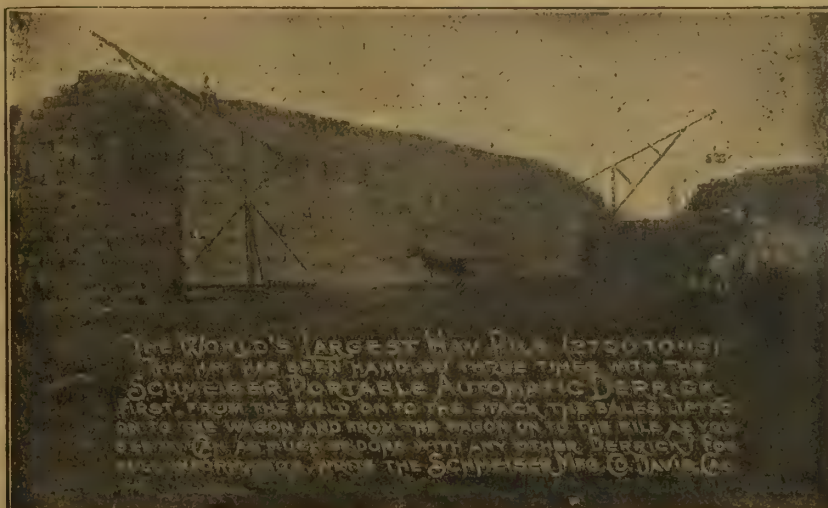
chorage Farm, Baywood Glen, Bacchus Vineyard, Banner Berry Farms, Bonnie Brae, Bonita Vista, Blue Ribbon Poultry Yards, Bear River Gardens, Bon Vista, Bellmere Ranch, Broadoak, Camp Wildwood, Carson Heights Ranch, Cave-Dale, Calla Grove Farm, Cedarhurst Ranches, Calmova Farm, Crest Oaks, Cliffside Ranch, Diamond L Ranch, Driftwood Hayfields, Dell Echo, Dairyland Farms, El Nido, Esplandian, El Terrado Ranch, Esta Bastanta, El Rancho Del Oro, Ellerslie, Emerald Acres, El Alba, Glennaire, Golden State Ranch, Glen Eva Farm, Glendale Hotel, Glorieta Stock Farm, Greycot Farm, Great Hopes Farm, Glen Moak Ranch, Glenwood Acres, Gray Rocks, Greenleaf Apple Ranch, Hillmont, Hillcrest Farm, Hooker Oak Farm, Hoosier Ranch, Hollow Hill Farm Huerta Los Almendros, Inspiration Heights, The Igloo, Ideal Apple Ranch, Juniper Heights Berkshire Farm, Keystone Ranch, Los Cerezos, Lomaland, Locust Grove Farm, Little Switzerland, Loma Vista Ranch, La Chusa, Lindaraxa, Las Tablas Ranch, Leonard Farm, Lockeford Stock Farm, Lemora, Linwood, L. A. Driver Stock Farm, Loma Rica Ranch, Lewosa Farm, Manzanita Ranch, Manzanita Ranch, Mountain Villa Ranch, Mountain Dell Ranch, Montalvo, Mossdale Farm, Manor Farm, Madrone Villa, Moorland Farms, Madrona Park, Mincello Ranch, Monte Paraiso, Nile Garden Farms, Northfield, Oak Grove Dairy Farm, Open Trail Ranch, Orange Heights, Oaklawn of Marin, Oak Grove Ranch, Oak Knoll, Oakhaven Farm, Olive Dale Poultry Farm, Pied-

ley Ranch, San Pedro Poultry Farm, Seven Oaks, Sunny Slope, Bangon Tract Orange Groves and Olive Orchards, Sun Kissed Farm, Santa Maria Rancho, Shady Glen Stock Farm, Sentinel Butte Ranch of Woodlake, California, South San Joaquin Dairy Farm, Sleepy Hollow Ranch, Stone Corral Ranch, Triangle Ranch, Warm Springs, Turlock Irrigated Farms, Timbercrest, Top O' The Hill Farm, Toro Canon Rancho, Tuolumne Meadows, Calle Vista, Villa Esplanadian, Villa Montatva, The Virginia, Verduco Ranch, Wawona Lodge, Wildwood Park, Wrights Electric Farms, Willow Wood Ranch, Wildwood Resort, Westside Farm.

#### YOLO COUNTY PUFFED UP

The state council of defense has issued to the press a statement in which is: "The example set by Yolo County in increased crop production and all-round patriotism is being commended for emulation to other counties of the state by the state council of defense and by Governor Stephens," and then follows with "Some Things Yolo County Did." "Raised crops worth \$20,000,000; increased its crop production approximately \$7,000,000 over that of last year; subscribed to liberty loan to the extent of \$47 for every person living in the county; contributed to Red Cross more than a dollar for each inhabitant, and other good points regarding the performance of the county. Yolo County's crop production now averages \$1400 in food stuffs for every inhabitant of the county.

## "The Schmeiser Way Makes the Farm Pay"



If you are paying more than 35c per ton for stacking your hay, you are losing money. You can stack it for less than that if you use the

#### SCHMEISER IMPROVED PORTABLE AUTOMATIC DERRICK

"The World's Greatest Hay Stacker,"

Stacks hay baled or loose, Saves Labor, Saves Time, Saves Money. More Schmeiser Portable Automatic Derricks are sold on the Pacific Coast than all other hay stackers combined. The reason is:

"The Schmeiser Way Makes the Farm Pay."

For particulars, write today to

### SCHMEISER MANUFACTURING COMPANY

22 Mechanic St., Davis, California

Manufacturers of

Sure Pop Almond Huller and Separator, 3 sizes; McGarvin Fruit and Olive Graders, any size; Schandoney & Harrington Equalizing Hitches, any size; Diamond Special Harrows, Baker Clips, Clevises; Schmeiser Alfalfa Land Leveler and Checker; Martin Farm Ditcher and Road Grader, and

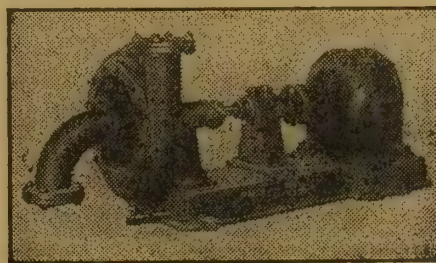
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**Krogh Pumps are Absolutely Water Balanced**  
**No End-Thrust Possible No Set Collars Used**  
**THE NO TROUBLE PUMP**



Krogh Direct Motor Driven Pump

Fitted with Ring Oil-  
ing Bearings.

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Bushings.

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We also build deep well  
turbines, deep well plungers,  
horizontal and vertical  
pumps for mining, irrigation,  
drainage.



## Western Phosphate Mining & Mfg. Co.

# Gray Phosphate Rock

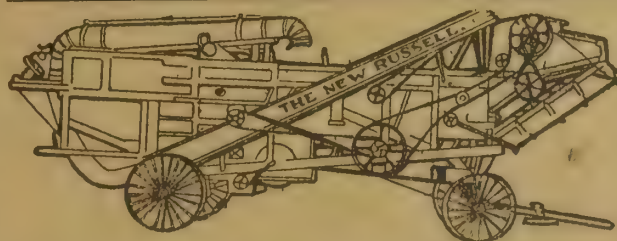
72 to 78 per cent tricalcium phosphate

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406 Dooly Bldg.

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## Russell Bean Threshers Gas Tractors

Built Specially for  
California Conditions  
CATALOGS UPON  
REQUEST

A. H. Averill Machinery Co.

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Requesting your local merchant to stock articles advertised in the California Cultivator helps your town, the advertiser and the Cultivator.



## THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

Gombault's

### Caustic Balsam

IT HAS NO EQUAL

For the Human Body

—It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils, Corns and Bunions. CAUSTIC BALSAM has no equal as a Liniment.

Perfectly Safe and Reliable Remedy for

**Sore Throat**  
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**Strains**  
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**Sore Lungs**  
**Rheumatism**  
**and**  
**All Stiff Joints**

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

REMOVES THE BORENESS—STRENGTHENS MUSCLES

Dr. Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than \$100.00 paid in doctor's bills."

OTTO A. BEYER.

Price \$1.50 per bottle. Sold by druggists or sent by express prepaid. Write for Booklet B. The LAWRENCE-WILLIAMS COMPANY, Cleveland, O.



Gertie's Son's Victor No. 123159  
Dam, Victor's Lady Kate, (R.O.M.) of  
627 lbs. Butter in 303 Days as  
a 4-year-old.

135 Registered Jerseys in my herd,  
including 18 Register of Merit Cows.  
Blue Ribbon winners at 1916 Kings,  
Kern and Tulare County Fairs.

**Invest in Jerseys and  
Start Right**

Visitors Welcome Correspondence Solicited  
**A. A. Jenkins**

Tulare Cal.



### Purebred Registered HOLSTEIN CATTLE

Prof. Carlyle of the Wisconsin Experiment Station asserts that "It will be readily seen that the Holstein cow has the ability to digest coarser feeds and work them over to a better advantage than Jerseys and Guernseys, and this is a strong point, in which I contend that the Holstein has a great advantage over any of our smaller breeds, and it is a point which is going to appeal to the farmer in the future far more than it has in the past." There's big money in the big "Black and White" Holsteins.

Send for FREE Illustrated Descriptive Booklets  
The Holstein-Friesian Association of America,  
F. L. Houghton, Sec'y, Box 120, Brattleboro, Vt.

### Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count  
Glory, 426982, grand champion at  
the California State Fair, 1916.  
Berkshire herd won Premier Ex-  
hibitor's banner at P. P. I. E.

513 Hearst Bldg., San Francisco  
Carruthers Farms, Mayfield, Cal.

### HOLSTEIN-FRIESIAN CATTLE

Registered young bulls from best  
families. Some of serviceable age.

#### REGISTERED BERKSHIRE PIGS

Masterpiece, Longfellow and Robin  
Hood Strains. Fine individuals of  
both sexes—we pay registration fee.  
Careful attention given to mail  
orders.

**Whittier State School**

Whittier, Calif.

Better service is assured by the advertiser if when  
writing you mention the California Cultivator.

## Live Stock Notes from Northern California

Written for California Cultivator By W. S. Guilford

### THE JOY OF THE WALLOW



THE hog that has access to a clean mud wallow or an irrigation ditch or a concrete wallow seems to be about as happy as it is possible for an animal to be during the hot weather in interior California.

I do not see how any one can advocate "dry lot" conditions for hogs in this section if they have ever had an opportunity to observe animals kept without and with some place in which to cool off.

A hog in a dry lot just lies and pants, and the fatter the animal is the more it seems to suffer. But when it can get the surface of its body covered with mud or water so that the cooling effect of evaporation can be felt, it is not unreasonable for a human being to wish to be a hog.

July 15, 1917 was the hottest day recorded in Willows so far this season, 112 degrees Fahrenheit. Humans were very much distressed, yet I saw a lot of hogs of all sizes and ages lined up along the edge of an irrigation ditch, and they did not seem to mind the hot weather at all.

The hog is very susceptible, both to heat and to cold. As soon as the cool weather comes it will keep entirely away from the wallow that is so inviting in summer.

Moisture and shade are two things that pay big dividends to the hog raiser in summer.

### HOT WEATHER DAIRY SUGGESTIONS

The intensely hot weather of July and August is apt to cause a considerable falling off in the yield of butter fat from cows in the warmer interior. Anything that may be done to add to the comfort of cows during this period will add to the amount of the milk check.

Provision should be made that the animals be able to feed during the night and the cool of the morning and evening. Then make some kind of a shelter from the sun for them during the middle of the day. A darkened shed on the north side of a big barn is a good place. Darken the doors and windows with sack curtains if no better way is available. Then be sure that plenty of fresh water is available all the time.

There are preparations that when sprayed on the cows will keep the flies off, that can be used to advantage where feed is high in price and where labor is available for applying it.

It is so hot sometimes during the summer, and there is so much work to do, that one hardly has time to think—this is just a reminder that may be worth a lot to many dairymen who can arrange something for the comfort of his cows without much trouble.

### BIG SILO BUILDING CAMPAIGN

Over 60 silos are either being built, or are contracted for, in one county in the Sacramento Valley. And many more will be built before the end of the season. There has been a good deal of silo talk throughout this district for the past four or five years, but the one big factor that is influencing farmers to build silos is the demonstration of their worth that has been made by the silos that have been used one, two and three years.

A great deal of milo and feterita will

be put in silos this season, while the acreage in Indian corn has been greatly increased.

Practically all of the silos being built are of staves—and of one or another of the standard, well advertised kinds. These have made good, and the increase in sales this year must be very gratifying to the manufacturers.

While silage is useful for young cattle, beef steers, sheep, and to a certain extent for hogs, the dairy cow is

the animal that gives greatest returns for silage and is responsible for the big silo industry.

Practically all of the silos are being built on dairy farms. The manure from the dairy cows applied to alfalfa land where the stand is thin makes possible very heavy yields of corn. On heavy lands that have been badly treated, rotating corn and alfalfa—with the addition of plenty of manure to the alfalfa stubble—is bringing many small farms up to a very high state of production.

The silo is indirectly responsible for making increases in farm values of over 1000 per cent, in values based on the amount of revenue secured from the land.

## Caroline of Chilmark

Caroline of Chilmark 24812, one of the three cows composing the Guernsey herd of G. W. Wilder's private dairy at Redlands, which was the foundation of the herd of over 100 Guernseys at present at Hollow-Hill Farm, has just finished an official yearly test of 15,185.91 pounds of milk with an average of 4.76 per cent and making 722.97 pounds of butter fat.

She is a daughter of that great bull,

clared by experts to be almost the ideal type of dairy cow. She has a wonderful conformation, with a deep chest and a great spring of rib which very clearly shows her relationship to Imported Masher's Galore. Her udder is large and well placed and her milk veins are very prominent.

Since coming to California Caroline of Chilmark has dropped one bull calf and four heifers, the last one being born on July Fourth just past.



Caroline of Chilmark, 24182

A great producer, one of the finest Guernseys in the West, owned by Hollow-Hill Farm, Colton, California.

Imported Cora's Governor of Chilmark 8971, which has over 40 officially tested daughters, seven of which have averaged over 600 pounds of butter fat. Caroline of Chilmark's record places her at the head of the list of these daughters. She is a granddaughter of Imported Masher's Galore 8572 and of Governor of the Chene 1297 P. S., two of the most potent bulls of the breed.

Caroline of Chilmark has been de-

The bull, King of Hollow-Hill 25876, is by Itchen Daisy's May King of Langwater 17349, which sold at birth for \$1800 and was lately resold to a California breeder for the record price of \$8000, is the senior herd-sire at Hollow-Hill Farm and is getting some wonderfully fine calves.

It is the expectation at present to show King of Hollow-Hill, Caroline of Chilmark and a number of other cattle at the coming state fair.

## Field Notes from the Live Stock Men

Norman Hale, the English lad who is herdsman for C. N. Hawkins at the Pacheco Shorthorn ranch, San Benito County, has his bunch of show stuff in splendid shape for the fall fair circuit. He says he is very fond of Herefords as he was born in the adjoining county to Herefordshire in the old country and has handled many herds of White Faces, but for a long time now he has been working with Shorthorns and is on the fence. Makes no difference what the breed, this English boy knows his business. He showed Bright Oak, the late A. J. Splawn's cow for several seasons in strong competition and was never beaten in that class. He was also herdsman for C. B. Wade of Hall Lake, Oregon, before coming to California.

The high quality of the Bishop Bros. Shropshire flock is due to practical and proven methods. Instead of

culling after the animals have reached full growth this is done when they are lambs. This concern has over 300 head of registered ewes this year, the largest number since they have been in the business. They are completely sold out of breeding stock for this season which has several weeks yet to run. They carry about 1200 head of range ewes in addition to the pure breds, but the range ewes have been bred to registered rams for 15 years, so they are a classy lot and difficult to duplicate.

The Paicines Rancho is carrying about 700 head of registered cows, and together with their herd bulls headed by the Imp. Champion of Scotland, Paicines has what is considered one of the largest and finest herds of Shorthorns in the entire country. The herd is owned by the millionaire sportsman, A. K. Ma-







## Announcement

### of First Annual Sale of

# PUREBRED BERKSHIRES

Escalon, August 2, 1917

(The day following the Carruthers Sale at Mayfield)

The bred sows and open gilts for this sale have been carefully selected from our herd of 250 pure bred swine. They were sired by Grand Leader 2nd, Solano Emblem and Fashion Longfellow. They will be in pig to Grand Leader 2nd and to Royal Superbus 220200, the great boar we chose to fill the place made vacant when we sold Grand Leader to go East. Royal Superbus carries the same blood lines which have made Grand Leader's get such consistent winners wherever they have been shown. He is, in fact, a half brother to Grand Leader, both having been sired by that great sire, Superbus. Royal Superbus is a very smooth, deep-bodied boar, with good hams and heavy bone.

Catalog of Sale Ready Soon. Write for Yours Now.

## Grapewild Farms

A. B. HUMPHREY, Prop.

Escalon, San Joaquin County, Cal.



## Santa Anita Rancho

Anoakia Breeding Farm



**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by imported Stallion Ibn Mahrus, head of our Arabian stud. Dams are the choicest thoroughbred mares of Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahrus, world renowned imported Stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 6th. The dams are from the very best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted former State Record Cows. Write for details.

Correspondence Invited

Anita M. Baldwin

W. H. TAYLOR, Superintendent

Santa Anita, Cal.

## INNISFAIL DAIRY SHORTHORNS



Our herd of registered Shorthorns has been carefully selected from the leading milk producing strains of the breed and is being developed along the same lines in our hands. The herd is headed by

### GLENSIDE ROYAL

a prize winner at the 1913 International and grand champion at Panama-Pacific Exposition. Sired by him and out of large cows of good milk production we offer for sale a few choice young bulls. Our entire herd is tuberculin tested. Alexander & Kellogg, Suisun, Cal.

GLENSIDE ROYAL 408155.

Farm on Grizzly Island.

## Shorthorn Bulls and Heifers

We have twenty bulls and ten heifers for sale at present. This is the best lot that we have ever had for sale. Mostly two year olds, registered, tuberculin tested and all reds in excellent condition and splendid individuals. Write for prices or better come and see them.

H. L. & E. H. Murphy

Six miles from Sacramento

Perkins, Cal.

# Cheese from Sheep's Milk

Written for California Cultivator



FEW days ago the writer visited a sheep dairy in Yolo County where some farmers were milking about 500 head of sheep and making milk.

The process was unique to say the least.

The dairy barn consisted of an old shed that was divided into pens, the floors of which were the ground covered with about two or three inches of finely pulverized sheep manure. The sheep were driven into these pens in lots of about 50 and run into a narrow but short runway that opened at the opposite end of the shed. In front of the opening, which was just large enough to allow one sheep to pass through at a time, was placed a 10x10 inch timber long enough to allow one man to sit on each side of the opening. A floor was built here with an incline of about 30 degrees, sloping up and away from the timber on which the milkers sat. This upward slant makes it difficult for the sheep to get a foothold, therefore easier to hold while milking.

A boy keeps the chute full of sheep and the elbows of the milkers close the opening so that no sheep can pass out without jumping over the shoulders of the milkers. The milkers sit with a wooden kit between their feet and as a sheep comes out of the chute it is grabbed by a leg with one hand, then with both hands the sheep is grabbed by the bag and yanked into position with its hind feet on each side of the kit and the milking process is begun. The teats and enough

of the udder to fill the hand are grasped and five or six strokes empty the udder. The opening in the teat of a sheep is large and the milk flows out in a stream about a quarter of an inch wide. There is a great difference in the behavior of different individual sheep. Some stand quietly and others keep up a continual highland fling which accounts for the flotsam and jetsam that constitutes part of the content of the milking receptacles. As the sheep spring for the opening when released there is sometimes a shower of miscellaneous material that is thrown into the faces of the milkers, the milk kits receiving their share. A large wash tub is placed at one side into which the kits are emptied when full. This tub reminds us of the description that used to be in our geographies of the Sargasso Sea. Upon inquiry it was ascertained that the milk was strained before making into cheese. It was also ascertained that the cheese made from this milk had a "dis-stink-tive" flavor and sold for 40 cents per pond.

The lambs are allowed to run with the ewes till three months old, when they are taken away and cheese making begins. At that time the ewes are milked twice a day, two men milking 500 in two hours. At that time the ewes average half a pound of cheese per head, while now, in July, the milking has decreased to once in two days with a proportionate reduction in the amount of cheese. The ewes are now being allowed to go dry so as to get them in condition for the winter season.

## Eastern Field Notes

This government is more rigid in its requirements as to horses for army service than were those of the European buyers. No white or gray horses will be accepted; all animals must be absolutely sound. The following prices are being paid for horses and mules for government use: Mature cavalry horses \$180; artillery horses for light and horse batteries, \$195; artillery horses for siege batteries, \$235; draft mules (wheel), \$235; draft mules (lead), \$190; pack and riding mules, \$165.

Illinois has a new dog law calling for a license fee of one to three dollars. In it is the provision that if any dog is discovered in the act of chasing, killing or wounding sheep it is to be pursued and killed; also, any dog trespassing on premises of another and not accompanied by his owner may be killed. Any untagged dog may be killed by anyone wherever seen. The license fees are to be kept as a fund for reimbursing owners of sheep.

A serious epidemic is affecting French cavalry horses. The animals arrive at the field apparently in good condition and often die without any symptoms of disease. It has been suggested that it is a case of poisoning but most careful observation and investigation have failed to show any cause.

The British army sends about 500 horses weekly to butchers of Paris.

York state eggs are commanding about 45 cents per dozen.

New York has enacted a law which puts a premium on the herd of dairy cattle which is free of disease. That is, the idea is to award for clean herds rather than punish or cause loss in

the cleaning up from tuberculosis. The law provides for the payment of 90 per cent of the appraised value of animals which shall be destroyed.

The showing of Herefords at the Calgary Stock Show was by far the largest and best exhibit of the White Faces made in that section of Western Canada. The judging was done by Prof. W. L. Carlisle.

Thompson Brothers, representative breeders of the Hereford in Nebraska, will make an offering of some finely bred Herefords at public sale early in December.

The Texas Swine Breeders' Association will hold its annual at College Station, Texas, August 2 and 3. L. B. Burk of College Station is secretary.

Bob Hall of Columbia, Missouri, is planning a Pacific Coast trip to get in touch with all Duroc-Jersey breeders. He comes as field representative of the National Duroc-Jersey Record Association. Presumably he will attend the state and some of the county fairs where Duroc-Jerseys will be in evidence.

Poultry stealing having become a lucrative practice in many Eastern states poultry people are organizing protective associations and propose to make examples of some of the professional thieves.

In the absence of labor, milking machines are receiving more general attention in Eastern dairy sections.

We note in recent list of advanced registry Ayrshires, Mabel Chalmers, 26726, owned by the Oregon Agricultural College, Corvallis, also Willowmoor Blush, 29461, Willowmoor Brownie, 29457, Willowmoor Soncy Girl, 29470, Willowmoor Bloom, 29463, Willowmoor Vesta 3rd, 29489, Willowmoor Rosie, 29468, Fizzaway's Lady Semolina, 29074, Willowmoor Etta's Pride 2nd, 26003, owned by J. W. Chase of Redmond, Washington, have all secured entry to the mature class advanced registry of the Ayrshire Breeders' Association.



Silo Sense

Here are some sound suggestions made on the subject of silos by W. A. Barr, county agent of Maricopa County, Arizona:

The silo increases the size of the farm from 50 per cent to 100 per cent by increasing the stock carrying capacity.

Cows do not "dry up" when silage is at hand.

Milk costs 25 to 40 cents, and beef and mutton 50 cents to \$1.25 less per hundred pounds to produce when abundant silage is to be had.

The silo conserves the feed produced.

Eight tons of silage require no more space than one ton of hay.

Silage is the most convenient of all feeds to handle.

The silage and alfalfa ration is cheaper and one-third more valuable than alfalfa alone.

Silage is a health tonic to the animal system.

Corn, milo, kafir, feterita, and the sorghums are all good silage crops.

There is no "best" silo. All are good if rightly constructed.

Put up a silo and purchase filling machinery cooperatively with your neighbor.

Book Review

Feed Manual

"Feed Manual and Hand Book," prepared by Professor F. W. Woll, Ph. D., University of California, published by J. B. Lippincott Company, Philadelphia.

"This manual has been prepared with two main objects in view: first, to enable students in agricultural schools and colleges to become thoroughly familiar with our more important feed materials, not only as regards their chemical composition and digestibility, but as to appearance, physical properties, and the various conditions that influence their value for stock feeding, and second, to furnish a guide for the use of the feeds in compounding rations that is both scientifically correct and sound from a practical point of view. The aim has been to stimulate independent thinking so that the facts and principles

brought out may form a part of the mental equipment of the student that will materially aid him in his later efforts to become a successful stockman."

This is strictly a school text book and would have little value for the farmer unless he were making scientific study of feeds. While written by a Californian it has more the appearance of a book with an Eastern viewpoint. For instance, in the exercises and notes on feeding stuffs there are pages devoted to alfalfa, to timothy, meadow hay, to clover hay, oat straw, corn silage, etc., but no page for making of notes on the barley or other grain hays which are such a factor in west-of-Rocky Mountain sections.

Keep the pigs growing, for each day passed without some gain in weight is a loss to the feeder.

Show Herd of Berkshires to Be Sold

Lovers of high class swine of any breed, and particularly Berkshires, will have a rare opportunity to secure stock for either foundation or show purposes at the second annual Carruthers Berkshire sale, Mayfield, August 1.

Mr. Carruthers has fairly outdone himself in selecting 44 head of sows and three great herd boars for this sale. It will be remembered that last year's sale made the highest average of any Berkshire sale in America, and it is the consensus of opinion that this year's offering is even a better one than that of 1916.

The sows are indeed a wonderful lot, 32 head ranging in age from under a year up to three years, are bred to the best boars on the place and are due to farrow from September 1 on. Here is a chance for the buyer of foundation stock as well as established breeders. A perusal of the breeding of these sows shows how richly they are bred, but their individuality stands out as prominently as their breeding.

The dozen odd open gilts in this sale are a smooth, growthy lot that will attract sale goers. Quite a number of these gilts weigh over 300 pounds and are not yet a year old.

Mr. Carruthers is offering three outstanding herd boars any one of which should come pretty close to breaking a price record when they are led into the ring. Mayfield Champion, a February, 1916 boar is one of the best animals the proprietor of Mayfield Farm has ever offered for sale. He is a grandson of Rival's Champions Best on his dam's side and carries the blood of Gregory's Matchless Baron

Duke on his sire's side. His sire, Ames Rival 70th, is one of the best boars on the coast. Mayfield Rival 24th is a remarkably fine under-year boar sired by Ames Rival 121st who is a son of Rival's Champions Best, out of Premiers Successor. His dam is a line bred Rival's Champions Best also so that he is an intensely line bred animal in this family. This boar will be a winner on the show circuit and will probably be exhibited by the lucky buyer. The other boar is Iowanna Rival Majestic by Rival's Champion and out of Matchless Lady Majestic, a noted show and breeding sow. He was farrowed March 3, 1914 and is right in his prime. Great credit is due John Meyers who has had charge of the Carruthers herd for the splendid, thrifty condition of the sale animals. They are neither over or under-done but just right. As field representative and feed expert of the American Berkshire Association Mr. Meyers has a wide reputation.

No other Berkshire event on the Coast to date will have had so many visitors present of national reputation. Dean Curtiss of Ames, Iowa, will be there; Professor Plumb, department animal husbandry, Ohio State University; DeWitt Wing of the Breeders Gazette; J. E. Barker of Indiana; L. E. Frost of the Berkshire World; and many others. Sale will be called promptly at 1 p. m. August 1. Col. Seely of Whitehall, Illinois, will cry the sale. Mayfield can be reached by either Southern Pacific trains or motor buses from San Francisco or San Jose every hour. Whether you buy Berkshires or not it will be worth while to mingle with many of the country's notables in swinedom.

2nd Annual Sale  
BERKSHIRES

CARRUTHERS FARMS  
MAYFIELD, CALIFORNIA

WEDNESDAY  
AUGUST 1st  
1917

Sows are bred to Ames Rival 100, son of Rival's Champion Best; Iowanna Rival Majestic 3d, a son of Rival's Champion; and Mayfield Champion, son of Ames Rival 70th.

44 Sows and 6 Boars

In this sale will be included ten sows and two boars, comprising the best show herd that has ever left Carruthers Farms.

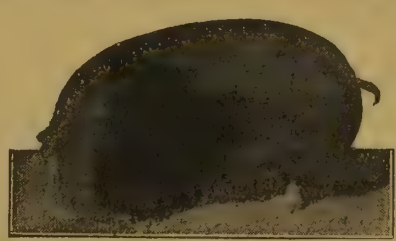
Entire Show Herd will be Sold

Remember A. B. Humphrey's Berkshire Sale, to be held at Escalon on August 2nd

Poland Chinas, Medium Type

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain. 12 firsts, Junior Champion and Reserve Grand Champion Boar. Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

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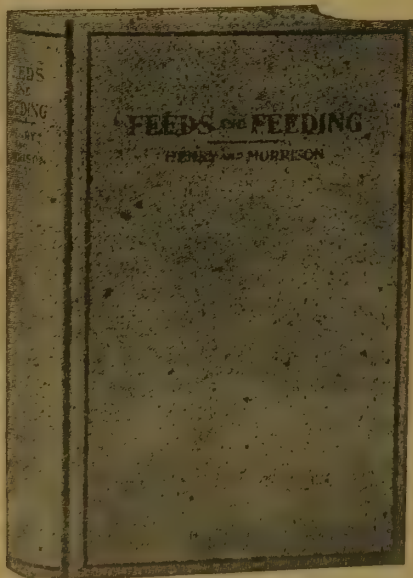
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## Silage for Hogs

Written for California Cultivator By W. S. Guilford

**A**NY silage that contains a large percentage of grain is readily eaten and relished by hogs. They eat the grain part and seem very fond of it, but my experience indicates that the leaves, stalks and other fibrous parts of the corn are mostly wasted.

At Butte City Ranch Indian corn silage has been fed to the Berkshires several different times with the result stated above. It might be that if silage was fed in small quantities to hogs that were very short of feed, they would eat a greater percentage of the mass than these hogs.

Whenever silage is being fed to sheep or cattle a small quantity is al-

ways fed to the hogs; it gives a variety to their ration and there is an indefinite something—hard to describe—that makes a feeder believe that it is good for hogs and that it may have an action as an appetizer or an aid to digestion that gives it a higher value than an analysis would indicate.

I have heard of specialty hog farms where silos have been built as a part of the equipment and where silage was to be figured as one of the principal feeds. I have never seen one of these farms, but if any Cultivator reader of this has such an establishment, I am sure that there are many who would be glad to learn of it through the columns of this paper.

## Conservation Suggestions

In thinning sugar beets it sometimes happens that part of the beets become of fair size before they are taken out. Could not these be canned in the same way as spinach? Frequently a considerable portion of a field is taken out and it would seem as though these beets and tops might be treated the same as spinach, which goes about three tons to the acre and for which the canneries pay about \$20 per ton. Also, we have found that when dried beet pulp is well cooked and treated like mashed potatoes it makes a palatable dish. Is there any reason why it should not be shipped to Europe to help out with the short supply of potatoes? Would like to ask regarding drying the small potatoes, of which there seems to be a plentiful supply this year. If these were cooked and dried would they not make a good article of export?—John Eastwood, Oxnard.

Regarding thinning young beets we believe the suggestion of Mr. Eastwood is most excellent. For us there is no better "greens" than tender young beet tops. Along this line we may quote from a recommendation of the National Emergency Food Garden Commission:

"Beet tops for greens should be canned the day they are picked. Sort and clean very carefully and blanch in steam 15 minutes either in regular steamer or in other vessel so arranged that the greens may be suspended above an inch or two of boiling water. After blanching plunge beet tops into cold water for an instant, then cut into desired lengths and pack tightly

into jars. Add hot water to fill jars and season to taste. Partially tighten tops of jars and sterilize for an hour and a half. Remove jars from hot water, complete sealing, and place in an inverted position out of a draft to cool.

"The small beets taken out of the rows in thinning may be canned with the greens and are very palatable if served in this manner. The process is the same as for canning the tops." For best results the beets should be selected as uniform in size as possible.

The dried beet pulp is another proposition. However, it is worth trying out in time of scarcity of food. Let us hear from homemakers who have tried it. The method of curing potatoes was given fully in the issue of July 21, 1917. In a word it consists of peeling, slicing about a quarter of an inch thick, then treating with the fumes of sulphur and drying. When ready to use soak 24 hours and cook as fresh potatoes.

### KILL THE SQUIRRELS

Horticultural Commissioner Marchbank of Madera County is after the squirrel and the squirrel owner. On the owner he is serving notice that the Madera County squirrel destruction campaign begins September 1 and if owner, rancher or one controlling land in that county does not have the pest removed from his land within 30 days from September 1 he will be prosecuted in accordance with the law governing destruction of ground squirrels. A copy of the interesting portion of the law is also served on the owner with the notice. Squirrel owners must bear in mind that they are liable to a fine of \$500 or to six months in prison, or both, for harboring this pest.



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By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator. The cost is only 3 cents per word per issue, with a minimum of 35 cents.

For Acacias, Avocados, Budded Loquats, Citrus trees, Evergreens, Feijoas, Palms, Roses and all kinds of trees, shrubs, vines, etc. Write for our new catalogue. Robertson Nurseries, Fullerton, Cal.

Eureka Lemon Trees—Best quality. Fine root system. No frost trees. Grown at San Dimas. Special low price. Smith Citrus Nurseries, 320 Marsh-Strong Building, F. 2729, Los Angeles.

Citrus Trees—All kinds, any quantity. Butler's Morning Side Nursery, La-manda Park, Cal.

Avocado Seedlings, in flats. Write for prices. Newberry-Sherlock, R. D. 2, Pasadena, Cal.

Citrus Nurseries, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

WANTED

Wanted—Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' work to right parties. Address J. H. Yetter, Sales Department, 810 Santa Marina Building, 112 Market St. San Francisco, Cal.

Wanted—Position as dairy foreman or herdsman by experienced man. Understand compounding rations and productive feeding. Will get results for employer through modern efficient methods. Box O, Cultivator.

One of the Most perplexing problems to farmers and ranchers is that of help. A small liner ad in California Cultivator is the quickest and easiest means of securing farm help.

We Buy Weed Seeds—Mustard, rape, anise, bitter clover, etc. Send samples. Write us, stating quantity and price. Globe Mills, Los Angeles.

Wanted—To buy new or good second hand smudge pots, seven to ten gallon preferred, Dunn or Scheu type. Address Box 298, Corona.

Wanted—Five hundred feet second hand seven or eight inch irrigating pipe. Wm. Fiege, Healdsburg, Calif.

Wanted—Second-hand Holt caterpillar, 60 or 75 h. p., two speed transmission. Will F. Phillips, Terra Bella.

Wanted—To buy "ewes." Healthy, 150 yearlings or about 125 2-3 year. G. Holst, Redwood City, California.

FARM LANDS FOR SALE

For Sale—A Bargain!! In the great Antelope Valley: 80 acres of fine soil within ½ mile of best producing hay and bean ranches. Good 3 room house, young orchard, 1¼ acre, with water piped to it, barn, horse, cow and chicken corrals. Windmill on good domestic well. Water at 18 feet. Fine shade trees. Nice home to move into. \$45.00 per acre, no less, no trade. Owner, Box A, Rosamond, Cal.

For Sale—Four acre ranch with 3 room and bath, new, modern cottage and large garage with sleeping room, fronting on paved boulevard. Family orchard, 80 walnut trees, chickens, rabbits, ducks, and furniture if wanted. Water piped for irrigation and domestic purposes. Electricity. Rich sandy loam soil. Price \$7000, including Ford delivery truck. Part cash and 6 per cent on balance. Geo. W. Snider, Chatsworth, Calif.

For Sale or Exchange—74 acres sandy loam, planted to alfalfa and beets, near factory and towns on good roads, near school. Splendid water, modern buildings, electric lighted, ornamental shade and fruit trees. F. G. Easton, Manteca, Calif.

For Sale—20 acres improved, rich, level land; irrigating and domestic water, implements, some crop and poultry. Near town and school. Price \$3500, terms, \$1000 cash, balance 5 to 20 years 6 per cent. A. C. Heald, Alpaugh.

Oregon, California Government Lands. Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

POULTRY

Poultry Wanted—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We will immediately. National Poultry Co 307 E. Third St. Los Angeles, Cal.

Day Old Chix—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Calif.

300-290 Egg Leghorn, Wyandottes, Rocks, Reds, Anconas, Orpington, Pullets, Cockerels, Breeders, Guernsey profit makers at bargain. C. Beeson, Pasadena, Cal.

'Eastman's Bred-to-Lay' Barred Plymouth Rocks, Fairmead Poultry Farm, Fairmead, Cal.

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HOGS

Chester Whites, the Billiken Brand.—Your duty is to raise more hogs and increase the meat supply. The demand for pork exceeds the production. Get started with some of these Chesters: 3 bred sows farrowed in April, 1916, due to farrow in September, and October; 18 October gilts due to farrow in October; 3 October boars ready for service. All first class in every respect and good enough to fit and show at the different fairs this fall. All are cholera immune and will be registered free. Write for price list and booklet. C. B. Cunningham, Box C, Mills, California.

Grape-Wild Farm Berkshires — World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

Large Yorkshires—Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

Rancho Rubio Durocs. Only a few September gilts left. One carking good fall boar by Orion Model, son of the last international grand champion. Place your orders now for weaned boar pigs. Best I ever raised. Elmer Lamb, Ceres, Cal.

Wanted—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

Choice Berkshires—We are overstocked with young hogs, boars and gilts by Artful Duke 32nd, Rancho Otto and Ames Rival 131st from prize winning sows. We are offering some fine bargains to early comers. Hollow-Hill Farm, Colton, Calif.

Duroc Jerseys—Grand Golden Model is sired by the Champion Grand Model. His dam is by Golden Model 2nd. Peters, Lamson & Walker, Devore, San Bernardino County, California.

Big Type Durocs. Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

Cholera Immune Duroc-Jerseys. Big type. Weaned boars and gilts from 500 to 700-pound sows. Prize winning stock. Derryfield Farm, I.O.O.F. Temple, Sacramento.

Crawshaw's California Chinas are prolific and profitable. Weanlings \$15.00, boars \$25.00. Dr. J. A. Crawshaw, Hanford, Cal.

Poland-China Swine Recorded. Stock for sale at all times. We please you or refund your money. W. A. Young, Lodi, Cal.

Most Money in Duroc-Jerseys. Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

Choice Boar Pigs for Sale. Sired by Superba 220620, champion Poland boar at San Francisco. Prices right. C. R. Hanna, Riverside, Cal.

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.

Duroc-Jerseys—Few choice March males from best eastern stock. Reasonable prices. W. M. Taylor, R. D. No. 1, San Bernardino.

One Large and two medium type boars, extra choice, 9 and 10 months old. W. Bernstein Ranch, L. C. Trewhitt, Mgr., Hanford, Cal.

Model Herd Berkshires bred for size and quality. Weanlings and gilts. J. L. Gish, Laws, Calif.

Carruthers' Farm Berkshire Hogs. Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

Berkshires—Two hundred pounds at six months. Ray C. Hannan, Corning, Cal.

Poland-Chinas—A few good breeding boars. S. F. Williams, Orland, Cal.

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Large Assortment slightly used and agents' sample plows, harrows, cultivators, wagons. Call and see them before buying. Save 50 per cent on some. Four floors. Largest stock. Arnott & Company, Ranchers' Supply House. 117 to 118 South Los Angeles St., Los Angeles.

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LIVE STOCK

D. E. Kellher, importer and breeder of Hampshire sheep, Eugene, Cal., offers for sale a choice lot of Hampshire ram lambs, sired by Walnut Hall and Butterfield Rams, purchased at Salt Lake, August, 1916. Lambs ready for delivery after July 15th, 1917. Inspection and correspondence invited.

Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

At Last the Perfect SMO—the Stay Round. No hoops, no bolts. No experiments. Any one can erect. Close price. Address D. O. Lively, 125 Hobart Bldg., San Francisco.

For Sale—Palomino stallion; woman can ride or drive. Address Mary A. Smith, care Dutard Ranch, Santa Maria, Calif.

Registered Shires — Blackhawk Stock Ranch. Importers and Breeders. Easton & Ward, Burlingame, Cal.

For Sale—3 light driving and riding mares and one pony. Hollow-Hill Farm, Colton, Calif.

Goats—One Saanen buck, two does. Bargain. C. A. Newton, Corona, R.D.No. 1.

CATTLE

Holstein Herd for sale: Herd consists of seven females and five bulls, including a splendid cow, her four daughters and a grand daughter, all registered stock of good breeding. Priced for quick sale. P. A. Hogaboom, Route A., Fair Oaks, Cal.

For Sale—Fine young three-year-old Holstein bull, registered, and five-year-old registered Holstein cow. Both in fine condition and have good pedigrees. Prices reasonable. Ben F. Thorpe, manager Canfield Ranches, Bonsall, Cal.

Registered Holsteins out of A.R.O. Dams. Grandsons of King Korndyke Hengerveld Ormsby who has 20 A.R.O. daughters with records of over 29 pounds. Look up this sire. Geo. Kounias, Modesto Farms, Modesto, Cal.

D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.

Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Calif.

N. H. Locke Co., Lockeford, Cal.—Choice young Jersey bulls for sale.

Holstein Bulls from record cows. Prices right. A. M. Bibens, Modesto, Calif.

MACHINERY

WHY BUY NEW? SAVE HALF Material guaranteed. It's second hand after used few times, but not worn out.

Let the wind do it. 8-ft., \$27.50; 10, \$35; 12, \$55; 16-ft. mills \$125, cost new \$285. Pump as much as 4 h. engine for nothing once installed. Why buy gas?

TANKS—TANKS New, used tanks, guaranteed; 1500-gal. galv. with cover, \$22.50; 16,000, \$250; 10,000 redwood, \$75. SOME TANK. Big 100,000 gal. redwood storage tank, round lug hoops, cost \$1200, our price \$400 before we move. Has mile of lug hoops alone on tank, also has low stand. Be quick. See who's cheapest.

Engines, Pumps, Pipe Centrifugal pumps; plunger pumps, \$5 up; Big Bulldozer single acting jacks, \$68; double-acting No. 3 Ames, \$225; cost \$660; Means double-acting deep well pump, \$275; Large Addison double-acting plunger pump complete with 85-ft. 10-in. pipe, 9-in. swell brass cylinder, double rods, pumps 50 in.; outfit cost \$1500; snap at \$475; 9-h. p. Foos, \$135; 8-h. 12 Fairbanks, \$165; 6-h. Stearns, \$89. Many other first class engines very cheap.

Brass cylinders, Plunger rods, pipe. Fittings, Ranch Machinery, Sundries. Fine, 2-gang mouldboard plow, \$45; 3 or 4-gang disc tractor plow; alfalfa renovator, \$25; 24-disc, 4-horse harrow, \$38; mowers, buck rake, feed cutter, \$8.50; bone grinders, \$6 to \$12; feed mill, \$10.50; water trough, \$4; cement mixer, \$25; sprayer, \$19.50; new discs, \$1 each.

Wanted to buy first class material. No junk wanted. Pioneers in our line. DEMMITT CO., Office Upstairs, 120 N. Main. Yards, 816 Yale, Los Angeles.

For Sale—Samson Sledge-Grip tractor, eight horse pull, just overhauled. Tractor tools; Clark 8 ft. double cutaway disk, Forkner spring tooth 10½ ft. cultivator, and a cross reach orchard wagon. All in first class condition. \$850 cash. Address J. W. Errant, Highland and Sycamore Avenues, Rialto, California.

Several new and slightly used engines at a bargain. Best makes. 1 to 35 h.p. Arnott & Company, Wholesale Machinery and Implements, 112 South Los Angeles St., Los Angeles, Cal.

SEEDS AND PLANTS

Tepary Beans for Sale—Twelve pounds will plant an acre. Will mature in 65 days from seeding. Seed very scarce. We have on hand a limited quantity which we offer, ten pound lots at \$2.50; hundred pounds \$20.00 F. O. B. Tucson. Tucson Seed Company, Dry Climate Seeds, Tucson, Arizona.

\*\* ORDER YOUR SEEDS NOW \*\* If you are going to need any seeds for next season now is the time to render your orders. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbutuck, Cal.

\*\* ALFALFA SEED OUR SPECIALTY \*\* Seed Potatoes—A limited supply of Burbank, American Wonder and British Queen for August planting. H. A. Hyde, Watsonville.

MONEY TO LOAN

Money to Loan—On improved farms, city property or for building loans, also on cattle or cotton crops. C. G. Paul, 206 North Glendale Ave., Tropic, Cal.

MISCELLANEOUS

Slacked Lime—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road Pasadena.

For Sale—Ice box suitable for store, hotel or dairy, galvanized lined, capacity 900 lbs. ice. Hollow-Hill Farm, R. F. D. No. 1, Colton, Calif.

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco

Send One Dime, receive 25 cent cake best skin and scalp soap, postpaid. Healing Soap Co., 1704 Oregon St., Berkeley, Cal.

RABBITS

Raise Rabbits For Us—We sell you foundation stock and buy back what you raise, paying \$1.75 and \$2.00 each for them. Send 25c for our proposition, our book on rabbit culture and our supply catalog. Gilmore's Rabbit Farm, Dept. C, Santa Barbara, Cal. (The rabbit farm of international reputation.)

LUMBER

Lumber—Sash — Doors — Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A.\*R.W. Shingles 50c per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.

A FARM LETTERHEAD

"Where grow a few hogs and a little corn." These words have an honest conservative, and wholesome ring. They appear under the owner's name in a farm letterhead which came to us the other day. On one side, and less pronounced, is a brief list of the live stock and farm products which the owner raises. It makes the letterhead impressive and much more individual than usual. Originality counts in letterheads as well as in other heads, and the reader of such a letter gets a wholesome impression of the owner, his farm and his business, from just these few simple words. How much better than glowing statements in the letterhead; the kind that are usually taken with a grain of salt. Even a busy editor catches the nicety of such an approach, and prospective buyers and business men must feel that here is a man it will pay to respect.—Orange Judd Farmer.

NONSENSICALS

The farmer broke his wagon  
When his horse began to buck;  
But he was most resourceful,  
And used his garden truck.—Widow.

Another broke his legs, sir,  
Before he'd sowed his crops,  
Who showed himself resourceful  
By going in for hops.—Mercury.

The farmer is resourceful  
And knows what is best to do  
By going in for hops,  
But not for making brew.

This farmer made another break.  
He planted hops so tall  
That he tumbled when he picked them  
And now cannot hop at all.

It's plain that these are farmers wise  
To make things grow so fine.  
Of course they read the "Cultivator"  
And digest every line.

REALLY CAPABLE

"How's your boy Josh getting on at the training camp?"

"Wonderful," replied Farmer Corn-tassel. "I feel a sense of great security. An army that can make Josh willin' to get up early, work hard all day an' go to bed early kin do anything."

MATTER OF YEARS

Editor—And you say this joke is original with you?

Humorist—Certainly.

Editor—Well, you don't look it.

Humorist—Don't look what?

Editor—Four hundred years old.

EASY ENOUGH

"Well," asked the doctor, "how did you find yourself this morning?"

"Oh easy enough," answered the patient. "I just opened my eyes and here I was."

It pays to keep up the appearance of the premises.



## The Cultivator Patterns



8415—Children's Dress. Cut in sizes 2, 4, 6 and 8 years. The dress has separate bloomers and the dress is to be slipped on over the head.

8151—Ladies' Shirt-Waist. Cut in sizes 34 to 42 inches bust measure. Any of the pretty striped materials can be used for this waist.

8159—Ladies' Waist. Cut in sizes 36 to 42 inches bust measure. Blouse has an inset vest and long or short sleeves.

8424—Ladies' Dress. Cut in sizes 36 to 42 inches bust measure. Front of waist and skirt panel are in one. Skirt is cut in four pieces.

8161—Ladies' Bungalow Apron. Cut in sizes 36, 40 and 44 inches bust measure. This apron covers the entire dress may be made developed in gingham or calico.

8414—Ladies' Skirt. Cut in sizes 24 to 30 inches waist measure. The skirt is cut in two pieces.

8427—Children's Rompers. Cut in sizes 1, 3 and 5 years. The kimono sleeves may be in long or short length.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

### HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send ten cents in coin or (1 or 2c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department

California Cultivator

Los Angeles

## Household Department

### VERSE GRATIS

I'm not just sure,  
What verse libre is,  
But I've a speaking notion,  
That it may be something,  
Just like I feel,  
Or worse—  
But no—that could not be,  
For I feel bad—oh, very bad,  
Not in one place,  
But all over—  
Why!  
It's simple,  
Look at my face,  
See how the perfectly good skin,  
Is all peeling off,  
And the patches of it,  
Are not a patching,  
To what is coming off,  
In great slabs and chunks,  
From that poor back of mine.  
You guessed it,  
I've had a vacation,  
And been to the beach,  
And besides oceans of flea bites,  
And tons of sand,  
That I carried home  
In my clothes,  
Or anywhere  
It could be concealed,  
I'm sunburned.  
The sun didn't burn, my poor skin  
And let it go at that,  
But it just cooked it,  
Until every nerve connecting,  
That skin with the place in the brain,  
Where it hurts,  
Is all exposed, and sore and raw,  
And I'd just as soon be all dead,  
As suffering the torture,  
Of being just live enough to hurt.  
All over,  
And dead otherwise.  
The next time the boss,  
Asks me  
If I want a vacation,  
I'm going to tell him,  
That if he is anxious to kill me off,  
There are more pleasant ways,  
And yet,  
I did have a grand time,  
And I guess this won't last long,  
And I believe that,  
I would go again tomorrow,  
Yes, I know I would,  
Gee—I wish I could.—  
—Redlands Review.

### KEEPING COOL WITHOUT AND WITHIN

Written for California Cultivator  
By Jeannette



OUR editor is surely to be congratulated on the correlation of the last three topics given for our discussion. Of course it is not accidental, but not even forethought always produces such happy results.

If we follow the suggestions of the economists in the first symposium in preparing staple foods in a simple way instead of making elaborate dishes; in putting aside rich puddings, cakes, and above all pastries until Thanksgiving and Christmas time, substituting in their stead bread puddings, custards, corn starch and fresh fruit and berries, we shall have taken quite a step toward keeping cool this summer.

The precepts laid down by the savers of strength in the second discussion are even more timely, particularly the counsel to make our brains save physical effort, for it takes a lot of thinking to keep ourselves and our families comfortable in the heat in which we now move and have our being.

Most country women do not need the advice to get up early in summer time. That is one of the musts of her day, and a very good thing it is too. There is nothing like the freshness of the early summer morning. It brings a breath of vigor and strength that lasts throughout the day and foolish is she who misses it.

I not only try to get as much as possible of my harder work done before the heat of the day sets in, but to do the greater part of my cooking for the day as well. Some of my stand-by dishes for hot weather are stuffed eggs, served in dish lined with crisp lettuce leaves, cottage cheese, cold meats, though we use meats sparingly in hot weather, and salads of all kinds. Cooked salad dressing can be prepared in sufficient quantity to last several days. If kept covered in the cooler it will keep perfectly. Everything needful can be prepared in the

morning and a few minutes at meal time produces a most delicious dish. Here are two more combinations which my family like:

Cook macaroni in salted water until tender, pour off about half the water and set in cooler. At meal time add a can of beef soup and simmer for a few minutes. Prepare rice as above and before serving add can of chicken soup and teaspoon of curry powder. I do not favor the use of many canned goods from the store, but soup used as seasoning I have found both convenient and economical.

Much of the difficulty of summer cooking is solved for the happy possessor of a fireless cooker. My cooker is yet on the "ship that's coming in" if it doesn't run into a submarine. Of course we can't have all the delightfully convenient things the magazines tell us about all at once. If our desires were all satisfied where would be the joy of anticipation?

However, I think that every woman, whose job it is to cook for a family in this heat, should be provided with at least a good oil stove of not less than three burners. It not only reduces the heat of the kitchen but saves that everlasting "stoking" which is so nerve trying when it is hot.

If you haven't a refrigerator or a patent iceless cooler by all means have a desert cooler. I made one myself the other day, so if the handy man, like the rest of his kind, is too busy for odd jobs these days, you need not wait for his leisure. I first made a framework the size I wanted my cooler, with solid top and bottom held together by uprights at each corner. This frame I covered with an old blanket which had been washed until all the nap was removed. A baking pan which nearly fitted the top was filled with water, and strips of the blanket were placed in the water and allowed to hang down the sides of the cooler. Capillary attraction keeps the strips and through them the sides of the cooler damp. If placed where the air can circulate about it it serves the purpose of a refrigerator perfectly.

I hope you all have a screened porch for a dining room, or at least a substitute. However, I am strong for the porch, for the oak in the yard sounds inviting but is apt to mean too many steps.

On a very hot day one way to have a cool porch dining room is to hang burlap dipped in water over part of the screen. Sprinkle the floor just before you announce the meal, and the members of your family will drop into their seats with a sigh of relief.

It is a very much lighter task to keep our bodies comfortable than to keep our minds at even temperature these days. As to the financial worries, high prices and scarcity of food I think we all talk on these subjects too much. Many students of the situation believe the danger of food scarcity has been exaggerated. The continual agitation gives unscrupulous dealers a lever by which to raise prices and goodness knows they do not need any help along that line.

Whenever you feel panicky go out and work in your garden and plan your canning campaign. Growing plants are always calming in their influence. They are so blessedly impersonal. They ask no impertinent questions and they flourish alike for all who supply the conditions of their growth.

A calm soul is hardest of all to maintain just now. It hardly seems possible to keep cool within when we think of all war means, but we can at least be sanely excited if we read the better class of magazines, and not depend altogether on the daily newspaper for our information. Such writers as Irwin Cobb, Carl Ackerman and Will Irwin give one a sane view, and though they leave one deeply stirred, arouse to a high plane of thought and feeling that forbids hysteria. The English women have set us a splendid example of coolness and efficiency. If we are to be real patriots we must do our best to keep calm minds and hearts that we may do our part for our country in her need.

### CARRY SOME

In order to leave footprints in the sand of time you must have a certain amount of sand.—Philadelphia Record.



### Overalls For Women

Through the ingenuity of skilled designers, have been made to look well as well as to give service.

Shown here in PEGGY JEANS style: one-piece garments of gingham; square neck, short sleeves, trimmed with fancy stripe or plaid gingham ..... \$2.50

Our Removal Sale is offering wonderful bargains all over the store; ask for anything we carry—it is very likely reduced now. Orders by Mail receive prompt and careful attention.

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215-229 So. Broadway LOS ANGELES

## The Iceless Cooler

(Stephenson Patent)



### NO ICE USED

Requires no ice and will keep your butter, meat and vegetables COOL AND SWEET. Has ample room for all requirements of a large family. (Special sizes made to order). Write for particulars and prices.

L. ANDERSON CO., MFRS., Martinez, Cal.

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KEEPING COOL, OUTSIDE AND IN

Written for California Cultivator  
By Mrs. W. L. Cunningham, Windsor

**I** HAVE lived for 30 years in good, old Sonoma County, and during that time have encountered some hot weather. Where the grape thrives and oranges and lemons grow in abundance, hot weather is essential, yet I have generally managed to keep comfortable under the most trying heat. Do you know how? By keeping busy, a great panacea for all humans.

I begin in the morning to make the house cool by having all windows and doors wide open, causing a current of air to circulate through every room. (My windows and doors are screened). Each room, where permissible, is darkened. On the outside, garden and surroundings are kept well watered, and under a glorious live oak many a lunch is spread and enjoyed. This same old tree serves as a sewing-room; for, after household duties are completed the women folks there take their sewing, crocheting, and the innumerable small things a woman finds to do; and there is a picture of coolness and content because of busy brain and hands.

Cool porches, shady trees, fireless cookers, etc., play their part; but they are no comparison to keeping occupied the mind and hands. Just try keeping busy, you people who suffer from the heat, and I am sure it will prove to be a case where you will say:

"Never mind the weather  
We're young and happy now,  
Boys and girls together,  
Hurrah! Hurrah! Hurrah!"

KEEPING COOL ON A DESERT HOMESTEAD

Written for California Cultivator  
By Mrs. G. A. Bisbee, Edom

**I** AM very busy woman, busy because I like to be busy. We are only two, myself and husband, but occasionally I drop down in an easy chair to rest a bit and read something, as I did this morning, and what I read was the household helps in the California Cultivator.

The thought came to me: Do all the housekeepers who might profit by others' experiences, live in the city or on some ready made ranch with most if not all of the comforts and conveniences, which most people think they can not live without, or do some of them live in the desert on a homestead as I do?

I know they do, and it is for these that I am in hopes of lightening the many cares which come to those who are fighting their own way in a perfectly new land, new at least to civilization.

One of the hardest things I had to learn was that it is impossible to keep house and keep it as I like to keep it and as I always have kept it.

Our house is a very well built house, but I found that the sand storms could cover everything with sand much quicker than I could uncover them. By putting away all unnecessary articles about the house and by cleaning house only after a sand storm I was more contented with my lot and could do some of the pleasant things which I was compelled to leave undone before, from lack of time and strength to do them.

Having conquered this ordeal, I also learned to not resent the sand storms so much for the weather is cooler after a blow.

This brings me to the other great condition which we have to contend with—the terrible heat through at least three months of the year.

Some people come to the desert (as we did) without knowing anything about how to care for their stock, their food or themselves to prevent loss and suffering. I hope something I may say will make things easier for those contemplating this life in the future.

Do not think that you have done all that can be done for your chickens in hot weather if you have given them plenty of food and water to drink. Have a clean ground for them in the shade and wet the ground thoroughly. The circulation of air over the wet ground will bring your chickens through the hottest weather.

See that your dog also has a damp place to lie on and a place to take a frequent dip.

If your team work is done when there is even the slightest breeze,

they can work even in the middle of the day.

Move your bed clear out in the open; it is much cooler than on the porch or under a tree.

I used to rush around and do all my work early in the morning before it got hot. Now I get our breakfast over and do some things which can not be done in the heat (like churning), and then I gather up strength for the rest of the day by enjoying the cool side of the house. I think it is easier to do a little cooking in the middle of the day (when you would be hot anyway) than to do it earlier when you might otherwise be comfortable. Take frequent showers, and a damp cloth over the head will be a help at times.

I was told when we came here that it was impossible to make butter during the summer. This and many other things are made possible with the aid of the air cooled cupboard which I think is familiar to most people, a burlap covered cupboard kept damp and placed where the air will blow through it. Flour and cereals of all kinds should be bought in small quantities as the loss is great caused by weevils getting in them.

Test out some of these things for yourself, "Desert Pioneers," and don't go off to some place where you might be more comfortable but less happy (for where can you be happier than at home) and leave your husband to do all your own work in addition to his own and get along the best way he can.

KEEPING COOL

Written for California Cultivator  
By Mary M. Casey, Pasadena

**A**FTER the many good articles published in the Cultivator recently on "saving strength," we ought to be better prepared to keep cool, for wise planning and less hurry and worry will surely be of help.

In Southern California the extremely hot weather seldom lasts over a week, so one can afford to play lazy a few days, even if the neglected work does seem urgent.

By rising at daybreak and preparing a light lunch of salad and fruit and sandwiches (which can be eaten picnic fashion) and a dinner all prepared in the early morning so it will require little effort to serve at night, a good start is made for a hot day.

Then the children who are too young to help can be called and a substantial breakfast served, dishes washed, beds made and house "brushed up" so it will do, for the house is cooler all darkened, and a little dust will not be noticed.

We prepare orange and lemon ade and put in fruit jars by the ice, and a cool drink is ready without the muss and effort later in the day. Then it ought to be possible for the busy housewife to rest a little while before lunch and feel rested enough to enjoy a picnic with the family; and how the children do enjoy anything that seems different, even if it is hot and they are only at home under a shade tree, dressed in rompers, and mine considered it like an outing at the beach when I let them put on their bathing suits and put the fine spray of the hose on each other.

By wearing light, loose clothing, hiding the thermometer, and getting interested in a good book or a piece of work we felt sure we would never have time to finish, we shall feel comfortable during the day, and with a cool sponge bath on retiring, we are assured of a night's sleep in good old California.

KEEPING COOL—OUTSIDE AND IN

Written for California Cultivator  
By M. W.

**T**HE only time the heat bothers me is when I get lazy. There! I have let my secret out.

I have a summer kitchen, a gasoline stove, refrigerator, and electric iron. These are helps. I wear sandals and bungalow aprons to take the place of dress and apron. They are cool and comfortable.

As for the things I do: I keep ice water in bottles in the refrigerator—no ice wasted you see. I serve a cold lunch at noon. Dinner is at 7 p. m.

But for the one great thing that relieves me of hot weather suffering—it is work! Yes, just common, everyday housework. I have a large house to take care of, five people to cook for, two of them ranch workers who have to have three hearty meals a day.

When they are working I rise at about five-thirty; otherwise I do not get up till late. I do not find that it makes much difference.

In the morning I do my housework, trying to get such work as ironing and baking done while it is cool. In the afternoons, having no housework, I sew—not fancy work, that's "loafing"—but make garments, keep at work all day, at least all afternoon. It won't break you down—I am only a school girl, very tiny and not strong at that and it isn't hurting me.

Don't rush; take your time. If you need rest, or want to write or read, do it in the morning when it's cool. If you think you have more housework than I do, go slow and take all day to do it in. It won't kill anybody, say, if some of the beds which are out of sight are not made up till afternoon. Or if on the other hand you haven't enough to do—lucky woman!—no sewing, etc., why go down to Red Cross headquarters and help them out. The thing to do, however, is be sure to keep at work during the hot part of the day. I have tried both ways, and this is the only cure I know. The only person who suffers from the heat in this household—and we live in one of the hottest sections of the state—is my kid brother, who has practically nothing to do.

AUGUST PRIZE CONTEST

For the August contest we will have something different, not a household problem or a problem of any kind, not even recipes, but animal stories, dog stories, horse stories, cat stories, stories of birds, geese, pigs, wild ani-

mals. Everybody who has ever had a pet has stories of its cleverness to tell.

Cash Prize

For the best short animal story the Cultivator will give a cash prize of \$2.00; for second best, \$1.00; for all others published three months extension of subscription unless such extension has already been granted in 1917.

Stories will be published in Cultivator of August 25. All should be received in this office by or before Thursday morning, August 16. Please write on one side of paper only.

Send Photograph

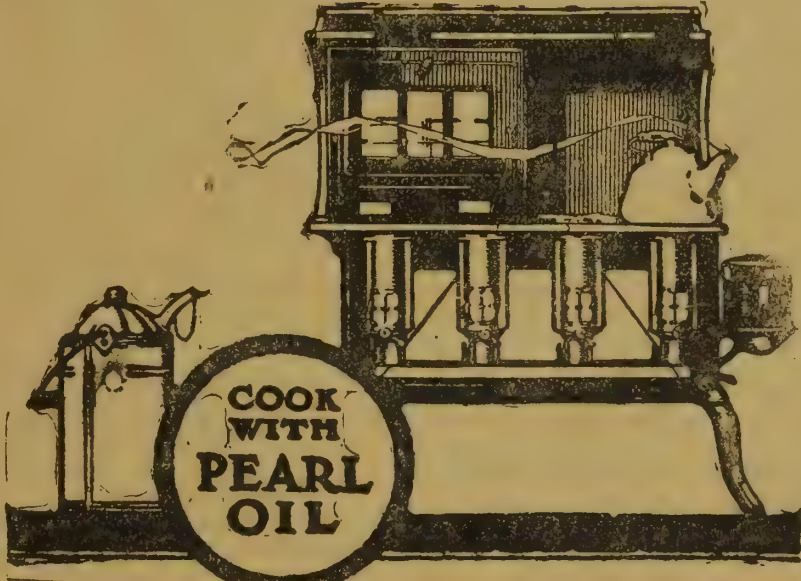
If you have a very good clear photograph to illustrate your story it will make it much more interesting. If photograph is sent and you wish it returned, be sure to send two cent stamp with request for its return.

PRIZE WINNERS

The winner of first prize in this month's household contest is "Jeanette" for her article "Keeping Cool Without and Within." The second prize goes to Mrs. G. A. Bisbee of Edom for "Keeping Cool on a Desert Homestead."

All others whose articles are published will receive a year's extension of subscription to the California Cultivator.

The reason I like a rooster is because he has the spurs to back up his crow.—Josh Billings.



ECONOMY

An oil cook-stove is cheaper to buy than a wood or coal stove and it's much cheaper to operate. Meals in a jiffy, and a cool kitchen in summer.

All the convenience of gas—economical for all the year 'round cooking. Bakes, broils, roasts, toasts. Steady, evenly-distributed heat, the best for cooking.

The long blue chimneys prevent all smoke and smell.

In 2, 3 and 4 burner sizes, with or without ovens. Also cabinet models. Ask your dealer today.

NEW PERFECTION OIL COOK-STOVE

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Install a PRIVATE GENERATING PLANT and have ELECTRICITY FOR LIGHT AND POWER. The Uni-Lectric system generates the standard 110-volt direct current, which will operate from 1 to 50 lights. It will run your sewing machine, electric iron, vacuum cleaner, churn, washing machine, etc.

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High speed gasoline motor, generator and automatic governor, all complete. Uses standard lamps and fixtures. Can be used for one or more houses.

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# What Ails My Hens?

Written for California Cultivator By Jean A. Koethen

**D**IAGNOSIS of poultry diseases is by no means an easy matter. Indeed, it is so far from being easy that many experienced poultrymen simply kill and bury or burn every chicken that dies, without much inquiry into the cause or attempt to doctor the victim. Perfect sanitation is the great preventive of poultry disease, they say. When this has been properly looked after the deaths which occur may be regarded as incidental, something to be expected, deplored, but hardly prevented.

On the other hand it is of the utmost importance that the causes of disease be clearly understood and that the symptoms of common diseases be quickly recognized. Take, for instance, the disease called aspergillosis, a high-sounding Latin name, which merely means "mold-disease." It is easy to understand, when you

stop to think of it, that mold spores, such as one finds sometimes in a sack of heated corn or in bran or middlings that have been wet, when taken into the throat, may often find lodging there and spread as they would in the sack of grain, ultimately reaching the lungs and causing suffocation and death. The first symptoms of this disease are similar to those of a catarrhal cold, but if every keeper of poultry had in mind that back of the catarrh or the rattling in the throat, which is the next stage in the progress of the disease, there might be a condition impossible of cure, he would lose no time in appointing himself an investigating committee to hunt out the exact truth. The fact is, we Americans have such firm faith in the power of medicine that we are very careless about preventing disease. We sleep in unventilated rooms, eat indigestible food, wear unhygienic clothing, and trust that when we are punished for our disregard of the laws of health the doctor will get us off somehow.

This blind faith may do for folks, but it won't do for hens. Disease in the henery must be prevented if possible. If it cannot be prevented, treatment must be prompt and investigation of the cause immediate and thorough, else the loss will be not one hen, but many. The mold in the sack of heated corn may kill one hen, and it may, if not discovered, kill a hundred. All hens are not equally susceptible to any disease, but the fact that one hen in a flock is attacked by aspergillosis is proof that there is a hidden enemy somewhere which may sap the health of the whole flock.

The common diseases of chickens may be roughly classified as diseases of the respiratory organs (throat, lungs, nasal passages and bronchial tubes), diseases of the digestive organs and diseases of the skin. There is another large class of diseases known as diseases of the reproductive organs, including rupture of the oviduct, egg-bound, etc., but these are so rare in comparison with the others that they need not be discussed here. There are also attacks of intestinal parasites, but these are so evident that they need no diagnosis. The presence of intestinal worms in a flock is readily observed and easily, though not always successfully, treated. Diseases of the skin, while there are several, may be dismissed with a single reference to the commonest of them, chicken-pox.

Chicken-pox is a very common disease in warm climates and is always known by the presence of warty excrescences or sores on head or comb. These have not always the same appearance, nor do they always begin in the same way. Usually they begin as flat nodules, gradually increasing in size. They are yellowish-gray or reddish-gray in color with dirty-gray, yellowish-brown or red-brown crust. Sometimes they are small and close together, sometimes larger and farther apart. Sometimes the nodules are on the edges of the eye-lids and sometimes on the cornea itself. Any sort of sore on the head may be suspected

as probable chicken-pox, and the victim isolated and treated.

The commonest disease of the respiratory organs is roup. Roup has several forms, but is always characterized by three things: discharge from nostrils or eyes or both, swellings about the head or eyes, and a peculiar, foul, unmistakable odor. The border line between an ordinary catarrhal cold and roup is hard to define. Some authorities lump all kinds of colds together and call them roup, but the odor is generally conceded to be the one unmistakable symptom. A cold which has no odor is not roup. It may be catarrh or bronchitis or pneumonia, but it is not roup. The swellings about the head are also characteristic and are found with no other form of cold. Sometimes the eyes are affected, and sometimes there are membranes in the throat. There is often, but not always, fever. The bird is usually dull and depressed, but in light cases it may eat and lay as usual.

What is commonly called canker is sometimes associated with roup, but the cheesy patch as sometimes seen in the mouth or on the tongue may come from mold spores, in which case the trouble is not roup but aspergillosis. Again whitish sores about the mouth are sometimes called canker when they are really due to the pecking of other birds. When there are no other symptoms of roup the canker should be laid to one of the two last-named causes.

Rattling in the throat indicates either bronchitis or aspergillosis and calls for a careful examination of mouth and throat for mold patches and of feed and scratching litter for the possible cause of the trouble. Bronchitis is due to exposure or dampness and calls for immediate transfer of the patient to warm, dry quarters.

No other class of diseases is quite as hard to diagnose as those affecting the digestive organs. Indigestion has so many symptoms and affects so many organs that one is always puzzled to know which is most affected. There may be liver trouble, which is indicated by a dark or yellow comb; there may be diarrhoea, sour crop, limberneck. Sometimes the trouble is acute, consequent to the eating of putrid flesh, spoiled beef scrap, or moldy food, and we have ptomaine poisoning, which is almost always fatal unless relieved immediately by a good dose of castor oil. Sometimes indigestion affects the nerves and muscles of the legs, and we have leg weakness, as in young turkeys and fat old hens. Sometimes it affects the muscles of the neck, and we have limberneck. In most cases which are not acute the trouble comes on so gradually that it is not noticed. The hens are fed an unbalanced ration, all hard grain with no meat and little green feed, perhaps, or a ration containing too much indigestible stuff like the hulls of oats or barley, or they are fed irregularly or too much or too little, or a ration containing too much fat-forming food, and little by little the liver becomes clogged and unable to do its work, the comb loses its normal bright red color, the bird becomes dull and mopy. Finally, and usually too late, the owner notices that something is wrong and begins to look for a remedy.

The first treatment for these digestive disturbances is always a dose of physic. In acute cases castor oil is best. In milder ones Epsom salts in moist mash, being less severe, is better. On many poultry ranches a dose of salts is given regularly once a month to the entire flock, just to clear out the liver and keep it normal

Half a teaspoon of salts to each adult bird is a fair dose. Dissolve in water and mix with a medium feeding of dry mash, no more than the birds will clean up immediately. This is the only satisfactory way of giving Epsom salts.

Along with the dose of salts should come a lightening up of the ration. Hens that are severely affected will not eat. Those that will eat should be given a ration largely of greens and bulky feed, like bran, which is quite laxative. In case of liver trouble it is a good plan to turn the birds out for a while and let them forage for their living. Going hungry is mighty good medicine for man or beast, and in these times of high feed prices nothing could be cheaper.

## THE NORTHWEST EGG LAYING CONTEST

The Egg Laying Contest of the Washington Agricultural College, which has been under way for the past year at Pullman, Washington, is nearing its end. Applications are now being received for the second contest. Applications from poultrymen in general were not received until after July 25. Up to that time former contestants were permitted to make their entries. Any vacancy after that date is to be filled by other applicants.

This is one of the most carefully conducted egg-laying contests of which we have heard, and most careful data are preserved, not only as to number of eggs but also as to cost of feeds and other points. Write the manager, Helen Dow Whitaker, State College of Washington, Pullman.

A fee of one dollar per bird for the six birds of the pen is required, three dollars to accompany the application, balance to be paid before October 15.

## NOW COOK SWATTED ROOSTER

"Swat the rooster week" is past and now it's up to mother to cook the rooster that father has swatted. And rooster meat need not be tough meat, either, if it is cooked correctly, says the home economics division at Ames, Iowa.

Hang the dressed fowl up for several days before cooking to soften the fibers, but be careful it does not spoil. Long, slow cooking in moist heat is best for meat that is likely to be tough. The fireless cooker is the best for this. Add one or two tablespoonfuls of vinegar to the water to help soften the fibers. If more rooster meat is on hand than can be used at once, and if the supply of cans is not short, can the surplus meat by the cold pack method for winter use.

Do not always serve boiled rooster; vary the dish. Mix the meat with crumbs, seasoning and eggs and make "rooster loaf," similar to meat loaf. Make croquettes or chicken pie or jelly chicken. Many good recipes can be found, using either gelatin or the chicken aspic to set the stock for this latter. Make a scalloped dish, using chopped meat, rice and gravy.

In case the roosters have not yet been swatted, it is best to separate them from the flock and feed them on a mash of ground oats, bran, shorts and tankage moistened with sour milk. This will help soften the flesh.

## BE ON TIME

"Well, that's enough to try the patience of Job!" exclaimed the village minister, as he threw aside the local paper.

"Why, what's the matter, dear?" asked his wife.

"Last Sunday I preached from the text, 'Be ye, therefore, steadfast,'" answered the good man; "but the printer makes it read, 'Be ye there for breakfast!'"

## Are Your Hen Profits Satisfactory?

If not, there is something wrong; and by adopting the

### "LEE WAY"

the wrong can be easily corrected.

### Cash Prizes

Those who will report to us by December 15th, 1917, the results received from use of the "Lee Way" and the "Lee Way Assortment" during the months August, September, October and November, we offer Cash Prizes for the 15 best reports:

First Prize .....	\$25.00
Second Prize .....	20.00
Third Prize .....	15.00
Fourth Prize .....	10.00
Fifth Prize .....	5.00
Ten Prizes of (each) .....	2.50

Start the "Lee Way" Now  
Get the Free Lee Library from  
Your Dealer or **Globe Mills Los Angeles**

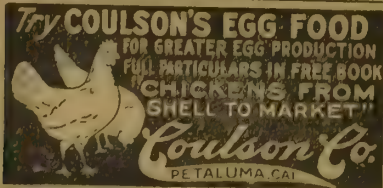
## DRY MASH



### The Best Feed on the Market

Has the highest protein at the lowest price, \$2.65 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or

**The Globe Mills, Los Angeles**



## Right Now use DEVIL'S DUST

and Kill Lice and Mites  
Devil's Dust is a deadly poison to all insect life; harmless to poultry, stock, plants  
**Globe Mills Los Angeles, Cal**

## Mr. Poultryman: TRI-STATE MOLT MASH

will help your hens through the molt and make it possible for you to stay in the business.

SOLD by our agent in each town or inquire of **GLOBE MILLS, LOS ANGELES**, Southern Wholesale Distributors, or **TRI-STATE POULTRYMEN'S COOPERATIVE ASS'N.**, Headquarters, Fresno, California.



## Los Angeles Market

LOS ANGELES, July 25, 1917.

## BUTTER

Produce Exch. Quotations.  
Price to trade 4c higher.

Rcts. wk. ending July 24, 308,710 lbs.	
California extra creamery	41½
Extr. Cry. Exch. past wk.	
July 18 19 20 21 23 24	
'17 39½ 40 40 41½ 41½	

## CHEESE

Brokers' prices:	
California fresh, lb.	23½
Oregon Longhorn	27@27½
Tillamook Trip.	26

## EGGS

Exchange quotations:	
Rcts. wk. ending July 24, 1,533 cs.	
Fresh extras	38
Case count	37
Pullet	34½
Fresh Ranch Exch. past wk.	
July 18 19 20 21 23 24	
'17 33½ 34 36 36 38 38	

## POULTRY

We quote to producers:	
Broilers	17@20
Fryers	22
Hens—Leghorns 10, Heavy Col'd.	20
Roasters	25
Ducks, lb.	15@17
Squabs, doz.	8.00@4.00
Roosters, old	10
Turkeys	21@24

## LIVE STOCK

We quote cwt. f.o.b. L. A.	
Cattle—	
Beef steers, av. 1000 to 1100 lbs.	8.50
Heifers, good	7.00
Cows, good	6.50@7.00
Fair	5.50@6.00
HOGS—	
Av. 125 lbs.	12.00
Av. 150 lbs.	13.00
Av. 175-200 lbs.	13.50
Rough, docked 20 lbs.; piggy sows, 40 lbs., stags, 40 per cent.	
Prime wethers	9.50@10.00
Ewes	9.00@9.50
Lambs	13.00
Yearlings	10.00@10.50

## POTATOES

Wholesale selling price:	
New, cwt.	2.40@2.50
Sweets, lb.	5@6

## ONIONS

Wholesale selling price:	
Bermuda, cr.	1.50
Pickling, cr.	1.50
Garlic	1.8

## VEGETABLES

Wholesale prices:	
Artichokes, doz.	50@75
Beans—Wax	4@4½
Limas, lb.	13@14
Ky. Wonder	4@4½
Beets, sk.	2.00
Cabbage, lb.	1½
Carrots, sk.	2.50
Cauliflower, doz.	1.00
Celery, doz.	75@1.35
Corn, lug	40@45
Cucumbers, lug	30@40
Egg Plant, lb.	8
Horse radish, rt. lb.	15
Lettuce, doz.	35
Leeks, doz.	30
Mint	40
Onions, green, doz.	25
Okra, lb.	10@12
Peas, lb., Telephone	7@7½
Peppers, Chili, lb. 25; Bell	20@25
Parsnips, doz.	50
Parsley, doz.	20
Radishes, doz.	20
Rhubarb—Strawberry	1.25
Romaine, doz.	40
Spinach, doz.	17½@20
Squash, Summer, cr.	35
Crookneck	35
Hubbard, lb.	3
Tomatoes, cr.	1.20@1.25
Turnips, doz.	35

## FRUITS

Wholesale prices:	
Apples—	
White Astrachan, lug	1.50
Gravensteins	1.85@2.15
Alexanders	1.90
Crab Apples, lug	90@1.00
Avocados, doz.	6.00@12.00
Apricots, lb.	3@4
Bananas, lb.	5½@5½
Cantaloupes—	
Standard	1.75
Paul Rose	2.65
Pony	1.75@1.80
Special	70@1.10
Honey Dew	2.25
Cherries, lb.	10@12
Currents, cr.	85@1.35
Figs, box	1.75
Grapes, Seedless and Malagas, cr.	1.65
Loganberries, bskt.	5@6
Nectarines	2.10
Peaches, lug	1.00@1.35
Plums, lug	75@1.50
Raspberries, basket	5@6
Strawberries, basket	7@8
Watermelon, lb.	2@3

## CITRUS

Lemons	4.25@4.75
Juice	2.50
Grapefruit	3.00@3.25
Limes basket	1.00
Valencias	2.75@3.50
Juice	1.50

## HONEY

Wholesale prices:	
Extr. White, lb.	11½@12½
W. W., lb.	12@14
Comb., case. W.	3.75
W. W. case	4.25@4.50

## NUTS

Peanuts, raw	12
Pine Nuts	20
Pecans	19

## RICE

Wholesale quotations:	
Cal.	6.25
Broken	4.75@5.00

## BEANS

Wholesale Prices:	
Lady Washington	18.50

Limas	18.50
Pinks	10.00
Manchurian Reds	11.00
Baby Mex.	9.00
Garbanzos	9.00@10.00
Small White	13.50
Blackeyes	8.00
Tepary	7.00
Lentils	18.00

## HAY

Quotations by Nichols-Loomis Com- pany. Wholesale prices to grower f.o.b.	
L. A. carlots.	
Tame Oat	18.00@20.00
Volunteer Oat	13.00@15.00
Wheat	14.00@17.00
Barley	15.00@18.00
Alfalfa	14.00@17.00
Straw	7.00

## GRAIN AND FEEDSTUFFS

Wholesale cwt. f.o.b. L. A.	
Alfalfa Meal	1.65
Alfalfa Molasses	1.75
Barley, Rolled	2.55
Barley, Recleaned, Whole	2.60
Barley, Hulled	3.15
Beet Pulp	1.80
Bran, Heavy	2.35
Cocoanut Meal	2.30
Cottonseed Meal	2.50
Corn, Yellow	4.20
Oats, White	2.80
Corn, Cracked	4.25
Corn, Feed Meal	4.30
Corn, Egyptian	4.10
Middlings	2.95
Milo	4.10
Oat Chop	1.90
Oats, White	2.70
Oats, Rolled White	2.85
Oats, Hulled	4.60
Oats, Rolled Chicken Groats	4.70
Oilcake Meal	3.30
Wheat, No. 1	4.10@4.15
Wheat, Cracked, No. 1	4.50
Rye	4.10
Blood Meal	5.10@5.20
Bone, Green	2.65@2.75
Bone, Dry	2.85@2.95
Charcoal, 50-lb. sk.	2.70@2.80
Clam Shell	70@80
Grit, Granite	65@75
Oyster Shell	1.25@1.35
Sunflower Seed	4.10@4.20
Soya Bean Meal	3.30@3.40
Scratch Feed	3.90@4.00
Rice Bran, ton	40.00
Middlings, ton	45.00

## San Francisco Markets

SAN FRANCISCO, July 24, 1917.

## BUTTER

Dairy Exchange quotations, lb.:	
Rcts. wk. ending July 23, 384,100 lbs.	
Fresh, extras	41
Prime firsts	40½
Extr. Cry. Exch. past wk.	
July 17 18 19 20 21 23	
'17 38½ 38½ 39½ 40 40 41	
'16 25½ 25½ 26 26½ 26 26	

## CHEESE

Dairy Exchange quotations:	
Cal. Flats	19@20 Y. Am. 22@23½
Fresh Ranch Exch. past wk.:	
Rcts. wk. ending July 23, 11,394 cs.	
July 17 18 19 20 21 23	
'17 33 32½ 33 34 35 35	
'16 26½ 28 28 28 28 28	

## EGGS

Dairy Exchange quotations:	
Fresh extras	35
Firsts	34½
Select Pullets	34½
Firsts	34

## POULTRY

We quote from producers, lb.	
Hens, large, 23@25, Leghorns	16@17
Small Colored	19@21
Fryers, lb.	26@28
Broilers	23@27
Roosters	30@32
Squabs, doz.	2.00@3.50
Ducks	16@18
Geese	19@20
Belgian Hares, live 11@12; dr.	15@16

## LIVE STOCK

Prices gross weight:	
Cattle:	
The following prices are for grass fed stock. Hay fed bring ½ to ¾ c more.	
Steers, lb., 6½@8½; cows and heifers, 4@7; calves, 7@9½.	
Sheep:	
Wethers, 11; shorn, 1½@2c less; ewes, 10; lamb, lb., 12@12½.	
Hogs:	
Hard grain fed, wt. 100 to 150 lbs., 13; 150 to 300 lbs., 14½; 300 to 400 lbs., 14.	

## POTATOES

Wholesale selling prices at wharf:	
New, cwt.	2.10@2.35
Sweets	7@8

## ONIONS

Wholesale selling price on wharf:	
New Red, sk.	85@90
Silverskin	90@1.00
New Green, bx.	50@75
Clarkburg	1.00
Garlic, lb., New	4@5

## VEGETABLES

Wholesale selling price:	
Beans, String, lb.	2@4
Fancy garden	4@5
Ky. Wonder	6@9
Corn, Green, Bay sk.	1.75@2.25
Cucumbers, box	25
Egg Plant, box	1.00@1.15
Peas, Halfmoon, sk.	1.25@2.75
Peppers, Bell, lug	1.00@1.25
Chili	75@1.00
Squash, Summer, lug	50@65
Italian, lug	50@65
Tomatoes, box	60@75

## FRESH FRUIT

Wholesale selling price:	
Apples—	
Red Astrachan	75@1.25
White Astrachan	75@1.25
Gravenstein, box	1.00@1.50
Crab Apples, box	40@60
Apricots, crate	50@65
Ton	45.00@55.00
Bananas, bunch	1.25@2.50

Cantaloupes—	
Standard, crate, Imperial	1.75@2.00
Pony	2.00@2.25
Flat	40@60
Turlock, standard	2.25@2.60
Honey Dew	50@65
Cherries, dr.	
Bings	1.15@1.25
Cal. Royal Anne, lb.	6@8
Ore. Royal Anne	75@1.00
Small, lb.	4@5
Figs, Mission, bx. single layer	90@1.00
Brown	85@1.00
Currents, chest	6.00@7.50
Grapes—	
Seedless, cr.	1.50@2.00
Fountainbleau	1.00@1.25
Strawberries, chest	7.00@9.00
Peaches, bx.	50@75
Pears—	
Bartlett	40@1.50; ton 14.00
Sugar, lug	1.00@1.50
Plums, Tragedy, cr.	65@85; ton 30.00
Burbank and Climax, cr.	75@85
Santa Rosa	1.00@1.25
Damson, ton	45.00
Blackberries, chest	6.00@7.00
Gooseberries, lb.	5@10
Loganberries, chest	4.00@5.50
Pineapples, doz.	5.00@6.00
Raspberries, chest	6.00@8.00
Watermelons, lb.	1½@2½

## CITRUS FRUIT

Wholesale selling price:	
Grapefruit	2.00@3.50
Valencias	2.75@3.50
Lemons	2.00@5.00
Lemonettes	2.00@4.00
Limes, Mex., cs.	4.50@5.50

CALIFORNIA PEACH GROWERS  
PRICE LIST

Fresno, July 24th, 1917.—Please note that prices for 1917 crop dried peaches are hereby advanced, effective immediately, and are subject to further advance without notice. The following quotations are F. O. B. factories, California common shipping points; for August, September and first half October shipment, our option. All orders shall be subject to our approval of variety, assortment and quantity, and subject to our confirmation. We will not supply Fancy Muirs to exceed 10 per cent of any order hereafter specified.

Standard Unpeeled Peaches	8	8½
Choice Unpeeled Peaches	8½	8½
Fancy Unpeeled Peaches	8½	9½
Ex. Fancy Unpeeled Peaches	9½	9½
Slabs Unpeeled Peaches	7½	7½
For Recleaned Peaches, add ¼ c to above prices.		
Blue Ribbon Peaches (practically peeled, 1½ c.		
The above prices are bulk basis.		
For 50-lb. bxs, unfaced, add ¼ c per lb.; faced, ¾ c.		
For 25-lb. bxs., unfaced, add ¼ c per lb.; faced, 1 c.		
For 10-lb. bxs., unfaced, add 1½ c per lb.; faced, 1½ c.		
For 5-lb. bxs., unfaced, add 2½ c per lb.; faced 3 c.		
For Graded Peaches, original, bags, add 1½ c to the bulk basis prices.		
Blue Ribbon (practically peeled) No. 12 pkg., 50 to cs., \$4.85 per cs.		
Blue Ribbon (practically peeled) 2 lb. cartons, 20 to cs., \$5.45 per cs.		
Blue Ribbon (practically peeled) 5 lb. cartons, 10 to cs., \$6.65 per cs.		
Choice Recleaned Peaches, 2 lb. cartons, 20 to cs., \$4.40 per cs.		
Choice Recleaned Peaches, 5 lb. cartons, 10 to cs., \$5.35 per cs.		
Choice Unpeeled Peaches, 2 lb. cartons, 20 to cs., \$4.15 per cs.		
Choice Unpeeled Peaches, 5 lb. cartons, 10 to cs., \$5.05 per cs.		
We guarantee the above prices, to the domestic trade, against our own decline to December 31st, 1917.		
Following the policy of this company to eliminate speculation in dried peaches, we will confirm orders only to the established and recognized jobbing trade.		

## BEANS

Jobbers' prices, cwt. recleaned:	
Limas	12.00@12.75
Bayous	9.00@9.50
Garbanzos	6.00@6.50
Small White	14.00@15.00
Mexican Red	9.50@10.00
Large White	14.00@15.00
Pinks	9.50@10.00
Black Eyes	8.00@8.50
Cranberry	10.00@11.00

## NUTS

Peanuts, Jap. 7@7½; Eastern	7½
Pecans	19@20
Pine Nuts	15@17

## HONEY

Jobbers' prices:  
 Comb, lb., W.W., 13@15; A., 8@10c;  
 Lt. A. ....11@12  
 Ex. Fy. W. lb....13c; Lt. A.....11  
 Beeswax, lb. ....38

## RICE

Price to growers:	
Cal. Rough, cwt.	3.00@3.25
Lower Grades	2.00@2.75

## HAY

Under date of July 21, Scott, Magner & Miller say:

Receipts past week 2291 tons; practically the same as last week, which was 2306 tons.

These receipts are far below the normal for this season of the year. Cars are very scarce and at some points the railroads have absolutely refused to give any box cars for the loading of hay. Local trade is very light. Export trade is light and with the exception of the government hay for shipment to the Philippines, there is nothing doing to speak of. The quality.

of this season's hay is of very superior grade. Stock hay is extremely scarce, with No. 1 grades plentiful. There is no change in the alfalfa or straw markets.

We quote today wholesale prices in carload lots as appear from dealers' transfers upon the market. For prices to consumers charges of cartage, commission and handling expenses must be added.

Wheat, Fy., lt. bales	19.00@20.00
Wheat or Wh. and Oat, No. 1	17.00@19.00
Wheat or Wh. and Oat, No. 2	15.00@17.00
Oats, Choice Tame	18.00@19.00
Other Tame	15.00@16.50
Wild Oat	13.00@16.00
Barley	13.00@16.00
Alfalfa, first cutting	13.00@16.00
Stock Hay, new	10.00@12.00

## GRAIN

Grain Exchange prices, ctl.	
Wheat, Northern Bluestem .....	3.85@4.00
Corn, California Yellow .....	4.10@4.15
Corn, Egyptian White .....	3.75@3.80
Oats, White Feed .....	2.35@2.40
Oats, Red Feed .....	2.15@2.20
Barley, Feed .....	2.10@2.15





**\$1150**

F.O.B. San Jose

**Now**



## Necessary to Order Tractor Now—Don't Wait

Steel and other materials are hard to get and are costing more all the time. No matter when you need your tractor you should order now for future delivery at present prices; \$1150 now buys the lowest-priced tractor of tracklaying type, suitable for orchard and vineyard work. Big crops count today and quick plowing or cultivation at just the right time brings big crops. You want to be ready.

### Bean TrackPULL Tractor Patented Front Drive Principle

There is a great advantage in the front-drive principle of the Bean TrackPULL Tractor. The Tractor steers with the track that pulls. It gets good traction and yet is so light in weight that little power is required to move it—the power goes into the pull. When you steer it you swing the entire front end around just as you swing a team. If you are of average strength you can swing the entire front end either to left or right at right angles with one hand. If you hit a soft spot you just swing her over a little to right or left and keep on going.

#### Weights 3100 Pounds

Its light weight distributed over long traction puts the Bean TrackPULL in a class by itself as a cultivating tractor. It packs the soil less than a man's shoe when he walks. Farmers and growers have come to recognize the folly of rolling down their land with a large, cumbersome outfit which works with difficulty over newly-plowed land and packs the soil unduly.

### Why Try to Get Along Without This Great Little Producer?

It will save you money by saving you the cost of man labor. It will not eat up one-third of what it helps to produce as horses do. It will not be affected by heat or insects. It will cultivate deep in hot weather. It will cost nothing to maintain when it is idle. You can use its belt power to run your stationary machinery. When the opportunity comes to rent an extra piece of land and by quick work put in an extra crop or two, you can work your tractor night and day, if necessary, and turn a handsome profit.

Remember that the Bean TrackPULL Tractor is owned and made by the manufacturers of the famous Bean Sprayers which have proved through years of service to be the staunchest machines of this kind ever built. You can depend on the Bean Spray Pump Co.'s Tractor the same as you can depend on its sprayer.

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Don't take chances if you want to be sure of getting a tractor this year. A lack of materials later may cut down the supply of these tractors or cause an advance in prices. Send the coupon today for full information about the remarkable Bean TrackPULL Tractor. Then decide if you want one and put in your order for delivery now or later. Price NOW \$1150. Get the fully descriptive, illustrated book.

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#### In the Orchard

The Bean TrackPULL is at home in the orchard. It is built very low, never damages branches or knocks off the fruit—turns accurately and short and pulls the same load on turns as on straightaway. It makes very little difference how far off center you hitch on the drawbar and, for this reason it is easy to plow or cultivate close to the trees. Trees do not have to be pruned at a greater height than 4 feet when you work with a TrackPULL Tractor. Fruit can be grown closer to the ground and therefore the yield will be greater.



#### In the Vineyard

There never has been another tractor that will work like the Bean TrackPULL Tractor in vineyards. It will work right up to vines without breaking off the young shoots. It can be turned as accurately and in as small a space as a two-horse team. Vineyardists appreciate this close work and this short turning ability.



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LOS ANGELES

August 4, 1917

SAN FRANCISCO

California Black Fig Near St. Helena, Napa County





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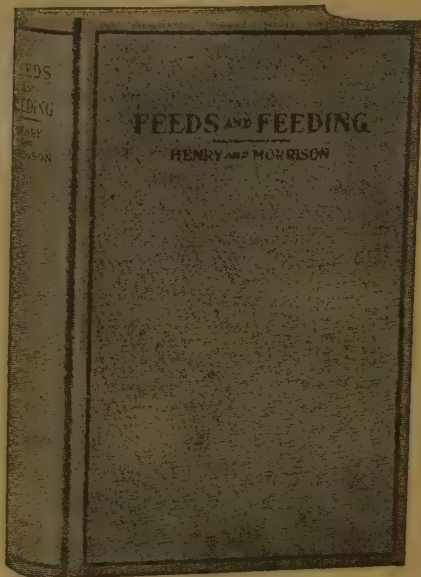
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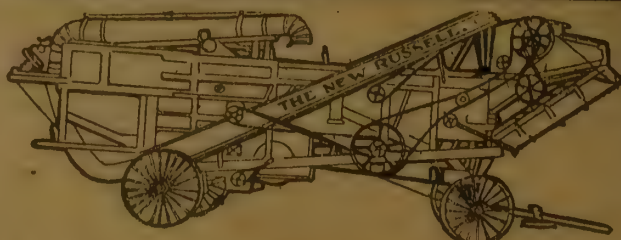
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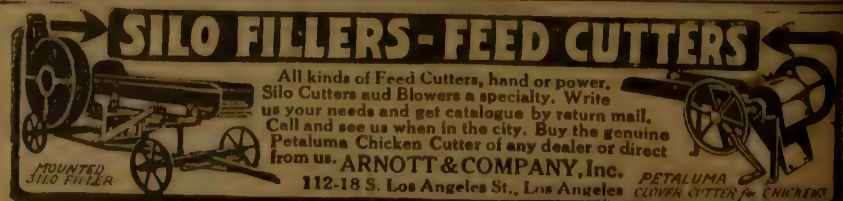
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# California Cultivator

Vol. XLIX No. 5

LOS ANGELES: August 4, 1917

One Dollar Yearly

## Harvesting Melilotus Indica for Hay

Written for California Cultivator by R. S. Vaile, University of California  
Citrus Experiment Station, Riverside



**M**ELILOTUS INDICA, commonly grown as a winter green manure crop, may be cut and cured for hay. It is rich in food value and when properly handled is entirely palatable to all kinds of livestock. Whether such a practice is wise in conjunction with Southern California orchards depends on many factors which the grower must weigh for himself. The following discussion is but an attempt to point out certain of the advantages as well as dangers which might attach to the practice. It is presented at this time because numerous inquiries have been received indicating a real interest.

If melilotus is to be used for hay it should be cut just before it starts to blossom. When allowed to stand longer it develops a bitter taste and becomes woody. As the lower part of the stalk is of low feeding value it is good practice to equip the mower with a high shoe so that a six-inch stubble may be left. This stubble will be of value to plow under.

One of the greatest difficulties in curing melilotus is that the harvest comes at a time of year when weather conditions are apt to be unfavorable for hay making, namely, late February or early March. The method of curing is very similar to that used for

alfalfa, but even greater care must be exercised because the leaves of the Melilotus are more apt to shatter. It is important that the leaves be saved as far as possible for they contain from two and one-half to three times as high a percentage of protein as do the stalks, as well as having very much less crude fiber.

If the crop is cut just before blossoming, leaving a six-inch stubble, a good stand should yield about a ton of hay per solid acre. When grown as an intercrop the yield per orchard acre will depend on the amount of land actually planted. This yield will not quite equal the tonnage that might be expected with barley. There is also greater danger of the crop being weedy in the case of Melilotus than in the case of barley.

On the other hand the feeding value of Melilotus is considerably higher than barley. Vorhees gives the following comparative figures in his book on "Forage Crops."

### GREEN FODDER

	Protein	Fiber
Barley .....	2.8	7.0
Melilotus .....	3.8	6.3

### DRY HAY

	Protein	Fiber
Timothy .....	6.3	29.3
Melilotus .....	14.1	27.3
Alfalfa .....	16.5	27.1

Feeding experiments conducted at several experiment stations indicate that Melilotus hay contains as much digestible protein as alfalfa and more than red clover. Feeding trials that have come to the writer's attention in Southern California indicate that Melilotus is a highly desirable feed, either as hay or silage, comparing favorably with alfalfa.

Judging by the work with cowpeas in the South and clover in Pennsylvania (similar crops because all are legumes) it would seem that the plowing under of the Melilotus stubble might be of some actual benefit to the orchard. In any event the damage following the removal of the hay as compared to clean culture through the winter would in all probability be negligible unless excessive drying out of the soil moisture was allowed to take place. This would not be the case in a normal season provided fall irrigation was practiced and the crop was harvested, as indicated, by early March. Barley left to mature for hay, on the other hand, would dry out the soil unless water were available for ample early spring irrigations.

Provided a ton of hay per acre was harvested, from 40 to 50 pounds of actual nitrogen would be removed. No

matter whether this nitrogen was taken by the plant from the soil or from the air, the practice of harvesting the hay as compared to plowing under the green manure crop would take about one-half pound of nitrogen per tree away from the grove. It would take 350 pounds of dried blood per acre to equal this amount of nitrogen. At present prices this dried blood (or commercial nitrogen in any other form) would cost very nearly \$15.00. Maybe the hay would be worth this much, maybe it would not.

Where orchard work is organized on a large scale so that the harvesting of hay would interfere with some other operation the practice would seem very questionable. On the other hand small unit orchardists might be able to utilize their teams to good advantage in this way for a few days previous to time of plowing. Hay enough to last some time could be harvested and the manure from it would ultimately be returned to the grove. The fact that part of the usual cash outlay would be avoided is another factor in favor of the practice. Certain it is from the standpoint of the orchardist that removing a Melilotus crop would be far better policy than removing a grain hay crop.

## Save Citrus Wastes

Three Bureaus of the U. S. D. A. Unite in Investigations and Laboratory Work  
and Fruits Which Formerly Went to the Washes Now May be Made Into  
Choicest Products for the Table or Into Chemicals for the Laboratory



**T**HE citrus industry is getting into a position where it is "saving even the squeal." Oranges and lemons are of all shapes, sizes and conditions, and while the greater percentage are attractive, there are many which may be of high quality yet still have certain defects which prevent them from going to market. For years these were dumped at the roadsides or in the "washes," or more lately a little return was received from them by putting them in the orchards for the small measure of fertility which they return to the soil.

From time immemorial the Italian orchardist has saved some of his product and his orchards have been the source of the citric acid of the world. As a rule the work of the small factory in occasional centers is the turning of lemons into citrate of lime, which later goes to the laboratory and is refined.

### Citrate of Lime

For many years systematic efforts were made in California to save some of these citric wastes. A factory was established at San Diego and citrate of lime manufactured and sent to Eastern laboratories. Marmalades, candied peel, dried peel, candied pulp and other products have been gradually improved upon until today there



Kumquat Orange  
Courtesy Teague Citrus Nurseries

are several factories in various Southern California points. The largest of these is at Corona and now another is being erected at the same place.

### A Laboratory

The bureau of chemistry of the department of agriculture has maintained a laboratory on Anderson Street, Los Angeles, for several years, in which chemists have been studying by-products and other problems. There is a factory conducted by the department, connected with the institution, and work has been carried on not merely to determine chemical questions but to perfect a commercial, practical process of handling these wastes.

This investigation and private work has continued until today the state is manufacturing refined citric acid, citrate of lime, orange vinegar—by the way one of the finest—, orange wine—though this is negligible—, evaporated orange, dried peel, candied peel, the dried citron of commerce, tincture of lemon peel, lemon oil, orange oil, and—the latest to be tried—fresh frozen orange pulp.

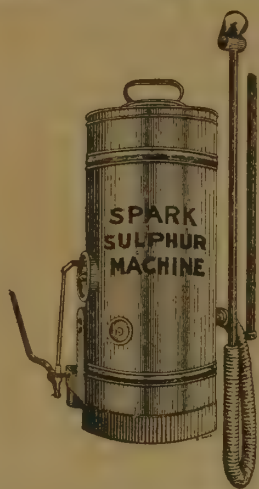
### Save the Orange

For years there has been experimental work in preserving this fresh orange pulp. Oranges have been peeled and the entire pulp reduced by vacu-



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## Soil and Water Analyses

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Mark Walker, B.S., 211 W. First St., Los Angeles

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um evaporator. It has been sterilized by heat, but always with unsatisfactory results; it had a "cooked" or other unsatisfactory flavor. Now the laboratories have tested and found satisfactory a process of freezing. The pulp and the juice are placed inside a receptacle, reduced to 14 degrees Fahrenheit, put in protected containers and sent by express directly to soda fountains, pie factories or other large consumers. Experimentally it has been found successful; the flavor remains perfect. It will be a problem of economical production to determine as to whether or not it will prove out commercially.

### The Peel

Evaporated orange has been very satisfactory. This is the pulp, rind and all reduced by simple evaporation. Sometimes to this has been added perhaps 20 per cent of sugar, but it has been found equally satisfactory to reduce to the dried state without sugar. This pulp is then packed in barrels and shipped to the larger Eastern centers.

The candied peel and dried peel have perhaps taken a greater percentage of the culls than any other one by-product. Production of citron, cured and ready for the consumer, has not proven successful. The process has been tried several times, but now we believe there is only one orchard in California, and that is about seven and a half acres near Riverside. A factory was established and the peel processed, but more recently contracts have been made with Eastern houses, and the rinds are sent direct to the market, the same as the citron of Italy, packed in brine.

### Specialists

Referring again to the by-products laboratory in Los Angeles. It is in charge of E. M. Chace, and beside the regular corps of helpers there are an assistant chemist, a junior chemist and a plant physiologist.

As this report indicates, there have been other questions than simply the chemical laboratory problems investigated from this laboratory. For instance during the last two shipping seasons the force has spent much time in the Imperial Valley, and in fact is now in the Turlock melon producing sections investigating both physical and chemical conditions of cantaloupes. This year some most valuable lessons have been learned. This work of the bureau of chemistry has been carried on in connection with the bureau of markets and the bureau of plant industry of the department of agriculture. These three bureaus have worked together for some years on these shipping problems.

This year in the melon fields ventilating has been one of the principal subjects of investigations. Fruit in various stages of ripeness has been picked, some shipped and some kept in refrigerator cars on the siding in Brawley as nearly as possible under the same conditions as the fruit which was going to market. And here, as with the orange shipping problem of some years ago, the necessity of careful handling has been the principal lesson learned. That is the most difficult of all problems, that is, where a dozen trainloads of melons are to be picked, hauled, packed, loaded and refrigerated within every 24 hours the number of helpers required is very great. At best much of this help is indifferent. The fully ripe melon handled by experts of the department has been found to keep and to reach the market in best of condition. Either ripe or comparatively green

melons reach the market in bad condition so often as to show that there is a great lack of careful work.

This passes the problem on to the grower and the packer, but it must be solved.

As noted, part of the force is now in the Turlock melon fields making investigations there. Later, investigations will take up grapefruit, Bartlett pears and dates. The period at which dates should be harvested is a comparatively new question. Another problem is that of the avocado growers. Growers do not understand the

proper time to pick an avocado to have it at its best. Mr. Chace remarked that he had seen avocados in the market in Los Angeles which should not have been removed from the trees for months, yet offered as salable fruit. These are not all of the questions considered; new ones are coming up daily which will offer plenty of field for investigation by experts.

Under the direction of Mr. Chace is also a small laboratory, formerly maintained at Tampa. This will probably be removed to Gainesville and be conducted in connection with the experiment station of Florida.

## Pruning as Practiced in the Natomas Olive Grove

By Edward K. Carnes in Olive Journal

**P**RUNING is a matter of judgment, not a rule.

Pruning is as natural and as old as any other orchard operation. Nature has always adopted this method for reducing the exceedingly large number of buds and small sprouts from growing into large branches and thereby overtaxing the energies of the tree. She prunes regularly and at the right time, leaving no large and ugly scars. Good pruning should follow this rule of nature.

It would be folly to even attempt to give definite instructions about how to prune olive trees; since there are no two trees that are exactly alike. No two trees can be pruned alike if they are properly pruned. Pruning is a matter of judgment, not a rule; some individual judgment has shown marked results over the system practiced by the majority of our growers, which result may have been influenced by locality, soil conditions, culture or climate.

When the tree is planted every side branch is removed till the tree is like a buggy whip; it is headed back to 18 inches, the top painted and tree protector put on. We never cut a single leaf or branch from it that grows the first year.

When a year old (spring), having been headed low, three to five limbs only are allowed to form the scaffold, all limbs cut as near the trunk as possible so the wound may heal over quickly. The healing of the wound depends on the activity of the cambium layer; this layer is most active in the spring after the tree starts to growing. Prune shortly before the growth starts.

We distribute the scaffold branches around the trunk, also up and down (not opposite), so when we finish, looking down at the trees the remaining limbs resemble the spokes in a wagon wheel.

Next season shorten it, round up

and shape the tree and remove cross limbs. We figure the pruning a tree secures during its first few years determines the shape of its future head and reduces the necessity of future heavy pruning. Most of the unruly or wild limbs are removed on the young trees before they become a nuisance or have robbed the tree. We conserve the tree's strength for good limbs. We find if intelligent training is given the young tree it does not need "pruning" later on; only "trimming" after it comes in bearing.

### Fruit Wood, Water Sprouts and Two-Year-Old Wood

Can you go up to an olive tree and pick out from a bunch of "shoots" the ones that will bear fruit; these that will outgrow their neighbor by three times and finally be a "sappy" branch, that will never produce good fruit if any? Can you tell wood that is two years old, that has borne fruit?

We figure that an olive only produces fruit on two-year-old wood, once and once only.

Can you pick out the fruit wood limbs that will grow upward in a drooping curve? Can you tell a "water sprout" olive branch? Can you detect limb rubs and cross-limbs? Can you remove a limb and not leave a stub? Do you figure an olive tree produces the best fruit on long or short limbs? If necessary to remove a limb, would you "stub" it off, or go back to its origin from the trunk? Can you "balance" a tree top in pruning?

These are some of the questions we ask a "pruner" before we turn him loose in our orchards, and if he can't answer them correctly and is "just a tree pruner," we put him with a man who has been taught our system for a week and then watch him carefully.

By marking certain limbs that are "different," we believe after four years of watching their performance we can tell the things set forth in our questions.

## Investigating Markets

Written for California Cultivator

**O**NE of the most useful activities of the department of agriculture, which is closest to the people, is that of the bureau of markets. It is one of the newer bureaus of the department, but its work has saved millions for the producers of the country. The Southern California branch of the bureau has its office in the Federal Building in Los Angeles. It is in charge of A. W. McKay. His assistants are V. W. Ridley and C. P. Schuster, and they are assisted in fruit handling field work by G. L. Fischer

and A. V. Stubenrauch, Jr., and Special Investigator in Fruit Storage, C. W. Mann.

These men are investigating field conditions, storage conditions, and especially conditions in the interior of the car while in transit, taking day by day temperatures. These temperatures, by the way, are taken in various parts of the car in a most unique way.

Thermometers are arranged, one at the bottom of the car near the bunkers, one at the door, and one midway—these all at the floor. At the top of the car are three others similarly



located. Through these electric connection is had with the outside. The investigator comes with his reading instruments and reads reports of temperature conditions in various parts of the car over these wires. Report is filed, and later at the office a chart is constructed showing temperatures from these six thermometers.

Every day or, if desired, every hour of the day, from the time the car leaves California until it is unpacked in New York or other markets, a record may be had of these cars. These charts are more than interesting. Of course the thermometers at the bunkers and at the floor show the lowest

temperatures. The temperature rises toward the center of the car and is always very much higher at the top of the fruit. The variation in temperature is sometimes as great as 10 degrees between thermometer at bunker at the floor and in the center at top of the fruit.

An effort is made to equalize these temperatures as much as possible, but since the railroads have required heavier loads it has been necessary to put in an additional row of fruit through the car, and this has left almost no air circulation space in the alleyways and has complicated the problem.

## Tulare County Lemon and Grapefruit Association

In the Porterville Messenger of July 2 we note:

"Organization has been completed of the Tulare County Lemon and Grapefruit Association with the receipt of the association charter from the state officials. The newly elected officers are:

"W. E. Sprott of Porterville, president; A. W. Swain of Strathmore, vice-president; W. S. Shippey, secretary, treasurer and manager. Directors are W. E. Sprott, A. W. Swain, V. A. Parr of Tulare; H. L. Matzke of Plano; B. L. Morey of Strathmore; J. Althouse of Plano; E. R. Abadie of Deer Creek.

"On recommendation from Manager Shippey the directors approved of a purchase of a site for a new packing house to be located at the junction of the Santa Fe and Porterville North-eastern railroads, giving the new asso-

ciation trackage over the two lines. Plans for the building have been roughly approved and it is proposed to begin work on the construction of the building without delay. The contract for the building will be conditioned upon its completion in time to handle the output of the coming season.

"This building will be 80x100 feet in size, will be built of hollow tile and will embody the very latest ideas of this type of construction to allow for the rapid and economical handling of fruits.

"Offices of this company, with the Sunland and Plano associations, of which Mr. Shippey is also the manager will be consolidated for the purpose of saving overhead costs. Quarters for the organizations have been secured in the Thomas building and will be opened there in due course."

## A Bigger Yield From the Same Field.

From any field that you have been manuring by the hand method you can get a bigger yield if you use the spreader method—and save much time and labor.

A good spreader tears up the manure into small particles and spreads it evenly. The manure goes farther. It can be worked well into the seed bed so that the plant roots get all of its valuable plant food. *Wasting manure is like wasting money—a good spreader makes every particle of manure count.* A Newton County, Ind., farmer testing the spreader and hand methods of applying manure on two ten-acre tracts found that the spreader method gave 120 more bushels of corn, 140 more bushels of oats and 9 more tons of clover.

## The John Deere Spreader

The Spreader with the Beater On the Axle

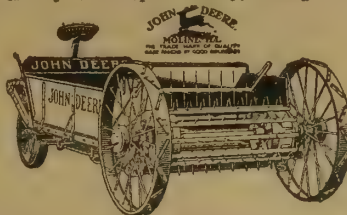
has special capabilities for increasing your crop yields. Its exclusive features make it the ideal implement for the best method. Ask any owner of the John Deere Spreader about the way it increases crop yields and saves time and labor. After you have operated a John Deere Spreader of your own for a year, you will fully appreciate how much these gains really mean. You'll find that the Spreader with the Beater on the Axle more than pays for itself in one year from the gains it gets on even a fair-sized farm.

The beater on the axle construction eliminates all chains, clutches and scores of other trouble-making parts. Does away with half the types of castings otherwise necessary. Does away with adjustments. Puts upkeep at minimum. Makes the John Deere Spreader exceptionally long-lived.

Beater is all steel—practically indestructible—runs on roller bearings, aiding light

draft. Beater teeth spirally arranged—tear up manure perfectly and distribute it evenly. Deliver manure close to the ground—wind does not affect spreading.

Revolving rake feeds manure to beater evenly, aiding in uniform distribution.



Shock-absorbing spring relieves spreader and horses of sudden strains.

Spreader only hip-high to top—easy to load. Big drive wheels—light draft. Ball-bearing apron drive—apron travel frictionless. Simple

gear attachment keeps weight of load from making apron race when spreading up hill.

Easy to operate—only two levers—one lever determines number of loads spread to the acre; the other starts and stops the spreading. It's so simple, a boy can operate it.

Wide-spread attachment for extra wide spreading.

Write for booklet on the John Deere Spreader.

## A Special Plow for California Orchards

Plowing conditions in California orchards demand special plow construction. A serviceable plow must stand the severe strains occasioned by the soil conditions and operate close to the orchard trees.

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Man Size

One alfalfa root and its products. Fred Shaffer, secretary Yolo County Board of Trade, is trying to reach it. The weight of the single plant is 21 pounds, the root is two inches in diameter, it stands over eight feet high. Ask Yolo County about it at the coming state fair. Shaffer will be there.



## Standardization



COMMISSIONER COLLINS of Tulare County calls attention of the fruit shippers to the provisions of the new standardization law, the enforcement of which rests upon the county commissioner. Regarding the new law Mr. Collins writes:

"The Balling test for the early grapes remains the same—17 per cent while the Emperors, Gros Colman and Cornichon must test 16 per cent Balling scale.

"The most important change affecting growers and shippers of deciduous fruits is the one requiring local as well as interstate shipments of all packed fruits to comply with all requirements of the law. This will necessitate the dumping or working into by-products of all fruit rejected at the packing sheds. All growers should note this and use due diligence in picking their fruit and thereby save

the inspector the disagreeable duty of rejecting their fruit, and themselves the loss of it, as this clause will be rigidly enforced. Fruit shipped to the local markets may be inspected and rejected at the destination if, from accident or design, the shipment does not comply with this law.

"The strict observance of this law will work no hardship on any one but will eliminate fraud and deception.

"The law governing the standardization of fresh fruits although it has been in operation but two years, and in a crude form at that, has done more than any other one thing toward putting that industry on a sound financial basis.

"There are many minor improvements in the new law and we cordially solicit the hearty cooperation of the growers and packers alike in our efforts to secure the best results from these changes."

## Tractor Men Meet



PHOTOGRAPHED below is a live wire bunch of Southern California Tractor and Implement people planning for the demonstration to be pulled off September 18-22, just without the limits of Los Angeles. It will be noted that the banquet table is in the form of a great letter T, which shows the importance placed upon the tract-

or by the organization. They feel that patriotic America demands tractors put into the hands of farmers, which shall be efficient and economical.

This organization has been in existence for a couple of years and offer-



Traction Engine & Implement Dealers' Association of Southern California banquets at the Alexandria, Los Angeles, and prepares for the big demonstration September 18-22. Standing at the rear the tall man, in light gray suit, near center in front of flag, is President O. H. Stevens; at his right is Secretary W. L. Cleveland; at his left Mr. Rosewater.

ed the greatest tractor demonstration yet held west of the Rockies, at Puente last season. A still greater is now planned, and almost everything which will be of interest to producers of California and Arizona will not only be exhibited but there will be demonstrations in action.

It was deemed fitting that the "father of tractor demonstrations" should give the 1917 demonstration an initial push-off, so Chas. C. Rosewater, founder of the Twentieth Century Farmer of Omaha, Nebraska, in 1913, was the principal speaker of the evening. Mr. Rosewater gave an account of the corn exposition held in Omaha, which practically led up to the tractor demonstrations. At this first demonstration 27 concerns made various exhibits. One of the exhibits was the original Ford tractor for which the public still waits. As Mr. Rosewater says, perhaps the greatest lesson of this first demonstration was the showing to the makers of tractors not only some of the good points of their own and their competitors' machines, but also some of the weaker points. Several hundred acres were provided and actual field work was engaged in, with implements attached.

Today with tractors more nearly reaching standardization, the tractor demonstration is useful more as an educational feature to the producers

than to the manufacturers. Mr. Rosewater said "You must tractorize every territory." The tractor is today accepted in a general way by nearly every farmer, but it has not yet become a living, producing thing on his ranch because of his lack of knowledge of its full capacities. This demonstration should be an education to the farmers who attend. It must be burned in that the tractor not only saves horsepower, but man power, time and money, and it conserves moisture.

## Export License Required on These Articles

Because of war necessity none of the articles listed below are permitted export without license. This list was authorized on July 23:

Coal.

Coke.

Fuel oils: Lubricating oil, benzol, head lantern oil, toluol, naphtha, benzine, red oil.

Kerosene and gasoline including bunkers.

Food grains, flour and meal therefrom: Corn flour, barley, rice flour, rice, oatmeal and rolled oats.

Fodder and feeds: oil cakes and oil-cake meal, malt, peanuts.

Meats and fats: poultry, cottonseed oil, corn oil, copra, cocoanuts, desiccated, butter, fish, dried, canned

The tractors now offered on the market are good, that is, their manufacturers have learned the best lines upon which they should be built. There are still improvements which can be made, and they are being made every day.

President Smith of San Francisco, representing the California Tractor Men's Association, offered the goodwill of that association and assured the Southern California association that they would work together in advancing tractor interests.

or fresh, grease, inedible or edible of animal or vegetable origin, linseed oil, lard, meats, all varieties, tinned milk, peanut oil and butter, rapeseed oil, tallow, tallow candles, stearic acid.

Pig iron.

Steel billets: steel sheet bars, steel blooms, steel slabs.

Ship plates and structural shapes: iron plates, "I" beams, mild steel plates, rolled steel plates, steel channels, steel angles, mild steel plates, ordinary tank quality, steel beams, steel plates, 1/2 of inch thick or heavier; steel sheets, 1/2 inch thick or heavier are classified as steel plates, steel tees and zees, structural steel shapes, boiler plates, tank plates, steel doors, steel car frames, steel towers.

Scrap iron and scrap steel.

Ferromanganese.

Fertilizers: cattle manure, shredded, nitrate of soda, poudrette, potato manure, potassium salts, land plaster, potash, cyanamide, phosphoric acid, phosphate rock, superphosphate, chlorate potash, bone meal, bone flour, ground bone, dried blood, ammonia and ammonia salts, acid phosphate, guano, humus, hardwood ashes, soot, sheep manure, pulverized, anhydrous ammonia.

Arms, ammunition, and explosives: nitrate of potash, rosín, sulphur, salt-petre, turpentine.

## Deciduous Tree Gumming



GEORGE QUINN, horticultural instructor of the South Australian government, discusses the matter which is of concern to every deciduous fruit grower in a recent issue of the Fruit World of Australasia. He says

"Gum is simply sap which has been exposed and congealed or changed by contact with external agencies. Frequently, however, the change is made in stone fruits through the agency of fungi which have gained an entrance by wounds of a greater or lesser extent, or even by means of the buds, which are less able to resist than the more solid bark. The exudation from wounds made by pruning is increased when the pruning is performed at a time when the sap is still slightly liquid, but not actively flowing, as it is when the tree is making or sustaining foliage. One cannot say that early, medium or late pruning after the leaves have fallen will give rise to it in any given season, for the simple reason that in our climate the solidifying of the sap is scarcely completed some years before it begins to liquify again. In cold, dry winters the tree either goes more completely to rest, and the solidification of the sap is more complete, or the closing up of

the channels at the cuts is more rapidly attained by natural processes of cauterization (drying).

"In a year like the present the peeled-off bark, especially on young trees, even at midwinter reveals a moisture to the touch in the sap layers and when the weather is consistently wet, so that the cut ends do not dry up. This sap is bound to exude and congeal into gum. Unless wound fungi find a lodgment on these cut ends the gum will solidify as soon as the weather turns dry and form a sort of natural plaster.

"In respect to artificial dressings to prevent injury, grafting waxes will not, as a rule, adhere to moist surfaces. The best suggestion I can make is to spray or paint the cuts with a strong fungicide, such as Bordeaux mixture. This will disinfect the wounds and keep out decay-producing organisms until the healing tissue is drawn over the wounds by the action of the tree's growth. I may say in a general sense I believe the very prevalent decline of our apricot trees will be found to have been hastened by the heavy prunings of winter having made bad wounds, which have admitted decay into the fibrous tissues of the limbs and trunks

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of the trees, thus lowering their vitality, although externally there is little evidence to this effect at the time. When a severe strain, such as the protracted drouth of recent years has imposed upon the trees' powers, this lowered vitality must prove an important factor in deciding whether they shall live or die.

"I believe, if it is possible to initiate a system whereby the making of these large wounds can be avoided, and the energies of the tree in building up its permanent structure be

directed into the desired channels during the growing season, much will be achieved toward increasing the tree's chances of sustaining a long life. As an indication of the practical application of this theory I suggest several summer manipulations in the form of disbudding surplus shoots, even to complete suppression, whilst others more suitably placed have their terminal points pinched out to cause them to subdivide into growths needed for framing the tree or maintaining a supply of fruit-bearing shoots."

## Watermelon Syrup

A delicious table syrup can be made from watermelon and affords a convenient means of using the surplus watermelons which otherwise are allowed to spoil in the field. This syrup can be used immediately or can be bottled hot in sterilized jars and kept just as is done in the canning of fruit. It is reddish brown in color, very sweet and well flavored and will serve most of the purposes for which syrup is used in the home. Directions for making are given by The Fruit Grower of St. Joseph, Missouri.

### Directions

Remove the pink flesh and seeds from the rind of sweet, fully ripe melons. Crush the flesh with a potato masher or by running it through a meat chopper. Place the crushed pulp and seed in cloth bags and squeeze out the juice, which flows out readily. About five-sixths of the pulp will squeeze out as juice. About 13 gallons of the juice will make one gallon of syrup. This amount of juice can ordinarily be secured from ten watermelons weighing from 22 to 25 pounds each.

The juice is then boiled down into syrup in an ordinary preserving kettle. The juice boils without much foaming until it begins to thicken, when the fire should be slackened to prevent foaming and burning. The red coloring matter in the juice coagulates during boiling and part of it

rises to the surface, where it can be removed by skimming. The remainder floats about in the juice forming red particles which gather near the top. Toward the last of the boiling the syrup must be watched constantly. If the housewife has a candy thermometer she should take the syrup from the fire as soon as it reaches a temperature of 220 degrees Fahrenheit, otherwise she should let it cook until a small sample on cooling is about as thick as maple syrup.

When the boiling has finished the syrup can be set aside to cool in covered vessels or can be poured while hot into cans or glass containers and sealed.

Where a cider press is available the melons can be cut into pieces and arranged on the press so that the pressure will extract the juice of the pulp before it presses the rind. The juice of the rind is not so rich in sugar, and experiments with rind juice alone indicate that it is not suitable for syrup.

### To Remove Red Coloring Matter

If it is desired to make syrup free from red particles, start the syrup boiling, and when some of the coagulated matter has been removed by skimming, transfer the juice to tall glass jars or other tall containers and allow it to settle and cool for a few hours. This allows the red particles to settle to the bottom. The upper part of the juice can then be poured off and boiled into syrup.

## War on Pine Beetles

War has been declared upon the beetles that annually destroy sugar and yellow pine timber to the value of hundreds of thousands of dollars in the forests of California. The forest service, the park service, the large lumber companies, and timber owners (representing holdings amounting to 16,000,000,000 board feet), have placed survey parties along the Sierras from Eldorado County to the Tehachapi to find out actual extent of the damage and plan a campaign that will control this enemy of the forest.

It is the habit of these insects to attack a healthy pine or fir, bore rapidly through the dry bark to the cambium layer, the vital tissue between the wood and the bark, and here drill their galleries in which the eggs are laid and the larvae hatched. The larvae mature into beetles and eat their way out to the surface, fly to a new tree and commence the vicious cycle over again. California's pine forests have been subject to attack since time immemorial.

The beetles have their natural enemies. Other species of insects wait at the mouth of the exit holes and when the new hatched beetles emerge, pounce upon and devour them. Woodpeckers and other birds take their toll. The attacked tree also puts up a stubborn fight. As the beetle bores

into the wood, it is met with a great flood of pitch exuded by the tree in an attempt to drown its enemy. Sometimes the pitch flow will down the entire colony. Of late years, however, woodsmen have come to believe that the ravages of these insects are on the increase. The government and the timber owners have declared a war to the knife.

### PEAR GROWERS, ORGANIZATION

Pear Growers of Napa County recently met and discussed the advisability of organization to secure more satisfactory returns in the market on both fresh and dried pears. E. B. Anderson of Contra Costa County spoke of the methods of work of the cooperative organization of that county. After discussing the question from all sides the following was adopted:

"Whereas, it is the general opinion at this meeting that a permanent organization should be effected in the County of Napa, in conjunction with the other counties of California, to promote the general welfare of the green and dried pear industry.

"Resolved, that such organization be effected, and that the pear growers of this county obtain for their green fruit, f.o.b. cars, not less than \$55 per ton this season."

### GLENN COUNTY FARM BUREAU

Meetings will be held during August as follows: 6 and 7 Ord, night meeting 7; 9 and 10 Larkin, night meeting 10; 13 and 14 Codora, night meeting Tuesday 14; 16 and 17 Jacinto, night meeting Friday 17; 20 and 21 Orland, night meeting Tuesday 21; 23 and 24 Plaza, night meeting Friday 24; 27 and 28 Elk Creek, night meeting Monday 27. Regular directors' meeting, Willows, 10 a. m., Saturday, August 4.

Mr. Essig, of the division of entomology, University of California, will be in the county during the month conferring on the subject of crop pests.

The farm adviser has been appointed county director for the United States Boy's Working Reserve. Enrollment by boys between the ages of 16 and 21 can be made with the county director.—W. H. Heileman, farm adviser.

### SECRETARY OF THE CHAMBER

H. S. Maddox, who has been secretary of the state horticultural commission since Commissioner Hecke has been in charge, has tendered his resignation and accepted the secretaryship of the new Consolidated Chamber of Commerce of Sacramento. Mr. Maddox was formerly secretary of the Yolo County Chamber of Commerce and has been a Sacramento Valley booster at the exposition and in every possible position. His election to the Sacramento chamber was unanimous.

"I cannot commend the work of Mr. Maddox too highly," said Commissioner Hecke, "and would prefer, of course, to have had him remain with me. I realize, however, that his nature leans toward more thorough action—a broader field—and Sacramento and her business interests need the touch of virility he can lend."

### NEW MANAGER FOR LIMA BEAN GROWERS

R. L. Churchill has taken over the management of the California Lima Bean Growers' Association from F. A. Shipley who recently resigned.

Recent annual election resulted in election of C. C. Perkins, president; R. G. Edwards, vice-president; W. H. Stiles, secretary; and W. S. Saviers, treasurer. Board of directors, re-elected, are: B. F. Barr, T. A. Rice, Richard Bard, John Lagomarsino, M. H. Butcher, E. S. Stowe, W. C. Jerome and George W. Moore.

### SWEET CLOVER

"Sweet Clover; Growing the Crop," Farmers' Bulletin 797, by H. S. Coe, published by the United States department of agriculture, Washington, D. C., is being distributed. Write the department at the above address.

### DOWNEY FAIR

Wm. Booth, chairman of the exhibit committee of the Downey Community Fair, informs us that Saturday of this week in the high school grounds at Downey will be pulled off a real live wire fair. It is featured for the purpose of aiding the Red Cross and also to show up an exhibit of agricultural products of that section of Los Angeles County. This is the second fair of the kind. It is hoped by another year live stock may become a feature of this fair.

### SHORT COURSES

The university farm at Davis is making preparation for short courses which will be given at the farm September 24 to November 2. Dean Van Norman writes: "Practical ranchers who have attended these courses say that the money spent for board and room has been repaid many times over in what they have learned from the farm staff, in the fields, flocks, and orchards of the farm, and from ranchers with whom they they have spent many hours of contact.

"Many young men fail to go to the short courses merely because they don't know of the opportunity. We are glad to tell them, and doubtless you will be glad to pass the word along. If you don't know about these short courses send to University Farm School at Davis for the short course booklet; it alone is well worth the bother of writing such a letter.

The department of engineering of the state of California is issuing Bulletin No. 3, "Investigations of the Economical Duty of Water for Alfalfa in Sacramento Valley, 1910-1915." It is a valuable publication based on data gathered under cooperative agreement between the office of public roads and rural engineering of the United States Department of Agriculture, the California State Department of Engineering and the University of California Agricultural Experiment Station, and reprinted from the Fifth Biennial Report of the Department of Engineering.

The Santa Paula Lima Bean Growers' Association at its recent annual meeting elected the following officers: President, W. H. Fleet; vice president, H. P. Balcom; secretary-treasurer, A. F. Walden, director and representative on central board, M. H. Butcher. The other directors are L. E. Mills, R. C. Joy, Erret Norman and A. G. Waters.

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# Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

## Evaporating Apples

Please give information in the Cultivator as to best method of evaporating apples. — Subscriber, Redwood City.

Sun-drying of apples is followed in the dryer, warmer valleys. They are dried much the same as other fruits but care must be used to sulphur soon after cutting. If this is not attended to the apples darken and a less attractive product is secured.

## Nests

Will you please give me a description of a nest that the hens will not scratch all the straw out of. I have deep nests and it would seem impossible for them to get the straw out but I will put in nice clean straw while they are eating their breakfast and go out in an hour and there will be none left. They practically have to lay on the bare boards. — Subscriber, Glendora.

Why not try trapnests? If you will send a postal card to Agricultural Experiment Station, University of California, Berkeley, California, asking for Circular 142, you will find in this circular complete description and diagrams of California trapnests. Nos. 1 and 2, both simple designs easily made at home. No hen could scratch the litter out of one of them, for she is shut in as soon as she enters and must stay ill she is let out. If you do not care for the trapnest, try the bottomless nest, which is merely a deep box or series of boxes without a bottom, set on the scratching litter on the floor of the house. This nest may be entered from the end or from the top. In the latter case the box will have to be made long enough to permit the hen to jump down in the nest beside the eggs, not on them. The use of something other than straw for nesting material might help to break the hens of their annoying habit. Sawdust is very good for this purpose and mites do not breed in it as they do in straw. Clean sand makes a good nest, and dry leaves are not as readily scratched out of the nest as straw.

## Starving for Molt

Would like information regarding starving hens through the molt, a practice quite prevalent some years ago.—Subscriber, Arroyo Grande.

The starving plan has been almost entirely discontinued. Mrs. Koethen's "Poultry for Profit" says: "The practice of starving the hens in order to force an early molt is condemned by nearly all experiment stations. After experiments with White Leghorns covering several seasons the Cornell station declared that there was nothing whatever to be gained by forcing the molt." Of course overfat hens should have a somewhat reducing ration at this time of year.

## Apricots Rotting

Please advise what causes apricots to rot on the trees. Have two four-year-old Royal apricots, which have been pruned, sprayed and thinned. Both set a good crop of fine large fruit but the fruit is now splitting at the end and rotting on the tree, some even rotting without splitting.—Subscriber, Ontario.

This seems to be a new trouble and has not only appeared in the Ontario section but is probably the same trouble which is affecting apricot orchards

of Madera County. At first the trouble in that section was thought by the horticultural commissioner to be due to insects. However, we wrote him regarding it and have the following: "In reply to your inquiry with reference to damage to apricots by beetles, after further investigation I have concluded that the origin of the trouble is a soil moisture or climatic condition which causes the fruit to crack on the end just about the time it is commencing to get ripe and while still very firm and often a little green. My first observations led me to believe that the trouble was caused by a little snout beetle; I afterward found other beetles. These beetles, no doubt, entered the fruit after the opening became larger so that the pit was visible, and because of the air conditions or work of beetles fermentation took place and there was considerable loss on some varieties."

It is possible the trouble is due to abnormal weather conditions, which may not occur again for years.

## Dipping Prunes

Please give formula for lye dip for dipping prunes before drying.—Subscriber, Los Angeles.

The strength of the lye solution depends on the ripeness or condition of the fruit and degree of heat. If the prunes are fully ripe or partially dried and the water is not boiling some use as strong a solution as one pound of lye to ten gallons of water. When care is used to keep the water at boiling it may be used as weak as one pound to 50 gallons.

## Summer Blight of Tomatoes

I have several acres in tomatoes which were irrigated on alternate sides every seven or eight days while they were young, since then irrigated as needed, and always kept thoroughly cultivated. Now and then a vine looks lighter in color, later begins to wilt and finally dies. We can find nothing wrong with soil conditions. Is this blight and is there a preventive or cure?—Subscriber, Hemet.

This is probably summer blight, one of the worst diseases of the tomato field. The bacteria may have been present in the soil at planting time or may have been introduced with the plants. Their action is largely upon the inner tissue or roots and affects them so that they are unable to take up moisture or nourishment and the plant dies of starvation. There is no cure for affected plants. The only treatment is preventive. Care should be taken in making the seed-bed to use new clean soil, free of any fungous or bacterial trouble, then set plants in ground known to be free from the disease.

## Insects Infesting Dried Fruit

Please advise how to prevent insects getting into stored dried fruit.—Subscriber, National City.

The best way is to take the fruit in at noon-day when the heat of the sun has killed all forms of life. Then if the fruit is not over-dried and it is kept in the sweat bin entirely free from insects it should be all right to pack away. However, if one wishes to be sure or if eggs have been deposited on the fruit, then before packing away it may be placed in wire baskets and dipped in vats of boiling water. After the dipping place in a dark or insect tight room for the surplus water to drain off. In 24 hours it will be ready for packing in boxes or tight containers.

# Legal Queries

Louis B. Stanton, attorney, 243 Wilcox Building, Los Angeles, will answer legal queries in this department.

Immediate mail replies cannot be given except where fee to Mr. Stanton is paid. When replies are wished in Cultivator address query to 115½ N. Broadway, Los Angeles.

## Poor Shipment of Potato Plants

I contracted for shipment of sweet potato plants, making part payment and stating that I would remit balance on safe arrival of plants in good condition. Plants arrived packed in huge packing case C. O. D. without permission of inspection. Upon opening case I found plants in heated condition and 1500 short, for which shortage I have made claim, which has been ignored. My check had been cashed prior to shipment, otherwise I would have refused delivery. Have I any legal claim?—Subscriber

Certain warranties are implied in every sale of personal property even though not mentioned in the contract. One is that a person who sells merchandise inaccessible to the examination of the buyer thereby warrants that it is sound and merchantable. The buyer has a right to inspect the thing sold at a reasonable time before accepting it and may rescind the contract if the seller refuses to permit him to do so. One who sells personal property must put it into a condition fit for delivery and, in case he agrees to deliver it to the buyer, must use ordinary care in forwarding it. You, of course, have a claim for the shortage, and, in case you can prove that the seller did not use ordinary care in shipping, you can hold him for any damage to the shipment caused by overheating. You would have been entirely justified in refusing acceptance when you were refused right of inspection and could have recovered your prepayment. Now, that you have taken the plants your safest procedure would be the action for damages.

## THE ANT NUISANCE

Written for California Cultivator

**A**NTS never seemed to be as pestiferous as this year. They come, and after they seem to be all killed off they continue to come. Buhach drives them away, poisons likewise, but the army is renewed. The only way to handle them seems to be to use every possible means, and persistently. As we have said, fresh buhach scattered almost daily is ordinarily effective. This is more in the nature of a repellent, however, than otherwise. Mr. A. E. Magoffin of Los Angeles County, has a "for-sure" remedy. It has been referred to before, but it is effective and well worth repeating. Mr. Magoffin writes: "I note in the Cultivator of April 14 someone asked how to get rid of ants, and I submit the following: Having served behind a drug counter for 52½ years, I speak from experience. Some years ago we were troubled greatly with ants, big and little. I located their holes near the house (for the house was overrun by them) and about sunset, when the ants had retired, I poured a few teaspoons of bisulphide of carbon in each hole and covered holes with a piece of sod. As the bisulphide is poisonous and the vapor is heavy, the vapor falls instead of rising. It goes down in the holes and destroys the ants. As gophers out here are numerous, I am using same treatment and so far am successful."

In addition here is a remedy recommended by J. B. Neff and given in our columns of October 7, 1916:

"Three tablespoons of honey, tartar emetic the size of a lima bean. Mix and put in two or three saucers and place where ants are proving troublesome."

And when these remedies have all been used, perhaps the commercial remedies such as ant paste, etc., may well be brought into requisition. They are effective if their use is persisted in. We may say that the ant paste proposition will work in the paper sack plan suggested in the issue of July 21, 1917.



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A half million pounds of wool was recently sold at Shaniko, Oregon, at 60¢ cents.



## The Two Spotted Red Spider in Cotton

By A. W. Morrill, State Entomologist of Arizona



ONE of the most widely distributed plant pests is the two spotted red spider. It probably occurs in every state in this country, having been definitely reported so far from 37 states. It attacks many greenhouse plants and consequently has an unusually favorable opportunity to be transported from one section to another.

This pest has been mentioned in reports of the Arizona state entomologist as infesting violets and strawberries in the Salt River Valley, but it has never before been known to be as abundant in this section as it is this season. It has been especially destructive to garden beans, to the foliage of the Dorothy Perkins rose and the blackberry. Among the other important food plants are cotton, alfalfa and tomato. A recent government bulletin records a total of 183 food plants observed in the cotton belt of the Southeast.

There is only one record of injury by this red spider to alfalfa. This was reported from Cochise, Arizona, a few weeks ago. This pest has done its greatest damage to cotton in the Eastern states where it has been estimated that the injury in some years amounts to \$2,000,000. It has not so far been found on cotton in Arizona, but it is practically certain that it will appear in cotton fields sooner or later, and it is important that cotton growers whose fields become infested discover the pest before it has an opportunity to seriously damage the crop.

The eggs are minute globular objects found on the under surfaces of the leaves. The young in the first stage have three pairs of legs, while in other stages there are four pairs of legs. This red spider is very variable in color; shades of green, yellow and red being common. The most typical coloration is brick red with two dark spots on each side of the body. The full grown females are less than a fifteenth of an inch in length and the males are much smaller than the females.

The leaves of infested plants turn ashy green in color as a rule but cotton leaves become rusty red and brown. Sometimes infested plants are more or less covered with a delicate web which is spun by the mites under certain conditions. The lower leaves of cotton plants are first infested and the mites spread upward as they increase in numbers.

It is believed that these mites do not pass the winter on cotton or in cotton fields, except in certain cases on wild food plants. In the cotton growing sections of Arizona the two spotted red spider is likely to pass the winter on strawberry plants, violets or other low growing food plants. Alfalfa fields should furnish favorable conditions for the overwintering of the red spider, but so far this crop has not been observed to be infested in cotton growing sections of Arizona. Cotton fields should be watched for plants presenting unusual appearances in order to detect this or other cotton pests before excessive damage is done. Weeds growing along roadsides or on the sides of fields should also be kept under observation or better still should be kept down. This will sometimes prove as important as cultivating or irrigating in producing a successful cotton crop.

After the red spider invades a cotton field two methods of checking it are available. First: when only a comparatively few plants are infested these may be pulled up and burned. Second: when the infestation is widespread control by spraying should be resorted to. For this purpose the best spray, so far as known, is made by dissolving one ounce of potassium sulphide in two gallons of water. The spray may be applied with a suitable garden sprayer if the infestation is limited to an acre or two of cotton. If the infestation covers several acres, however, a barrel pump carried on a wagon will be needed. Information concerning sprayers suitable for spraying cotton and other plants for the control of the red spider may be secured by applying to the state entomologist at Phoenix.

## Alfalfa Growers Association

Southern California alfalfa growers have organized in order to secure fullest possible return for their products. We have from the secretary, J. L. Farrar, the following statement of the methods of work of this organization. Mr. Farrar's address is Corona:

"The above organization has been going for some 12 months and up to the present time seems to have been very successful. It was started by the farmers in order to cooperate to get better prices for their product.

"The organization is made up of farmers. They elect an executive committee and officers to look after the business of the organization. These meet twice a month and discuss selling methods, market conditions, and matters of interest to the alfalfa grower. A central office is maintained with a man in charge, and through this office those members of the association who wish can sell their hay, the cost being to them 50 cents per ton. The central office in turn has connections with a broker in each county in Southern California, and he is allowed the 50 cents for handling

the hay. Thus the farmer's hay is handled at a minimum of expense and he is always assured the true market price. We have found that buyers going through the country greatly misrepresent market conditions. We keep in touch with the markets each day and inform the farmers of true market conditions.

"The expense of the central office is maintained by a levy of so much per acre. Next year we figure it will cost each member about 40 to 50 cents per acre for the running expenses of the organization. But that is cheap when you consider that this year we have brought the farmer a net increase for his hay of about \$3.00 per ton. Before it was the middleman who was making the profit. Our purpose is to prevent this and turn that profit to the farmer."

An apple grower of Watsonville, California, recently made a trip through the Northwest and finds apple crop prospects excellent. Rough estimates showed that Walla Walla will produce 500 cars, Yakima 3500, Hood River 1200, Medford 500, Wenatchee District 8000, Spokane 650, Southern Idaho 2200, Lewiston, Idaho 250.

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Rural Californian, Established 1877  
Combined with California Cultivator 1914  
Livestock and Dairy Journal, Established 1901, Combined with California Cultivator 1916Published By  
**THE CULTIVATOR PUBLISHING CO., Inc.**115 and 117 N. Broadway  
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**THIS WEEK'S COVER**

California produces well up toward 10,000 tons of dried figs annually. Perhaps that figure will be materially exceeded this year. Compared to some of our other dried fruits, particularly raisins, these figures are exceedingly small but show possibilities of the development of a great industry. We hope it will make a showing equal to that of the California Black fig on the cover of this issue. This magnificent tree is located in Napa County where it was planted by the padres in Old Mission days. For drying this original type of fig has been largely supplanted by the Smyrna or other lighter colored figs, but for eating from the hand and for perishable market there is no finer than the old Black fig.

**HEADLIGHT LAW**

There have been so many accidents caused by defective headlights that practically every motor driver welcomes the new headlight law which went into effect, July 27. Presumably every auto owner has had his lights adjusted and dimmed according to provisions of the law, given on another page of this issue. We believe the new law will result in fewer accidents.

**EAT CORN**

In referring to the necessity of conserving wheat an Eastern paper remarks that while the American people are willing to forego their wheat bread to a limited extent to supply European consumers "our friends on the other side must share in the use of the inferior grain." Maybe corn is inferior to the more aristocratic wheat, but a good corn hotcake or muffin or now and then an old-fashioned bowl of mush and milk is no serious punishment for most of us.

We are willing for our share to take several rations of the "inferior grain," and California is growing more of it than ever before.

**ENCLOSE STAMPS**

Occasionally the writer of an article or an item to be used in our columns particularly specifies; "Do not give my name or address." This is often because many contributors have found that when they do permit their names to be used a flood of correspondence comes from interested readers who, while asking information of interest to themselves, forget to enclose the usual stamp for reply. Two cents is too small to mention, but where these requests for letter answers run into the dozens, the writer of the helpful article, while he may be willing to take valuable time to give the requested answers, when he discovers that he is fined for postage stamps in addition, usually rebels.

**PHOTOS**

We have often asked our subscribers to bear in mind that we are always glad to use photographs of different sections of the state in illustrating our columns. Note on page

**BETTER BE PREPARED THAN REGRETFUL**

Fires thought to be incendiary, at least in many cases, are occurring in all parts of the state. Whether incendiary or otherwise, it is the season of the year when the greatest care should be exercised by every Californian. Whether in field or forest, barn or home, every possible precaution should be taken. There are excellent fire extinguishers "ready to use," but the barrel of water, with plenty of sacks for wetting, a supply of buckets, and boxes of loose sand or dust, shovels, and other appliances which aid in extinguishing fire, should be provided.

A little bit of preparedness is worth tons of regrets.

101 of this issue where Mr. Shaffer is trying to reach the top of the product of one alfalfa root. This is a striking example of what California soil and climate will produce. It is a most interesting photo. Also note the Napa County big fig trees on the cover. Hardly a handsomer illustration could be imagined. These are good advertisements for the sections from which they come. Send in the photographs with pencil memoranda lightly written on the back, giving information regarding the place taken and other items of interest.

**STATE OWNED TRACTORS**

The advantages to farmers from the improvement in tractors and other farm power is becoming more and more apparent. The Kansas council of defense has taken steps to make a complete tractor census of that state. Other states have taken count of the number of their machines and have urged upon tractor owners the importance of keeping them busy as nearly 24 hours a day as possible. If their own farms are not of a size requiring their continuous use, the machines should be kept occupied on other places. The state of New York, finding a shortage of farm power, invested state monies in tractors which were distributed to advantageous points, and these are being used in the production of a greater amount of food.

**STATE AID**

Since the adjournment of the legislature we have had nothing exciting regarding the state market commission. Mr. Weinstock has won his point and is now offered the opportunity of a lifetime. The farmers have answered the call to "feed the world"; they now need a market or, rather, a medium of reaching the greatest market ever offered to Amer-

ican farmers. Whether it is better transportation or elimination of middlemen or securing just returns from the middlemen we are not certain, but sure it is that with more products of the farm, marketing conditions are not satisfactory.

In Riverside County there has been a combination of the county council of defense, the farm bureau and other forces, which is working satisfactorily.

**WHO'S WHO**

On page 112 of this issue starts a series of short articles on breed leaders. In a word this is the "Who's Who" of California livestock. Animals in all parts of California, which have shown their worth by their performance will be reported in these columns.

Another week the columns of the Cultivator will be open to another series of articles concerning the humans who are responsible for producing some of these great breed leaders. California has made a name for itself in a livestock way. The men to whom credit is due for this will be chronicled in this department, both with pencil and camera. It is planned for

tion by the federal government has proved that court plaster inoculated with the germs of tetanus, or lockjaw, has been peddled in this country. Arrests of peddlers have been made, two in California.

The dark ages showed no more cruel—no more damnable—methods than the Present Great World War. Non-combatants and the defenseless, even in the country of the enemy, have seldom appealed to soldiers of civilized peoples in vain. This war has reversed ideas, and the world is asking: "Is the human becoming more savage and brutal?" "What will be the next step in the slaughter of innocents?"

**Agricultural News Notes**

Missouri reports all wheat and oats in the shock.

A tractor demonstration was held at Brandon, Manitoba, July 16-20.

New York is taking up the matter of aiding in the marketing of farm crops.

The International Apple Shippers' Association will meet in New York City, August 15.

The National Tractor Demonstration at Fremont, Nebraska, will be held August 6-10.

Iowa's garden production of foods has increased more than 300 per cent over that of last year.

The state fair at Minneapolis makes a special feature of its tractor exhibits, and demonstrations.

Fertilizer dealers have received orders that all cars used in shipping fertilizer must be filled to the limit. Dealers are also urging orders at once for next season's delivery.

Humogen, a much advertised "fertilizer" offered to English farmers, has been tested at Rothamsted and found to be absolutely inert. It was claimed to be a form of bacterialized "peat."

Connecticut has just enacted a law to control the practice of stealing fruit, a form of petty theft common with "best intentioned" people. It provides a fine of \$100 or six months imprisonment in jail.

With Florida limes going to market at \$10 and \$11 per barrel the Florida growers are strictly in clover. West Indian lime growers are also a big factor in the Eastern market. Florida produces about 10,000 barrels of limes.

The hillsides of Sac and Ida Counties in Idaho are said to be the world's popcorn center. The section covers about 5345 acres, on which are produced 197,322 bushels of popcorn. The growing season covers about 130 days.

The use of fertilizer has greatly increased in the United States. The state using most freely is Virginia which makes an application on an average of 400 pounds per acre. The South uses far more fertilizer than the North.

The Ontario province of Canada contemplates the purchase of a tractor for every county in the province. It is now estimated that the Canadian yield of wheat this season will approximate 42,000,000 bushels. Sixty-three per cent of her winter crop was abandoned.

Chemists in Great Britain have discovered a substitute for basic slag in a substance which they term tetraphosphate. It is prepared by mixing powdered phosphorite with carbonates of alkaline earths and heating in special ovens. The mass contain 20 per cent phosphoric acid.

**SHORT CROPS**

From information sent out by the International Institute of Agriculture at Rome it appears that the world over, there will be a material shortage of foodstuffs this year. The efforts of the United States to meet the world's shortage have resulted in far greater planting, and doubtless in far greater production. The past few months proved disappointing, however, in some sections of the Middle West, for intense heat has followed weeks of drouth, and the corn is withered, but it is hoped that this drouth will soon be broken and that the vastly increased planting will still permit this country to produce in excess of its ordinary 3,000,000,000 bushels of corn. The crops of winter and spring wheat, both together, will be greater than in former years.

The Institute reports that in northern and central Europe the drawbacks resulting from the length and severity of the winter are still seriously felt. In the greater part of Russia, both European and Asiatic, temperatures below normal have prevailed to a disastrous extent.

**COURT PLASTER**

Don't buy of peddlers; buy of known reputable dealers, especially if one is buying foods, drugs or any proprietary articles which give opportunity for introduction of deadly infectious diseases into the home.

The court plaster story was at first declared to be from the imagination of the reporter, but careful investiga-



# Agricultural News Notes of the Pacific Coast

## Northern California

The first grapes from Vacaville, Solano County, were forwarded July 8.

The Sixth St. Helena Vintage Festival will be held August 31 to September 3.

Butte County's peach crop will be 5000 to 7000 tons greater than that of last year.

Apple growers of Napa County recently met and discussed the apple standardization law.

Napa County schools are to remain closed so long as helpers are needed in the fruit harvests.

The university farm at Davis wishes names of milch goat breeders who have animals for sale.

Butte County grain fields have stalled some of the combined harvesters because of the heavy straw.

A beet dump is to be erected at Davis, Yolo County. One rancher near here has 1000 acres in sugar beets.

Butte County is deputizing men to act as deputy sheriffs in protecting the crops of the county from incendiaries.

Hops have advanced from eight to 12 cents during the past two weeks and growers are anticipating still higher prices.

Chinese eggs are again being received in California ports, but an effort is being made by egg producers to stop their importation.

The State Poultry Association proposes to follow up its members who violate contracts made to market through the association.

The Napa County Fair Association has chosen the dates of September 22-26 and has named a bunch of committees to push for a big fair.

The state purchasing agent has been working in Alameda County to secure hay for state institutions. His plan has been to buy direct from the growers.

The Rice Products' Company of America has been incorporated at Gridley, Butte County, and will process and put in cartons high grade California rice.

The state reclamation board is consulting with engineers and trustees of levee districts along the Sacramento River, endeavoring to adjust levee assessments.

There will be constructed at Fyffe, Eldorado County, an apple evaporator to handle apples and other fruits of that section. This is the first fruit evaporator in that county.

It is announced that Mr. Burbank has developed a variety of wheat which will yield five times as much per acre as the average of wheat production throughout the United States."

A Vacaville peach dryer is succeeding in "peeling" his peaches by sulphuring heavily and removing the entire peel before the trays are placed in the sun. The fruit has to be exactly in the right condition of ripeness.

The Central California Berry Growers' Association, made up of producers in the great central valley, is being "investigated" because of a charge that they are working "in restraint of trade." They have little fear but that they can prove their organization to be purely one of cooperative producers.

## Central California

The Tulare County grape crop is 120 per cent of normal.

Tulare County creameries disbursed \$130,000 last month.

Leroy B. Smith is to be the farm adviser of Fresno County.

Lindsay, Tulare County, shipped out 500 cars of Valencias.

Eleven cars of Tulare County Valencia oranges netted \$11,678.

Kern County is estimating its output of food crops this year at \$10,000,000.

The price of dried peaches made two advances within three days' last week.

Dunkards are settling in the Waterford Irrigation District, Stanislaus County.

The Stanislaus Fair and Live Stock Show will be held in Modesto, September 17-22.

The grain acreage of the Tulare Lake District will greatly increase another year.

Oakdale, Stanislaus County, is building a \$100,000 flume to extend its irrigation system.

The Stanislaus County Live Stock Show and Exposition will be held at Modesto September 17-22.

Porterville, Tulare County, bean growers are combining and organizing a drive on the jack rabbit.

Carl Nichols, associate farm adviser at large for the state, is with County Farm Adviser Grass of Merced.

The date of the grape growers' meeting which was to be held in Lodi, July 21 has been changed to August 11.

Porterville potato growers propose to make potato buyers stand by contracts made earlier in the season at \$2.50 per cwt.

Two Indians of Fresno County who understood that jimson weed made an excellent beverage proved it out and died as a consequence.

Oakdale, Stanislaus County, is to build a warehouse for sulphuring and hulling almonds. The output this year will be its largest.

Fred K. Howard, horticultural commissioner of Kings County, is now waging a county-wide campaign against ground squirrels.

Dinuba is to have another cooperative growers packing company. Its name is Dinuba Fruit Growers' Company and J. F. Williams is president.

Modesto, Stanislaus County, is promised a branch of the Borden Condensed Milk Company, which will handle 100,000 pounds of fresh milk daily.

Fresno fruit interests are endeavoring to secure the location in that county of white American families which will be an aid in the fruit harvesting season.

An Exeter hog feeder has found that in finishing his hogs for market a liberal ration of raisins gives a flavor and quality of pork not to be secured by any other feed.

Kings County creameries report the last as one of the most successful months in its history. Central Creameries of Lemoore and Riverdale paid 39½ cents for A grade and 37½ for B grade; Laton, 39; Lucerne, 39½; Swift and Co., 39½; Maple Grove, 39½; Riverside Cooperative, 41; Corcoran, 38½.

## Southern California

The new fruit law takes effect August 1.

The Oxnard sugar factory opens August 11.

The market for all kinds of beans remains weak.

Orange County's harvesting of sugar beets has begun.

Apricot growers are anticipating prices around 18 or 18½ cents.

Many of the citrus orchards are showing the second, or "off bloom."

Riverside is considering the construction of a vegetable evaporating plant.

Ventura County will hold an agricultural fair, the site and date not yet named.

Imperial County is shipping cantaloupes and watermelons much later than usual.

The Downey Community Fair committee holds its annual fair this week, Saturday, August 4.

Ventura County reports its present holdings of Lima beans at one-fourth that of the 1916 supply.

Hemet, Riverside County, reports 2500 acres of beans planted in that section, promising a big crop.

Imperial Valley grapes are running around 16 and 17 per cent sugar. The market has proved exceptionally good.

Hemet apricot producers are finding a poor market for apricot pits. Germany has been the principal consumer.

Riverside is anticipating the construction of a factory which will handle and evaporate 50 tons of fresh vegetables daily.

Apple growers of Yucaipa, San Bernardino County, are to organize and cooperate in the marketing of this fall's apple output.

The California Lima Bean Growers' Association recently made a payment of over \$200,000 as the fourth installment from the Lima pool.

Imperial Valley will place a weir across the Colorado to divert water at its heading and will put up a \$100,000 guarantee bond to make good any damage caused by the weir.

Beet growers of Chino, San Bernardino County, recently met and discussed beet hoppers and the hiring of a chemist and tare man to be on duty at the Southern California factories.

Hemet, Riverside County, has had thousands of outside helpers in canneries and dryers and at one time had difficulty with I. W. W's. who were endeavoring to upset labor conditions.

The San Antonio Growers' Association cannery at Ontario recently found itself with 150 tons of apricots without sufficient help. The use of telephone soon brought additional helpers from surrounding towns.

Fruit growers have proposed to have full returns from crops in this year of high prices and in some sections have appealed to county sealers of weights and measures for establishment of just tare on orchard boxes.

San Bernardino County citrus growers who at first appealed to the board of supervisors for change in valuation by the assessors have changed their appeal to a reduction in the rate. To do this a reduction of county expenditures will be necessary.

## The Coast

Cherries are ripe in Wenatchee, Washington.

Arizona's state fair will be held November 12-17.

Arizona hay shipments are in excess of former years.

Several new cotton gins will be erected in the Salt River Valley.

A 35,000 pound car of mohair was recently shipped from Albany, Oregon.

Idaho wool growers are selling the new clip at around 58 cents per pound.

One cherry cannery at Cove, Oregon, is putting up over 400 tons of cherries.

Bellingham, Washington, creameries are paying around 46 cents for butter fat.

The first raspberries from Bellingham, Washington, were shipped out about July 16.

The cantaloupe shipping season began at Chandler, Arizona, about the middle of this month.

Several thousand feet of film have been taken of scenes in the cotton fields and camps of Arizona.

A Hampshire breeder of Oregon recently sold a carload of pure breds at an average of \$32.50 per head.

A streak of hot weather about the middle of July did serious damage to truck farmers near Dallas, Texas.

Cotton growers at Chandler, Arizona, recently met and discussed the matter of labor for the cotton harvest.

The state normal school at Lewiston, Idaho, is conducting a summer school of preserving, canning and drying.

Roosevelt Dam is again overflowing and alfalfa and cotton producers are assured of at least two year's irrigation.

The Salt River Valley Cotton Growers, Arizona, have fixed upon a two and a half cent price for picking cotton.

The first full car of butter was recently shipped from the Payette Valley of Idaho. It contained 21,983 pounds.

Colorado truck farmers are shipping cabbage, but celery and cars of mixed vegetables will not start until early in August.

A land company at Twin Falls, Idaho, is beginning the reclamation of 580,000 acres in Owyhee and Twin Falls Counties.

Several of the county agricultural agents of Arizona are making complete agricultural maps and surveys of their counties.

Six months ago Arizona had three county agricultural agents. Today it has 11, leaving but three counties in that state without agents.

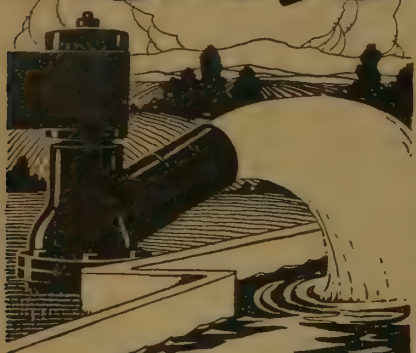
Okanogan County, Washington, has greatly increased its output of hogs and is also materially increasing the number of dairy cattle in the county.

Snohomish County, Washington, farmers have been inconvenienced and caused material loss because lumber camps have drawn so largely on the farm laborers for help.

Salt River Valley, Arizona, has planted 40,000 acres of Long Staple Egyptian cotton. The crop is expected to produce about 16,000 tons of seed, which will yield 600,000 gallons of oil.



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Extra parts are always available without delay for standard advertised machinery. This class always found in the California Cultivator.

## August Vegetable Planting Calendar

### Northern California

Written for California Cultivator By A. R. Gould



**FROM NOW ON** for a few weeks it will not be possible to neglect any crops in the way of water and the liberal use of the hoe or cultivator.

Indeed this work will take up all our time and that of harvesting the crops. It is now too late to plant very much except lettuce, endive, carrots, turnips, radish, and towards the end of the month perhaps our winter cabbage, Brussels sprouts and kale will need transplanting.

Many root crops will now be ready to dig and can be stored in a shed, or the basement will prove excellent for this purpose and we shall deal with this more fully later on in this column.

**Celery**  
It will be time towards the end of this month to tie up the stalks of the variety known as the Golden Self Blanching, and this will assist blanching or the bleaching white process which takes place toward the center of the plant. Use raffia, a good tying material for this work. The varieties White Plume or Columbia may be blanched by tying brown paper or sacking around the stems.

#### Tomatoes

Follow out the directions as given last month in regard to these, and if they are being grown on the single stem method watch for the axil growths and remove them. It is a good plan to shake the plants every few days as this will help to fertilize the flowers and for a few weeks some varieties do not set well, especially in certain localities. Too much moisture in the atmosphere will also prove detrimental and cause the flowers to drop off. It is not advisable to water the plants too often from now on. Keep a close watch for aphids.

#### Turnips

It is possible to keep up the supply of this useful vegetable by sowing Early Snowball and the other varieties mentioned last month. Soot forked in lightly between the rows makes excellent fertilizer.

#### Radish

Sow winter varieties such as Chinese White Winter and Rose Winter and Early Scarlet Turnip and Long Scarlet for use in a few weeks. Keep this crop well supplied with water.

#### Lettuce

It will be possible to secure many plants from the sowings made last month and these, if carefully transplanted, watered and cultivated will provide good heads, but for a later supply sow Iceberg, which will stand the hot weather well and May King which makes rapid growth and is of fine quality.

#### Endive

This is an excellent vegetable for use as salad and may be used with lettuce. This may be cultivated practically the same way as lettuce, but just before maturing it should be blanched. The best varieties are White Curled and Giant Fringed.

#### Carrot

Continue sowing the varieties as mentioned last month to keep up the supply. They will keep in the ground for some weeks after maturing if water is withheld and, then later they will be found of great value for storing. Constant cultivation between the

rows is essential and will mean less watering.

#### Beans

This crop should now be ready to harvest, and the varieties will provide enough for present use in green podded state and in a few weeks for use as shelled beans. The later crop will need careful drying.

#### Winter Cabbage, Brussels Sprouts and Kale

Toward the end of this month the varieties sown last month should be ready for transplanting and meantime the plot should be well prepared, especially that portion intended for the Sprouts, as these require ground heavily manured and well repay any extra trouble.

#### Potatoes

The early crop will have been used up probably ere this and this month the main crop will be ready to dig. Do not dig these to store, until the tops have become completely yellow or dried as if the tuber is handled until fully mature it is likely to become diseased. They may be stored in dry sand in a dark cellar or basement or even in a heap outside if a small cover is placed over the heap. Examine tubers very carefully for any sign of fungous disease before storing.

#### Storing Vegetables—Dry Method

That it is a patriotic duty to help solve the food shortage problem no one will deny, and furthermore, speaking generally, the situation demands much thought and practical application. The need for storage was always there long before this unfortunate world

crisis came on, and this dry method was practiced successfully by private gardeners in England years ago. The farmers had a similar method for storing their beets and potatoes by the ton in well covered heaps out in the open field. If by storing up the surplus we have produced this year we can benefit mankind and perform a patriotic and sensible act we should do all we can in this direction. Only labor and some dry material is needed, and the following crops can be stored as ready: Carrots, beets, turnips, parsnips, rutabaga or Swede turnip.

These root crops should be carefully dug and the green tops should be cut off, but it will not be necessary to wash them. In fact they are not liable to keep so long if washed. But remove as much soil as possible and make a layer of dry sand or coal ashes one inch deep on the floor of the basement or cellar, then place a layer of the root crop. On this put a layer of sand or ashes, half an inch, then another layer of vegetables and so on until you have a good mound and have stored away those you are not likely to need for some months to come.

It is essential that they should be stored in a perfectly dry place and that no moisture should penetrate the mound; otherwise many of the root crops will be ruined and some start into growth.

Main crop onions should be well dried in the sun after being pulled and then strung up by the tops on a three-foot rope and hung up to the roof of the basement or some other dry place. It is best to hang them or tie them on the rope in alternate fashion. See that they are not bruised in any way. Some of the early and smaller type of onion may be hung up in bunches and will keep quite a long time. Of the main crop or long keeping varieties, Australian Brown, Ailsa Craig and Prizetaker are the best.

## Southern California

Written for California Cultivator By D. F. Reichard



**SO IMPORTANT** are the summer months for starting gardening in California that many of our leading authorities begin their planting calendars with either July or August operations.

The all important thing in starting a fall garden is to get the desired plot thoroughly soaked, preferably before plowing or spading. There should be applied water to the depth of at least four inches over the ground, which is equivalent to 7500 gallons for a city lot, or 50,000 gallons per acre. This will do for crops such as corn or beans that come up quickly and that can be cultivated and furrowed out for a subsequent irrigation in a couple of weeks, but for most garden crops another flooding equal to the first should be applied after the ground has been worked up from the first soaking. After the second wetting work up the soil and pulverize thoroughly to give a good seed bed. All this work may seem superfluous to the amateur gardener but it is very necessary that the ground to be planted during the summer or fall months should be well filled with moisture before the seeds are put in. This gives them ample time to germinate and get out of the ground before another wetting is required. Plant all stuff in rows so that the garden may be subsequently irrigated in furrows made between the rows of plants.

For those who have gardens made the same plan of procedure for start-

ing vegetables where crops have been harvested should be taken—thoroughly soak and work the plots for the reception of seeds.

In Southern California nearly all varieties of vegetables may be planted with success. Beans and sweet corn will develop in all but extremely cold sections. Potatoes are planted very extensively during the early part of August as they stand considerable frost during the later part of their growth. Sow seed of cabbage, cauliflower, Brussels sprouts, parsnip, rutabaga and kohlrabi for early winter use as these all produce the best during cool weather. Plant beets, carrots, radish, lettuce, spinach, turnips and bunching onions for succession. In the upper valleys cucumbers and summer squash and muskmelons, casabas and watermelons will make for late crops. In protected sections along the foothills tomatoes and peppers may be started for winter crops.

Some years early onions started during August make all right, but if there is a warm late fall many of them will run to seed. Rhubarb started now will give good strong plants for setting out next spring.

The state market director is endeavoring to hold a line on the potato market and get the potato growers in each county organized.

A barge of 14,000 sacks of grain struck a snag and sank in the Sacramento River near Meridian.



## August Ornamental Planting Calendar for Northern California

Written for California Cultivator By A. R. Gould



**T**HIS MONTH we should keep watch for insect pests, collect seed, prepare plans for our spring garden and sow seeds of various perennials

which will provide us with bloom the following summer. It will also be a good plan to make up a propagating bed in a warm but shady corner, in which cuttings of a few subjects such as daphne, Buddia, veronica, heather, hypericum, euonymus, privet, box, honeysuckle and deutzia, all flowering and evergreen shrubs and climbers, may be inserted. If you can fix up a box, filled with sand or sandy soil, and cover it with a window sash this will make a fine propagating frame. When selecting the cuttings see that none are flowering shoots. Cuttings of arabis, aubretia, alysium and viola may also be placed in the propagating frame now.

### Dahlias

Thrips, a small white insect, appearing on the underside of the leaves and young shoots, has made itself a source of trouble to many growers and should be looked for. Spray with a nicotine solution to keep this in check. The leaf eating beetle (*Diabrotica* soror) is also busy just now and will need hand picking. Mulch the dahlias with horse manure. When watered in it will form a good stimulant.

### Climbing Roses

Tie in all long shoots of these whether on the fence or on the wall. These shoots will provide material for next year's bloom.

### Seed Sowing of Perennials

Collect seed of hollyhock, lupins, digitalis, aquilegia, or columbine, gailardia, delphinium, geum and sweet

William and sow this on a shady but fairly warm border, and these will develop into flowering plants for next year. Keep them well watered and watch for slugs.

### Pansies

Seed can also be collected from these, and many young seedlings will also have made their appearance by this time in the flower beds. These can be transplanted and given a better chance.

### Perennial Asters or Michaelmas Daisy

These will now be coming into flower, and most of the varieties will require stakes for support. They will produce a wealth of flower for a long time.

### Selection and Taking Notes

Now that most of our choice flowers are at their best it is important that we should make notes of observation as it not infrequently happens, owing to the ways of nature, that there may be new types developing, and it is more than fascinating to watch this process. It may be that you planted a batch of seedling gladioli or hollyhocks, or even delphiniums, and amongst these some may be worth propagating largely. In this case now is the time to label them carefully for seed selecting later on. The same applies to dahlias, among which there may be many types worth saving.

Many beautiful flowers have been lost through the fact that many have neglected to give this matter of selection their attention. Nature is no respecter of persons and distributes her gifts to one and all. We owe many excellent types now in cultivation to the fact that they originated in some humble garden, and yours may yet be the home of a novelty.

## Contact Sprays for Aphids



**A**CCORDING to specialists in the United States department of agriculture, contact sprays are the only effective means of controlling the various kinds of aphids, the small insects which by feeding upon the juices of the plants do much damage to the fruit and foliage of orchard trees, currant, gooseberry and grape. As the aphids do not eat the plant tissues but drain the sap from them the various kinds of sprays containing stomach poisons, such as Paris green, arsenate of lead, etc., are ineffective. To do any good the sprays must come in contact with the bodies of the insects and great thoroughness in spraying is therefore necessary.

Nicotine has been found to be one of the most effective substances for killing aphids, and as it may be applied with entire safety to plants it is possibly the best suited of all the substances used in the control of these insects. The cost of the concentrated article is high, but as it may be greatly diluted the actual cost of applying the spray compares favorably with that of other contact sprays. Of the commercial preparations the 40 per cent nicotine sulphate is the solution in most common use. Weaker grades may be used if care is taken that the spray is made up to contain not less than 0.05 or 0.06 per cent of actual nicotine.

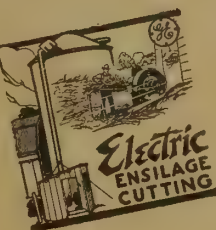
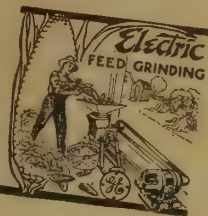
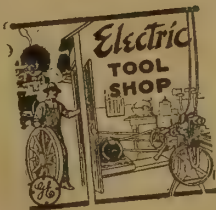
Washes made of fish oil or laundry

soap are also effective against aphids, and are especially suitable for use on a small scale. The fish-oil soap of different brands on the market varies greatly in water content, so that the precise quantity of soap to be used with a given amount of water will vary also. Manufacturers, however, are required by the Federal Insecticide Act of 1910 to state on the label the amount of active ingredients, in this case soap, and of inert ingredients. This will enable purchasers to make up a solution which should range from one pound of soap for five gallons of water to one pound for seven gallons, depending upon the amount of water present in the soap. As has been already said, soap should not be added to lime-sulphur solution. Nor should lime-sulphur solution be added to kerosene emulsion. This last may be used against aphids at the rate of one gallon to seven or eight gallons of water. The stock solution for this purpose is made according to the following formula: Kerosene, two gallons; fish-oil or laundry soap, half pound; water, one gallon.

### HOW TO CAN TOMATOES

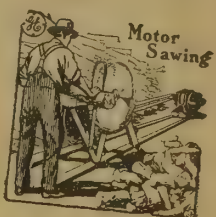
Select firm, well-formed tomatoes. Scald  $1\frac{1}{2}$  minutes or until skins loosen. Dip quickly into and out of cold water. Peel and remove stems and cores. Pack directly into cans or hot jars. Press down with a tablespoon (add no water.) Add a level teaspoon of salt per quart. Put the rubber rings and caps of jars into position but do not tighten fully. Seal tin cans completely. Place the packed containers on a false bottom in a vessel of water sufficiently deep to cover them by one inch and allow to remain at a boiling temperature for 22 minutes when using hot water bath canners.

## The Dependable Hired Man



If you had a hired man available at any hour of the day or night--ready for all kinds of work, in the house, in the barn or out in the field--your greatest trouble would be over.

**G-E Motors** can do all this and more. Practically every farming operation can be performed cheaper, quicker and better by the use of G-E electric motors.



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## Northern California Live Stock Notes

Written for California Cultivator By W. S. Guilford

### CLEAN TROUGHS

**A** YOUNG MAN who has had training at the university farm at Davis recently took charge of a herd of hogs. He was not pleased with the condition of the troughs in which the water was supplied and the grain fed. They were just ordinary wooden troughs such as hundreds of farmers have. So his first work was to give them a thorough cleaning. He first washed them out with water, then with a sheep dig solution, finishing up with a lime whitewash which left them sweet and clean. This is repeated once a week.

### PAINT THE NAVEL

The lives of many colts and calves can be saved if the navel is painted with iodine as soon as the animal is born. It is best when this is done before the navel has a chance to touch the ground or become contaminated in any way. If this is not done give the navel a thorough application as soon as possible.

Many germs can obtain access to the body of the young animal through the navel, and some may cause death. Sometimes this may not be the first day, but the animal may linger along for a week or so, but the cause of the death would be the entrance of some germ by way of the navel soon after birth.

It is an easy thing to have a bottle of iodine on hand, and it is a simple treatment to give.

### MUCH WATER NECESSARY

If a horse perspires 6.4 pounds—or over 3 quarts of moisture at rest; and 14 pounds, or about 7 quarts working at a trot, in 24 hours under ordinary conditions, the amount must be greatly in excess of this during the dry hot weather in California's interior valleys.

Added to this is seven pounds or about three and one-half quarts of moisture given off through the lungs and fat secreted and given off by way of the kidneys.

Animals suffer, and lose in weight

and condition, when they are not supplied with an abundance of pure water during this hot weather.

### USEFUL PONIES

You never realize how many really useful things the children can do on a ranch when they have a pony and cart or a little buggy.

They can make dozens of trips to town for repairs and supplies. They

Shetland ponies and ponies a little larger than Shetlands are very strong. Ponies 36 to 42 inches high, and weighing 325 to 400 pounds, travel 30 miles a day and draw a 1200 pound load on rails in the mines in the Shetland Islands. Because of the small size of the Shetland, it is frequently crossed with the Welsh or other larger ponies.

Welsh ponies are noted for their



The Happy Family

Nothing gives more happiness nor is a better drill for children in the treatment of animals than a pony and cart. These are the children of W. P. Dwyer of Butte City Ranch.

can bring in stock from the fields, go on errands to the neighbors, and do many other things quite as well as a grown person.

And in these times when every effort must be made to "speed up" production to a maximum—and when we are all short of labor—these things count more than ever before.

strength and hardihood. It is reported that in Wales men weighing up to 200 pounds ride these ponies that are about 50 to 54 inches high.

Shetland and grade Shetland ponies are very kind and affectionate and are very fond of children.

## Don't Waste—SAVE Everything

The World's condition demands the conserving of all foods; this saving starts with the farmer. He must save every blade of green food for his stock and the cheapest and most efficient method is by the use of a rapid, economical cutter and filler for his silo.

### CLIMAX SILAGE CUTTER

Cuts and Fills Silos as Fast as 8 Teams  
Can Haul to Machine.

#### Saves Time

Ask any Climax owner about the durability and economy.

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That Famous Inward Shear Saves Power

The steel knives, finely tempered, and bolted to heavy knife wheel are easily removed for grinding. Their greatest value lies in the fact that they cut from the outer edges toward the center, where cutting power is greatest. Other wheel type machines cut the other way.

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and Supplies  
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## Santa Anita Rancho

Anoakla Breeding Farm

**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by imported Stallion Ibn Mahruus, head of our Arabian stud. Dams are the choicest thoroughbred mares of Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahruus, world renowned imported desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 8th. The dams are from the very best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted Prince Geische Walker, and bulls from one World Record cow and two California State Record Cows. Write for details.

Correspondence Invited

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on beef breeds of cattle in amounts from \$5000 up,  
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Southwest Cattle Loan Company

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LOS ANGELES, CAL.

## Practical Veterinary Science

Written for California Cultivator By F. M. Hayes, Assistant Professor  
of Veterinary Science, University of California.



**T**HE FARMER who will take the opportunity to attend the short courses at the university farm from September 24 to November 2, 1917, will

add to his stock of knowledge much information that can be practically applied to the conservation of his live stock through the prevention of disease.

### COLLEGE of AGRICULTURE



Throwing a horse



Vaccinating for Hog Cholera

A Patient of  
the Veterinary  
Clinic



The age of "wolf in the tail" and "hollow horn" is fast disappearing before the march of progress and enlightenment. Colts and calves are no longer altered by the phase of the moon. Science is continually bringing to light sensible and practical facts in relation to the causes, treatment, and control of animal disease.

The lectures and demonstrations by the veterinary science division during the farmer's short courses, September 24 to November 2, are for the purpose of teaching the student the essentials and fundamentals only of the prevention and control of diseases of animals, which will add income to the farmer and more than a "bit" to the

on digestive diseases of horses, including colic, on diseases of sheep, especially the parasites; on hog cholera and other diseases of hogs; on such widespread diseases as tuberculosis, blackleg, anthrax and contagious abortion; on retained afterbirth, calf scours and pneumonia, and udder troubles; on the treatment of various kinds of wounds; on the common unsoundness of horses, and on other subjects as may be brought up for discussion.

The University of California college of agriculture has for the purpose of giving this work to the Short Course students a veterinary building equipped with a pharmacy, surgical instru-

Give the sow a small feed of shorts and skim milk slop for two days before parturition.

In the farrowing pen place a two-inch by four-inch scantling eight inches from the floor and six or eight inches from the wall to prevent the sow from lying too close to the wall.

Provide the sow with a small amount of clean bedding.

Be on hand during the act of "pigging" to lend assistance in case of abnormal presentations.

Remove the mucous from each pig's nose as soon as it is born so as to allow breathing.

If the sow is feverish, restless, and consequently irritable, place the new

and the tonnage. Owing to the high prices being received for dry wine grapes for shipping East, it is doubtful if there will be general use of the fruit for stock. But properly handled, a large proportion can be so fed as a war emergency.—Sun-Maid Herald.

#### MEMORANDUM

The executive committee of the California Creamery Operators held its regular quarterly meeting at Petaluma last week. The time was entirely devoted to consideration of date and program for the coming annual convention of the association. The committee fixed upon October 4, 5, 6 as the dates. It conferred with officials of the Petaluma chamber of commerce regarding number of features of entertainment. A tentative program was arranged.

Cultivator readers are assured that there will be many new and attractive features on the program. More attention will be paid to the social side of the convention and members will be urged to bring their ladies. Petaluma is an ideal convention city. It is located in a good dairying section with two large and prosperous creameries located within the city limits. The efforts these two creameries will put forth, combined with the boost spirit that prevails in Petaluma, is all the assurance that anyone could want for an interesting and enjoyable convention.

The Cultivator will publish more details from time to time.

#### JERSEY CATTLE CLUB ACTIVITIES

R. M. Gow, secretary American Jersey Cattle Club, and Wallace MacMonnies, chief of the extension department, accompanied by Field Agent McLouth of Orland, will make a tour of California beginning at El Centro, August 14.

A five mile "dry zone" around military camps has been ordered by the president.



Kings County Poland Chinas  
Prize Winners on the Ranch of W. Bernstein near Hanford

necessary increase of animal food products.

Practical exercises in the examination of animals for such normal functions as the temperature, the pulse rate, the number of respirations, the heart, lung and abdominal sounds, are carried out. Demonstrations in making the tuberculin tests, administering anti-hog cholera serum, castration, spaying sows and heifers, dehorning, administering the milk fever treatment, injecting blackleg vaccines, giving medicines, throwing and restraining, bandaging and wound treatment, are all given during the courses, and in so far as possible the students take actual part in the exercises. The course is made as practical and interesting as feasible; the clinical work is supplemented by lectures, often in conjunction with clinical material, on digestive diseases of cattle, such as bloat, impaction of the stomach, etc.,

ments, bacteriological laboratory, and a hospital barn and stocks for the handling of animals affected with any disease. There is an abundance of clinical material available not only from the large number of animals owned by the university, but also from subjects brought in by farmers around Davis. The university farm maintains a clinic during the college year to which farmers may bring their animals and have them treated or have them prescribed for at the actual cost of materials used. Over 3000 animals have been treated in this manner during the past year. The Short Course students have an opportunity of seeing many of these cases during their six-weeks' course. In presenting this work to the farmer student the college of agriculture through the veterinary division, hopes to fulfill two of its most important functions — those of instruction and public service.

born pigs in a basket warmed by a hot-water bottle until the sow has finished farrowing when the youngsters can be placed to the teats without having been injured.

Remove the afterbirth and soiled bedding from the pen and bury it.

Do not disturb the sow by offering her feed for 12 hours after farrowing, but provide water to quench her thirst.

#### DRIED WINE GRAPES FOR FEED

The use of dried wine grapes for stock feed has recently been investigated by the state university farm at Davis. It has generally been considered that grapes at best are a poor hog feed. But recent experiments show that in many cases the grapes have been fed either as an exclusive feed or in too large amounts, causing digestive disturbances. In some cases the hogs cease eating them after a few days.

The recent experiments found that if fed with an equal volume of barley, alfalfa and other foods, the dried wine grapes make good feed for hogs and cows. The grapes should be allowed to become well ripened to decrease the acidity and increase the sugar

## Shorthorns

### Paicines Ranch Company

Offers for summer and fall delivery both registered and unregistered weanling bull and heifer calves.

For prices and particulars apply to

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**Berkshire Hogs—Milking Shorthorns**  
Breeding Stock For Sale  
G. A. Murphy - Perkins, Cal.

## The Brood Sow and Her Litter

By Wm. Hislop, Animal Husbandman Washington State Experiment Station

**T**HOSE who have been long engaged in the breeding of swine know that the new born pig is the mainstay of hog production. The much needed expansion of the industry depends largely upon the number and quality of the pigs that are raised. Many pigs are lost and many more are developed below their capacity because of careless treatment during their first weeks of life.

Happily, the late summer and fall farrowing sows are usually in better

health and more vigorous than those that gave birth to spring litters, consequently little trouble is to be feared. The run of lush alfalfa, clover and bluegrass pastures and the exercise obtained by foraging contribute most liberally to an easy parturition and a robust litter. The greatest danger lies in the possibility that the sow may smash her pigs. This misfortune is not entirely preventable, but the following conditions will reduce it to a minimum:

Have the sow in good physical condition at parturition.

## Shorthorn Bulls and Heifers

We have twenty bulls and ten heifers for sale at present. This is the best lot that we have ever had for sale. Mostly two year olds, registered, tuberculin tested and all reds in excellent condition and splendid individuals. Write for prices or better come and see them.

H. L. & E. H. Murphy

Six miles from Sacramento

Perkins, Cal.



# SANITATION

IS THE RELIABLE METHOD  
FOR PREVENTING

FOOT AND  
MOUTH DISEASE

## HOG CHOLERA

AND OTHER CONTAGIOUS  
DISEASES.

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## KRESO DIP No. 1

The Standardized, Reliable  
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KRESO DIP No. 1 has been used at the large state fairs in the United States for the last ten years to prevent the spread of contagious disease. It has done it, and KRESO DIP No. 1 will do the same for you on the farm.

KRESO DIP No. 1 is reliable. It is easy to use. It is inexpensive.

FOR SALE BY ALL DRUGGISTS.

We will send you free a booklet on the treatment of mange, eczema or pitch mange, arthritis, sore mouth, etc.

We will send you free a booklet on how to build a hog wallow, which will keep hogs clean and healthy.

We will send you free a booklet on how to protect your hogs from lice and parasites and disease.

Write for them.

**PARKE, DAVIS & CO.**

Dept. Animal Industry. DETROIT, MICH.



## Clean Barns

The time and trouble it takes to mix whitewash keeps many barns dirty, dark and gloomy. You can make yours snow-white and, without extra cost or labor, kill all lice and mites, and prevent the germs of disease that affect livestock, from getting a start in your herd.

## CARBOLA

The Disinfecting White Paint

is a mineral paint combined with a germicide 20 times stronger than carbolic acid—a paint and disinfectant in one. Comes in powder form ready to use when mixed with water. Apply with brush or sprayer. Will not flake, blister or peel off nor spoil by standing. No disagreeable odor.

Use It Instead of Whitewash

in stable, dairy, poultry house, piggery and cellar. Get some today from your dealer and have it handy for a rainy day job.

10 lbs. (10 gals.), \$1 and postage.

20 lbs. (20 gals.), \$2 delivered.

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# Breed Leaders

Every breed of live stock has its outstanding character the same as the human kind. A great dairy cow has proved her ability to produce anywhere up to 15 tons of milk annually; the trotting horse has secured his record around two minutes; the beefmaker has shown his ability to make the least amount of feed into the greatest amount of food; swine, sheep and others of the live stock family have shown themselves great characters.

In addition—and here is where their worth is proven—these animals can transmit their productive power to their offspring, so the breeder seeks these great leaders, and we are glad to devote a few columns to referring to some of these Pacific Coast doers of things. Illustrations of animals of the different breeds will appear now and then with a few notes and performance records.

### PIETERTJE BLOOM

Written for California Cultivator  
By Professor Gordon H. True



N<sup>o</sup> every herd of pure bred animals there is usually at least one individual of such outstanding character as to be counted superior to the

Arthur Edwards, Salem, Oregon; and California Pietertje Pontiac, 137893 (never shown) head of the herd of J. N. Fulmor, Ferndale.

Among her daughters California breeders are all familiar with the names of Fidessa Bloom 110841, who in the herd of Miss M. M. Holdridge



Pietertje Bloom, 66816

A great butter fat producer and a great producer of other butter fat producers. She was bred and photographed on the University Farm at Davis.

rank and file of the herd. Such an one is the old cow, Pietertje Bloom, 66816, in the Holstein herd at the University Farm. "Old Piet," as she is familiarly called, was bred at the Sleepy Hollow Ranch of R. M. Hotaling at San Anselmo. Her mother, Prune Blossom, 52011 was one of four daughters of an old cow of Stanford breeding bearing the name of Preciosa Fatina. Three of these sisters made comfortable advanced registry records in the days when 15 or 16 pounds of fat was counted good. The sire of Pietertje Bloom was Captain Pietertje Netherland, 27416, son of the one time world's record seven day cow, Mercedes Julip's Pietertje, 39480.

Among the sons of the subject of this sketch are to be counted three herd sires; Sir Colantha Juliana 2nd, 98762, head of the university herd, junior champion at the California state fair as a calf, and whose first daughters are just now coming in milk; Sir Pietertje Bloom Fayne, 119325, also first in his class as a calf at Sacramento, head of the herd of

of Modesto made a seven day record of 26.83 pounds fat and sold to the Carnation Stock Farm at the time of the Panama-Pacific for \$1500. Creamcup Bloom and Pietertje Bloom 2nd, other daughters, have seven day records averaging better than 16 pounds of butter fat or over 20 pounds of butter as Holstein men are wont to figure it. The latter has a semi-official yearly record of 587 pounds fat, and a daughter that in the last 80 days with her second calf has made 191 pounds of fat, her best week showing a little over 20 pounds.

Not only as a mother of good ones is the "old cow" famous but her record of production of milk and butterfat is equalled by but few cows of the breed. Others have made outstandingly larger records for a single year, but few have done as well in the test of one year after another. Her average for four consecutive years of 19,447 pounds of milk and 640 pounds of butterfat is a record of performance surpassed by but few cows of any breed.

## Feed From Silo to Save Silage

The diameter of a silo should be limited by the amount of silage fed in a day. Fresh silage, exposed to the air, will soon spoil. This is especially important in summer feeding. If about two inches is fed daily, spoilage will be reduced to the minimum. This means that for a 10-foot silo there should be at least 17 head of stock; for a 12-foot, 25 head, and for a 14-foot, 30 head.

The following table, prepared at Iowa state college, gives capacities for a few of the more common sizes:

Diameter	Height	Tons	Acres to fill	Pounds to feed daily
10	34	56	3.7	525
12	36	87	5.8	751
12	38	94	6.4	755
14	38	128	8.5	1030
14	40	138	9.2	1030
16	38	167	11.1	1340
16	40	180	12.0	1340

## An Air-Tight Silo Keeps Silage Best

Practically all the trouble from spoiling of silage comes from the action of air on the material after the first necessary fermentation is over. The first fermentation or "heating" of the green material uses up all the

oxygen of the air which is present in it when it is packed into the silo. If no more air can get in, no further fermentation or decay can possibly take place. If the silo is air-tight, therefore, silage will keep indefinitely. Of



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You can't afford to wait another week. It means too much loss with butter at its present high price, and the importance of saving time and labor. Let the De Laval start saving cream for you right now, and it will soon pay for itself.

See the nearest De Laval agent right away and let him show you what the De Laval will save for you. If you do not know the De Laval agent, write direct for any desired information.

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course, most silos are open at the top and some spoilage will take place from the top of the mass downwards. But this can be prevented in large part by covering the silage, after it has finished settling, with a layer of chopped hay or straw well wetted down.—R. W. Thatcher, Iowa University Farm.

Field Notes from the Live Stock Men

Alex McDonald, who put California on the map as the feeder of grand champion steers at the Chicago International last year, is fitting a bunch of show stuff at the Davis farm to exhibit at the fairs this fall. Hopeful the Gibson estate and is planning improvements on the place and later on the addition of more cattle to the herd.

The Glide Shorthorns will be out on the circuit again this year and the string will capture plenty of ribbons in



Grades, but Good Ones Just the Same

Jersey cows on the A. J. and Nellie A. Morey Ranch, Orland. Cow in foreground headed Orland Cow Testing Association for month of October with record of 59.3 pounds fat.

Prince 2nd, who sired the prize winners last year, is being carried along on straight pasture and is in fine breeding shape. He is considered one of the finest bulls of the breed in the West.

Roselawn Shorthorns in Yolo County are in fine fettle, but their usual large show herd will be small by comparison this year because they have sold down pretty close. Carl Johnson, the herdsman who has been handling the old Tom Gibson herd for years, is still at the helm, and depend upon him to trot out something good when the judge calls for the beef classes. Dr. Elberg has taken a long lease on

the different classes. The two-year-old Cumberland-Villager bred red bull Mr. Glide purchased from the Sanders herd in Iowa, is looking fine and will attract a lot of attention at the fair. Wm. Gibson, the herdsman, will have the Hillcrest stuff ready when the bell rings. Hillcrest Mary, a Glide bred heifer, is going to take a lot of beating. A junior yearling red heifer, daughter of Lancaster King, will be up there too. The class in which she will show will represent the greatest line-up of young stuff ever seen in the West in one ring this year, as there are a number of possible champions in the lot.

Organization of Hereford Breeders

Active work in developing the industry of raising Hereford cattle on the Pacific Coast is to be prosecuted by the new Pacific Coast Hereford Cattle Breeders Association, organized at a recent meeting of the leading Hereford breeders of the state, held at the University of California Farm at Davis. The officers are: H. H. Gable of Esparto, president; W. D. Duke of Likely, vice-president; W. R. Madden of Dixon, secretary-treasurer. Besides promoting better acquaintance and cooperation among the breeders of Herefords, the association will hold public sales and promote exhibits at state and county fairs.

The possibilities of Hereford breeding in California are illustrated by the fact that the University of California farm has just sold for \$1000 (a record price for a California-bred Hereford calf) a three-months-old Hereford bull calf bred at the university farm. The buyer is John A. Bunting of Centerville. For the dam of this calf, Sophie, a 1700-pound cow, the university paid \$250, and for his paternal grandsire, \$400. The sire was "Hopeful Prince," a half-brother to the steer with which the University of California recently won the grand championship at the International Livestock Show.

Buy Feed

Cheap feed will be a rarity this year and yet the temptation may be strong to hold off buying until more satisfactory prices can be had than today. During the late fall and early winter season many hog feeders ran short of grain. This meant lots of soft stock going to market at comparatively low prices. The wise stock feeder should take advantage of every possible condition and lay in a supply of feeds. New grain is now coming to market and the feeder, by keeping his eye open, watching as to quality of different grains, and prices as well, may be able to put in an adequate supply for this season's feeding. Bar-

ley is comparatively reasonable at this time. It may be lower but all grain buyers are not united on this point. In any case let the feeder get wise and secure a good supply before abnormal advances are made.

**KEEP HOG CHOLERA AWAY**

The Imperial County hog growers are posting the following:

**NOTICE**

The hogs on these premises are free from cholera. Owners of infected herds are

**Warned to Keep Away**

No visitors allowed in hog pens or fields without permission. Trespassers will be prosecuted to the full extent of the law.

# Get Rid of Worms!

Many animals, especially hogs, are troubled with worms. When your hogs are unthrifty, you hear a little cough now and then, suspect worms.

## Dr. Hess Stock Tonic

**Keeps Hogs Healthy**      **Expels Worms**

So sure am I that Dr. Hess Stock Tonic will keep your hogs healthy and expel the worms, that I have authorized my dealer in your town to supply you with enough Tonic for your hogs and, if it does not do all I claim, just return the empty packages and get your money back.

My Stock Tonic is not a feed, but a true conditioner and tonic, highly concentrated, which contains blood purifiers, laxatives and drugs which are powerful worm expellers. Feed in small quantities, watch your hogs improve.

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### Dr. Hess Poultry Pan-a-cé-a

conditions fowls, makes hens lay and is a great help at moulting time. Valuable for chicks, for pullets starting to lay and for all grown fowls. Costs a penny for 30 fowls per day. 1½ lbs., 25c; 3 lbs., 50c; 7 lbs., \$1.00; 25-lb. pall, \$3.00. Guaranteed.

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A reliable lice killer, very quick acting. For use on poultry and stock. Use by dusting and sprinkling. Destroys bugs on cucumber vines, cabbage worms, slugs on roses. In handy sifting-top cans. 1 lb., 25c; 3 lbs., 60c. Guaranteed.

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**CARRUTHERS FARMS**  
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## Care of Growing Chicks During Warm Weather

**C**ARE of growing chicks during the summer is one of the most important factors in poultry raising. The chicks may be hatched from strong, vigorous stock and carefully brooded, but unless they receive the proper attention during the warm months their

growth may be retarded. In other words, they should be so managed that they will mature into well developed fowls.

### Proper Housing

Growing chicks should be provided with a house that will give them a place to stay in bad weather and at night. No particular style of house is recommended, but it should be so built that it will provide the chicks with ample ventilation, dryness, sunlight, freedom from drafts, and be so arranged that it can be cleaned easily and frequently.

Care should be taken not to crowd the chicks by placing too many in any one house. When the chickens cover the greater part of the floor at night, it is an indication that they are too crowded. At such a time they should be thinned out and placed in another house.

### Feed and Water

In addition to the grain feed that the chicks are likely to find when on free range, a grain mixture should be given morning and evening. The following rations should produce good results:

Equal parts of cracked corn and wheat. As the chicks increase in size, oats may be added. To cheapen this ration it may be changed to two parts cracked corn and one part wheat. When one part of oats is added to this mixture, as the chicks increase in size, the ration may be changed to three parts cracked corn, one part wheat, and one part oats.

In addition to the above a dry mash should be fed in a hopper to which the chicks have access at all times. The following mixtures are suggested:

Two pounds corn meal, one pound middlings, four pounds oat meal, two pounds wheat bran, two and one-half pounds beef scrap.

Two pounds corn meal, one pound middlings, two pounds wheat bran, two and one-half pounds beef scrap.

Three pounds wheat bran, three pounds middlings, three pounds corn meal, one pound crushed oats, one and one-half pounds beef scrap.

Charcoal, grit, and oyster shell should be provided so that the chicks can help themselves whenever they want to.

If a continued supply of sour milk can be obtained it may be fed separately and the beef scrap in the above rations reduced one-half. Sour and sweet milk should not be fed alternately as such practice is likely to cause bowel trouble. Whenever it is possible growing chicks should be allowed free range so they may obtain as much natural green feed as they need in addition to bugs and worms. When green feed can not be obtained on range such feed as sprouted oats, cut clover, mangle-

wurzel beets, etc., should be fed daily.

The importance of clean fresh water for chicks can not be overemphasized. In very hot weather fresh

water should be given to them twice a day. Whenever possible the pan of water should be placed in the shade to keep cool. The water pan should be cleaned every day before fresh water is added.

## Oats to the Rescue

Written for California Cultivator By Nettie Metcalf



**T**HE cry of the multitude of poultrymen right now is in protest against the high price of feed.

It will be found that oats will help out wonderfully, and when chicks are half grown oats should form a good share of their diet, if large frames are desired, on account of the bone framing material contained in them.

Sometimes I pour scalding water over them at night, to soften the hull and swell the grain, leaving them covered until morning, but usually I feed just plain dry oats in the morning and follow up with beet or other greens to pick at during the day, and when all other greens are scarce, I have found that oats can be sprouted in a short time. Instead of putting the grain to be sprouted into boxes as we used to do, I now dig up a place in the poultry yard, wet well, and sow thickly to oats. I have a frame about 3 feet square and 10 inches high, just four boards nailed together, (6 inch boards would do nicely). This I put over my bed of oats and over this a frame of screen wire, upon which I can throw bagging for shade. I sprinkle thoroughly and often and am rewarded by a luscious crop of green in a few days, when another bed is prepared and the frame moved to that. This process also keeps the yards sweet, as the growing grain purifies the ground. The deeper you work the

soil under the frames the better the crop will be and the longer it will last. Let the oats grow until 4 to 6 inches high before taking the frame away and if a piece of wire netting is put over the greens to prevent the roots being dug out the patch will last longer, but it won't last long. Barley will grow almost as well as the oats.

Now while there is some complaint that the increase in the price of eggs and poultry is not equal to the advanced cost of production, we used to have an old saying that "Dear feed makes cheap cattle" which applies to the present condition very aptly; so many people selling off and reducing their flocks, thus flooding the market and bringing down the prices, but just wait, the pendulum is going to swing the other way before long, and what with these depleted flocks and the new crops of grain coming in, there will be such a demand for a stock of eggs another season that those who can and do hold on will surely reap their reward.

And the hens cackle on undisturbed by the high cost of living knowing they are "doing their bit" every day of their lives. I do not know of a single flock that is not holding its own, and most of them are paying a small profit, even now; not all that the work of caring for them should bring, but few forms of business are paying as well as they should just now.

## American Egg Laying Contest

By T. E. Quisenberry



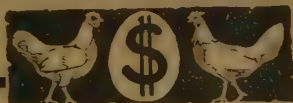
**L**EGHORNS and smaller breeds in the American Egg Laying Contest at Leavenworth, Kansas, showed quite an increase in egg production for June. Eight out of the ten highest pens for June were Leghorns. The third highest pen for the month was a pen of Black Rhinelanders. While the larger breeds were broody in June, the smaller varieties kept busy.

The ten highest pens of five pullets each for June were as follows: Single Comb White Leghorns, Illinois, 119 eggs; Single Comb White Leghorns, Missouri, 110; Black Rhinelanders, California, 107; Single Comb White Leghorns, Illinois, 107; Single Comb White Leghorns, Missouri, 106; Single Comb White Leghorns, Illinois, 105; Single Comb White Leghorns, Nebraska, 104; Single Comb White Leghorns, Kansas, 104; White Wyandottes, Illinois, 103; Single Comb White Leghorns, Wisconsin, 102.

A Barred Rock from Missouri and a Black Rhineland from California

have tied for first place as an individual. One hundred and seventeen pullets have laid over 120 eggs each in eight months, which entitled them to be registered. Over half the pullets will pass this mark for the year. The ten highest individuals to date are as follows: Black Rhinelanders, California, 189 eggs; Barred Rock, Missouri, 189; White Wyandotte, Arkansas, 178; White Wyandotte, Arkansas, 171; White Orpington, Missouri, 170; White Wyandotte, Illinois, 163; Barred Rock, Kansas, 162; Barred Rock, Missouri, 160; White Wyandotte, Illinois, 159; White Wyandotte, Illinois, 157.

White Wyandottes and Barred Rocks have tied for the eight months period. The ten highest pens to date are as follows: Barred Plymouth Rocks, Missouri, 730 eggs; White Wyandottes, Illinois, 730; White Wyandottes, Arkansas, 697; Single Comb White Leghorns, Pa., 662; Single Comb White Leghorns, Missouri, 660; Black Rhinelanders, California, 653; Barred Plymouth Rocks, Kansas, 630; White Wyandottes, Illinois, 611; Barred Plymouth Rocks, Maine, 600; Single Comb Rhode Island Whites, Michigan, 598.



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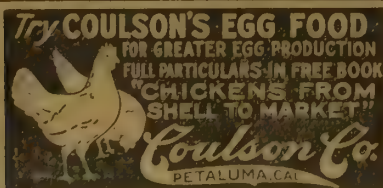


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Wanted—Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' work to right parties. Address J. H. Yetter, Sales Department, 810 Santa Marina Building, 112 Market St. San Francisco, Cal.

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Wanted—40 to 60 acres of alfalfa land, stocked, to work on shares. Have a herd of pure bred hogs which I will give an interest in. Land must be first class. Roy Dawson, General Delivery, Visalia, Calif.

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For Sale—20 acres improved, rich, level land; irrigating and domestic water, improvements, some crop and poultry. Near town and school. Price \$3500, terms, \$1000 cash, balance 5 to 20 years 6 per cent. A. C. Heald, Alpaugh.

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Poultry Wanted—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

200-290 Egg Leghorn, Wyandottes, Rocks, Reds, Anconas, Orpingtons, pullets, cockerels, breeders. August half price sale. Money-makers. C. Beeson, Pasadena, Calif.

"Eastman's Bred-to-Lay" Barred Plymouth Rocks, August chicks and eggs. Fairmead Poultry Farm, Fairmead, Cal.

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### HOGS

Chester Whites, the Billiken Brand.—Your duty is to raise more hogs and increase the meat supply. The demand for pork exceeds the production. Get started with some of these Chesters; 3 bred sows farrowed in April, 1916, due to farrow in September, and October; 18 October gilts bred to farrow in October; 3 October boars ready for service. All first class in every respect and good enough to fit and show at the different fairs this fall. All are cholera immune and will be registered free. Write for price list and booklet. C. B. Cunningham, Box C, Mills, California.

Grape-Wild Farm Berkshires—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

Large Yorkshires—Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

Rancho Rubio Durocs—Only a few September gilts left. One corking good fall boar by Orion Model, son of the last International grand champion. Place your orders now for weaned boar pigs. Best I ever raised. Elmer Lamb, Ceres, Cal.

Wanted—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

Choice Berkshires—We are overstocked with young hogs, boars and gilts by Artful Duke 32nd, Rancho Otto and Ames Rival 131st from prize winning sows. We are offering some fine bargains to early comers. Hollow-Hill Farm, Colton, Calif.

Biggest Prize Package Yet—Three brood sows, eight months old and one herd-boar eighteen months old. All best I. O. C. breeding. \$180 takes the lot. G. H. DuBois, San Martin, Calif.

Big Type Durocs. Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

Cholera Immune Duroc-Jerseys. Big type. Weaned boars and gilts from 500 to 700-pound sows. Prize winning stock. Derryfield Farm, I.O.O.F. Temple, Sacramento.

Choice Boar Pigs for Sale—Sired by Superba 220620, champion Poland boar at San Francisco. Prices right. C. R. Hanna, Riverside, Cal.

Poland-China Swine Recorded. Stock for sale at all times. We please you or refund your money. W. A. Young, Lodi, Cal.

Most Money in Duroc-Jerseys. Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

One Large and two medium type boars extra choice, 9 and 10 months old. W. Bernstein Ranch, L. C. Trehwitt, Mgr., Hanford, Cal.

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.

Duroc-Jerseys—Few choice March males from best eastern stock. Reasonable prices. W. M. Taylor, R. D. No. 1, San Bernardino.

Large Type Poland Chinas are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Calif.

Model Herd Berkshires bred for size and quality. Weanlings and gilts. J. L. Gish, Laws, Calif.

Carruthers' Farm Berkshire Hogs. Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

Duroc-Jerseys—Headquarters in the west for Golden Models. Peters, Lamson & Walker, Devore, San Bernardino County.

Berkshires—Two hundred pounds at six months. Ray C. Hannan, Corning, Cal.

Poland-Chinas—A few good breeding boars. S. F. Williams, Orland, Cal.

### AGRICULTURAL IMPLEMENTS

Large Assortment slightly used and agents' sample plows, harrows, cultivators, wagons. Call and see them before buying. Save 50 per cent on some Four floors. Largest stock. Arnott & Company, Ranchers' Supply House, 112 to 118 South Los Angeles St., Los Angeles.

### HORTICULTURAL PRINTING

Catalogues—Good Printing. Specialists in preparing nursery, seed, poultry and live stock catalogues and all kinds of commercial printing. For prices and information address WOLFER PRINTING Co., 424 Wall St., Los Angeles.

### LIVE STOCK

Auction Sale of Dairy Cows and registered Duroc brood sows. On the Lawrence ranch, two miles northwest of Modesto, Wednesday, August 8, 1917, I will sell the following live stock: 33 good dairy cows, 17 Holsteins and 16 Jersey and Durham; 8 Holstein calves; 1 registered Holstein bull two years old, 17 extra choice brood sows, all due to farrow by the 12th of October; two herd boars, all pure bred Durocs. Registration papers furnished with each hog. One expert stock horse and saddle.

Lease expires on the Lawrence ranch, reason for selling.

Terms of sale: Credit of six months will be given purchaser on approved notes, without interest, if paid when due; seven per cent from date if not paid when due. No discount for cash.

Come everybody—you are welcome. Ladies especially invited. R. J. Ross, owner; Frank Hatch, clerk. Col. Cy N. Clark, Modesto, auctioneer.

D. E. Kellner, importer and breeder of Hampshire sheep, Eugene, Cal., offers for sale a choice lot of Hampshire ram lambs, sired by Walnut Hill and Butterfield Rams, purchased at Salt Lake, August, 1916. Lambs ready for delivery after July 15th, 1917. Inspection and correspondence invited.

Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

At Last the Perfect Silo—the Stay Round. No hoops, no bolts. No experiments. Any one can erect. Close price. Address D. O. Lively, 215 Hobart Bldg., San Francisco.

For Sale—100 good young dairy cows and heifers, 25 calves, 150 hogs, pigs, Percheron stallion, year-old jack. Want to lease pasture near Madera. A. H. Tilton, R. D. Box 164, Madera.

Registered Shires—Blackhawk Stock Ranch. Importers and Breeders. Easton & Ward, Burlingame, Cal.

For Sale—3 light driving and riding mares and one pony. Hollow-Hill Farm, Colton, Calif.

Goats—One Saanen buck, two does. Bargain. C. A. Newton, Corona, R.D.No. 1.

### CATTLE

Holstein Herd for sale: Herd consists of seven females and five bulls, including a splendid cow, her four daughters and a grand daughter, all registered stock of good breeding. Priced for quick sale. P. A. Hogaboom, Route A, Fair Oaks, Cal.

D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.

Registered Holsteins out of ARO Dams. Grandsons of Pieterje Malt Ormsby, 35.55 pounds average 5.31. Geo. Kounias, Modesto Farms, Modesto, Cal.

Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

Thirty high-grade Holstein Cows and one registered Holstein bull. Chas. Hubbard, Riverdale, Calif.

Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Calif.

N. H. Locke Co., Lockford, Cal.—Choice young Jersey bulls for sale.

Holstein Bulls from record cows. Prices right. A. M. Bibens, Modesto, Calif.

### MACHINERY

WHY BUY NEW? SAVE HALF. Material guaranteed. It's second hand after used few times, but not worn out.

Let the wind do it. 8-ft., \$27.50; 10, \$35; 12, \$55; 16-ft. mills, \$125; cost new \$235. Pump as much as a h. engine for nothing once installed. Why buy gas?

### TANKS—TANKS

New, used tanks, guaranteed: 1500-gal. galv. with cover, \$25; 16,000, \$250; 10,000 redwood, \$75; 10,000 fine heavy galv. tank, \$135; SOME TANK. Big 100,000 gal. redwood storage tank, round lug hoops, cost \$1200, our price \$400 before we move. Has mile of lug hoops alone, cost over \$600, also has low stand. Be quick. See who's cheapest.

### ENGINES, PUMPS, PIPE

Centrifugal pumps; plunger pumps, \$5 up; Big Bulldozer single acting jacks, \$68; double-acting No. 30 Ames, \$350; cost \$1000; 2 1/2 hor. 2 step centrifugal pump, \$40; large Addison double-acting plunger pump complete with 35-ft. 10-in. pipe, 9-in. well brass cylinder, double rods, pumps 50 in.; outfit cost \$1500; snap at \$475; 9-h. p. Foss, \$135; 8-h. 12 Fairbanks, \$165; 6-h. Stearns, \$99; 2-h. Fairbanks with direct connected walking beam pump jack, cost \$125 new; our price \$68. Many other first class engines very cheap.

Brass cylinders, Plunger rods, pipe. Fittings, Ranch Machinery, Sundries. Fine, 2-gang mouldboard plow, \$45; 3 or 4-gang disc tractor plow; alfalfa renovator, \$25; 24-disc, 4-horse harrow, \$38; mowers, buck rake, feed cutter, \$8.50; bone grinders, \$6 to \$12; feed mill, \$10.50; water trough, \$4; cement mixer, \$25; sprayer, \$19.50; new discs, \$1 each; 68 ft. 8-in. rubber belt, half price.

Wanted to buy first class material. No junk wanted. Pioneers in our line. DEMMITT CO., Office Upstairs, 120 N. Main. Yards, 816 Yale, Los Angeles.

For Sale—Pumping plant, 25 h. p. Commercial engine. No. 5 Krogh pump, belt, shafting, drums, tanks, etc. Ready to start work. Price \$300.00. Ward N. Fancher, Indio, Calif.

Several new and slightly used engines at a bargain. Best makes. 1 to 35 h.p. Arnott & Company, Wholesale Machinery and Implements, 112 South Los Angeles St., Los Angeles, Cal.

### LUMBER

Lumber—Sash—Doors—Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A.R.W. Shingles 50c per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.

### MISCELLANEOUS

For Sale—575 two-gallon orchard heaters if taken soon 10c each. One 5,000 gallon galvanized iron tank. One 250 gal. galvanized iron tank, about 3500 gallons of Star fuel oil. Inquire of J. Earl Talcott, Anaheim, Calif.

To Fruit Growers—New simple process for crystallizing figs and all other fruits. Instructions, terms, on application. Correspondence with fruit growers solicited. Monteith & Co., Santa Rosa, California.

Slacked Lime—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road Pasadena.

For Sale—Ice box suitable for store, hotel or dairy, galvanized lined, capacity 900 lbs. ice. Hollow-Hill Farm, R. F. D. No. 1, Colton, Calif.

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

Send One Dime, receive 25 cent cake best skin and scalp soap, postpaid. Healing Soap Co., 1704 Oregon St., Berkeley, Cal.

### RABBITS

Raise Rabbits For Us—We sell you foundation stock and buy back what you raise, paying \$1.75 and \$2.00 each for them. Send 25c for our proposition, our book on rabbit culture and our supply catalog. Gilmore's Rabbit Farm, Dept. C, Santa Barbara, Cal. (The rabbit farm of international reputation.)

"The Western Rabbit Book" containing everything pertaining to the rabbit business. 15 chapters, illustrated. Price 50c. Mrs. C. A. Richey, 616 N. Benton Way, Los Angeles, Calif.

### MOTOR CARS IN THE UNITED STATES

In 1916 there were 1,067,332 more motor cars registered in the United States than in 1915. This was an increase of 43 per cent. The gross total of registered cars, including commercial cars, was 3,512,996; the number of motorcycles registered was 250,820. The several states collected in registration and license fees, including those of chauffeurs and operators, a total gross revenue of \$25,865,369.75. Of this amount 92 per cent, or \$23,910,811, was applied directly to construction, improvement, or maintenance of the public roads in 43 states, according to figures compiled by the Office of Public Roads of the United States Department of Agriculture, in Circular 73, "Automobile Registrations, Licenses and Revenues in the United States, 1916."

The figures for 1916 correspond very closely with the annual percentage increase of motor car registration of the last three years. This yearly increase has averaged 40 per cent in the number of cars and 50 per cent in revenues.

When viewed over a period of years, the increase in motor-car registration and gross revenue has been remarkable. In 1906 the total state registrations were approximately 48,000 cars, on account of which the several States collected in fees and licenses a total gross revenue of about \$190,000. Only a small part of this was applied to road work. In 1916 the \$25,865,369.75 collected formed nearly 9 per cent of the total rural road and bridge revenues of the states.

Recent years have shown an increasing tendency to put the spending of the motor-car revenues directly in the hands of the state highway departments. Of the total amount applied to road work in 1916, 70 per cent, or \$16,411,520, was expended more or less directly under the control or supervision of state highway departments. Only 13 states did not exercise any direct control over the expending of the net automobile revenues.

### POULTRY AND PET STOCK SHOW

Plans are now being made for the annual poultry, cat, dog, rabbit and pet stock show to be held at San Jose in October. It will be held under the auspices of the Santa Clara Valley Poultry Association, the Garden City Kennel Club, the California Pet Stock Association, and the Pacific Pet Stock Association. Arrangements are being made also to make the American Red Star Animal relief the beneficiary of the show.



## The Cultivator Patterns



8423



8408



8411



8409



8430



8180



8423—Children's Rompers. Cut in sizes 2, 4 and 6 years. Kimono waist is in one piece with short sleeves.

8169—Ladies' Russian Blouse. Cut in sizes 34 to 42 inches bust measure. Jersey cloth, satin, silk or crepe can be used for this blouse.

8408—Ladies' Shirtwaist. Cut in sizes 36 to 42 inches bust measure. The waist has a detachable collar and long or short sleeves.

8430—Ladies' Dress. Cut in sizes 36 to 42 inches bust measure. Long or short sleeves may be used and the skirt is cut in one piece.

8411—Ladies' Dress. Cut in sizes 36 to 44 inches bust measure. The dress has a two-piece, gathered skirt.

8180—Children's Dress. Cut in sizes 2, 4, 6 and 8 years. The waist is plain and the skirt is cut in one piece.

8409—Ladies' Skirt. Cut in sizes 24 to 32 inches waist measure. The skirt is cut in two pieces.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

### HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send ten cents in coin or (1 or 2c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address:

Pattern Department

California Cultivator

Los Angeles

## Household Department

### THE FLAG OF THE U. S. A.

By E. A. Brininstool in Wells-Fargo Messenger

Against the sky it is fluttering high,  
In the winds of a tropic breeze;  
It swings and dips from the great gray ships

That buffet the foaming seas.  
It backs the guns of the Yankee sons,  
As its rippling colors sway  
To the marching feet down the dusty street—

The Flag of the U. S. A.

It flutters free on the land and sea,  
With its Red and its White and Blue;

Wherever it goes against its foes,  
'Tis followed by soldiers true.  
To the rattling thrum of the throbbing drum,

It gleams in the battle's fray.  
And never, as yet, has its match been met—

The Flag of the U. S. A.

It waves and runs with the frowning guns,  
No matter in war or peace;  
Midst the cannon's cry it will bravely fly

Till the sounds of the conflict cease.  
With its filmy stars and its blood-bought bars,

Men follow it day by day,  
And die to defend to the final end—

The Flag of the U. S. A.

Through the battle's blast, from the staff or mast,

Does the Starry Emblem wave;  
It sings a tune in a gentle croon,  
O'er the martyred soldier's grave.  
It swings aloft in the breezes soft,  
In a quivering, peaceful way,  
That banner fair and without compare—

The Flag of the U. S. A.

Through the shot and shell of seething hell,

Where the crash of war is heard,  
It grimly waves o'er its gallant braves  
With a glory yet unblurred.  
It leads the van of the fighting clan,  
When raised, it is up to stay!

For by never a foe shall it be trailed low—

The Flag of the U. S. A.

### FROM AN AIRPLANE

With nearly a billion dollars appropriated to send flyers over Germany there is keenest interest in the questions which aviators have to consider. One of the most interesting statements we have seen on this line, and from a scientific standpoint, is that of Ford A. Carpenter, meteorologist of the weather bureau of the department of agriculture, and local forecaster for the Los Angeles district. The close cooperation between the weather bureau and the aviator is indicated by Dr. Carpenter in "The Aviator and the Weather Bureau," published by permission of the Weather Bureau by the San Diego Chamber of Commerce. Dr. Carpenter says: "In order to qualify as meteorologist competent to confer with aviators, it seemed desirable to become personally acquainted with some of the conditions that confronted them." Therefore, he put himself in the student's place and learned at first hand the practical facts by weather observation up where the weather is made. He sought to determine the height of the upward trend of the sea breeze over Point Loma, also to observe the extent, form and condition of the velo cloud which is the characteristic sun cover of California, and other lessons. From Dr. Carpenter's story we quote:



VIATOR Inspector Oscar Brindley (the 1915 winner of the Curtiss trophy), in military tractor No. 50, was assigned as pilot. It may be stated here that the accepted definition of aviator is a pilot of a flying machine heavier than air. The airplane used in my first flight was made in Los Angeles and is the present standard army model. This tractor has an 80-horsepower engine and 8-foot propeller. It is 21 feet long, has a wing-spread of 38 feet, supporting area 364 square feet, and a flying radius, with two persons, of 300 miles. The maximum altitude attained with this model at San Diego was 13,000 feet. Before being placed in service the machines are thoroughly gone over at the repair shop, and the motors are run at full speed for 24 hours, after

which they are taken down and subjected to scrutiny for possible defects. All of the struts, guys, and wires are closely examined; the boltheads are all drilled, wired, and soldered so that no amount of vibration will loosen them. Regardless of the length of the flight, each machine, before going up again, is given a rigid inspection and not until the mechanics have tested every part is it pronounced ready.

Not being prepared with a regulation aviation suit, I was loaned a leather jacket by one officer, face-goggles and safety helmet by others. I then took my place in the observer's seat forward and was strapped into it with the safety belt. I was cautioned to let my body give way as the waist-controls were moved from side to side and not pay any attention to the steering rudder wheel which had a way of mysteriously revolving, advancing and receding.

In cranking an airplane, a certain formula is always gone through. The mechanic at the propeller calls out, "Closed!" The aviator closes the switch and repeats the word. This short-circuits the ignition apparatus so that no spark occurs in the cylinders. The propeller is turned in order to introduce explosive mixtures into the cylinders. When ready to start the mechanic says "Open!" The aviator opens the switch and repeats the word. The charges in the cylinders then fire when the propeller is turned.

After the engine starts, the machine is "timmed" by helpers and jockeyed for a favorable "take-off" into the air. This model of airplane climbs on a gradient 1 to 7; its minimum speed is 41 miles per hour. In other words, if the speed is less than 41 miles per hour the machine will not fly horizontally.

### The Ascent

The tractor was headed into a 30-mile northwesterly wind so that the "take-off" was quick and easy; there were only a few seconds spent rolling over the field, when the airplane left the ground and I felt the never to be forgotten cushioning feeling of the air. For ten seconds there was experienced a decidedly weakening nervous chill, which occurred to me once before when making a high dive from a spring-board. It was the sort of physiological disturbance that can only be counteracted by immediately pulling one's self together saying, "Well, here goes nothing!" The momentary depression was immediately followed by a corresponding elation of feeling which strange to say did not leave me during the trip and is always associated with thoughts of the journey. There was no dizziness, although I am peculiarly susceptible to the least change in balance. The earth did not recede as we progressed steadily upward; we seemed part of the earth, but not of it. Although the airplane reached an altitude of 3000 feet in a comparatively few minutes, the barometer falling from 30.0 to 27.0 inches, the decreased bodily pressure was not at all noticeable.

Next to the supporting quality of the atmosphere I had noticed the 70-mile blast of air as the airplane pushed its way steadily onward and upward. Naturally, the exhaust of the motor in addition to the roar of the wind made conversation impossible. Some airplanes have telephone communication between observer and pilot. During one flight in a machine

not so equipped, the passenger noticed the breaking of some apparatus. Knowing that it was impossible to make himself heard he hastily scribbled the word "Accident!" on a bit of card, whereupon the pilot shut off his engine and glided to earth.

### Two Thousand Feet Above Point Loma

Carrying out my suggestion as to investigating the "woolly," the pilot drove the machine straight for Point Loma and those unseen aerial breakers. Suddenly there were two distinct "wallops" and I felt the fuselage, beneath me respond as if struck by a stuffed club. There was evidently first a surge then a drop, and it was the descending current of air that deprived the airplane of the supporting medium, hence the shock. Point Loma itself, from this altitude, and seen directly from above, looked very like a barracuda's backbone—long, low, and ugly. Although this peninsula is less than 500 feet high it so effectively deflects the prevailing northwesterly wind that the upward surge has been noticed by aviators at an altitude of 4000 feet. It is no wonder then that these descending winds, called "woolies" (from their churning the water into isolated masses which look like tufts of wool), are dreaded alike by yachtsmen and birdmen. They have been known to carry away topsails from too closely venturing schooners and student aviators always give the vicinity of Point Loma a wide berth.

### No Winds Aloft

We had not changed our direction since leaving the ground, but after passing over Point Loma the airplane was put sharply on a port course. I had been expecting this and must confess, somewhat dreaded it, innocently thinking that a 30-mile wind added to our 70-mile rate of speed would "heel" the craft to an uncomfortable angle when the course was changed from

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northwesterly to southerly. What was my astonishment to find that the putting about was unaccompanied by any of the nautical motions such as tilting or canting. Theoretically one may be ever so well grounded in physical laws but it seems to take actual experience to bring their truth home to us. Of course there can be no wind in the air; when we entered the air it was moving 30 miles an hour in relation to the earth but as soon as we were free from the earth the velocity of the wind had no effect on our flight. No matter how strong the gale, so far as it concerned the airplane, if the wind be steady no difficulty is experienced; the aviator is concerned only by wind-shifts.

#### The Velo Cloud Seen from Above

In kindergarten days I remember that one of the first questions I asked was "Are clouds smoke?" And this early query was really first answered in the air. Fog on a mountain top may be cloud, but somehow cloud free from close proximity to the earth seems different.

The machine was put through the cloud blanket much as a horse takes a hurdle; it seemed unlike fog and more of a palpable substance. As we emerged, the sun was shining on it like a silvery sea with gently undulating surfaces and it looked for all the world as supportable as layers of cotton-wool. Many times have cloud-banks from mountain tops been observed, yet the upper side of the velo cloud from a flying-machine looked very different. The cloud was only four or five hundred feet thick and extended inland a few miles in irregular outline. The seaward edges of the velo cloud were not ragged, and apparently paralleled the coast for 10 to 15 miles.

Such was the exhilaration and confidence the air gave that I can understand how parachute jumpers confidently step off into space, for to them the air is a supporting medium no more terrible than a transparent sea to a good swimmer. I believe that the record parachute drop was made in 1916 by Colonel Maitland, of the English Royal Flying Corps, who descended in a parachute 10,000 feet from an airplane. Fifteen minutes was occupied in the descent.

#### Ease of Vision at 3500 Feet Altitude

At this altitude the ease of vision is most remarkable. At this height, with perpendicular vision, the eye is possessed of wonderful powers. In those "solitudes august with stars" men not only "mount up with wings as eagles" but are given the eagle's unobstructed vision. Birds have been credited with much too keen vision. From this height of several thousand feet every object stood out with remarkable distinctness. Automobiles racing along the El Cajon boulevard to Lakeside were readily picked up with the unaided eye although 20 miles away. Looking down over the aviation field the long compass mark and the wind-direction pennant were easily distinguished. The bay and ocean, however, gave the most remarkable revelation, for the bottom of the bay and the shallow ocean shore were plainly discernible. The absence of water as well as air refraction explains why submarines cannot hide from the airplane: one of the army aviators told me that a submarine cannot ordinarily sink so low that it cannot be seen from an airplane.

#### Color of Landing Ground Important

Owing to the absorption and reflection of sunlight, there is a distinct variation in the character of otherwise similar landing ground. A field,

dark from recent plowing (or burning), will heat the air over it faster than will a field of stubble, hence over the former field there will be the greater air disturbance, and this will affect the ease of landing. Air is heated by contact and convection. One of the aviators said that recently he was descending, and had all but reached the ground when a localized convectional current hurled his machine upward some distance but immediately afterward deposited him on the ground without damage.

#### Spiraling Down 3000 Feet

Speeding ever in wide circles the course lay southeast over the upper part of San Diego Bay. The city of San Diego presented the usual check-board appearance, and even at this altitude it would seem easy to drop an orange at almost any point. The velo cloud was lifting and we could see the gradual disappearance as it melted rather than drifted from North Island.

The gliding descent was made from an altitude of 2500 feet, starting above San Diego. As the aviation school was approached, we could see a number of machines in the air, three below and two above us, circling about like hawks. And, like soaring birds, these machines had their air-lanes, designated courses and levels being devoted to the different classes of machines. The landing was made without incident and the hour's flight was ended.

#### TO CAN SWEET CORN

Can as soon after the corn is gathered as possible. Remove husks and silk. Blanch by placing in boiling water for five minutes. Remove and dip quickly into and out of cold water. Cut the corn from the cob and pack directly into hot jars or cans to within one-fourth inch of the top. Pour in enough boiling water to fill the container. Add one level teaspoon of salt to each quart. Put rubber rings and caps of jars into position, but do not tighten the wire clamps. Seal tin cans completely.

Place containers on a false bottom of wooden slats or wire mesh in a vessel of water deep enough to cover the containers completely. Keep the water boiling for three hours.

Remove the jars, tighten covers, invert jars to test seal, and cool (not in draft as jars might crack).

Tin cans may be placed in cold water for rapid cooling.

After the containers are cool store in a dark, cool place.

Rapid preparation for canning is especially desirable for corn if a good quality of product is to be obtained. The best results can be secured when one person cuts the corn from the cob and another fills the containers. If it is necessary for one person to work alone she should cut off sufficient corn to fill one jar, pour on boiling water, add salt, place the rubbers and caps in position, and put the jar or container into hot water at once. The extra cooking which will be given to the cans filled will not be injurious and a better product will be secured than if the cut corn were allowed to stand until all jars were filled.

#### MAKING POTATO STARCH

The Sacramento Bee is authority for the following simple method of making potato starch. It might be worth trying.

"Potato starch is easy to make. Potatoes or potato peelings may be grated or ground in an ordinary food chopper and then washed in clean water. The starch particles become suspended in the water and after the coarse material is removed, will settle to the bottom. To make the starch perfectly clean, the water with the starch particles suspended in it may be run through a cloth filter.

"The uses of potato starch are many. It may be used in the making of bread and gives a fine texture to all sorts of pastry. Steude says the war bread of Germany contains two-thirds other flour and one-third potato flour starch."



The parting gift—

## A Vest Pocket Kodak.

It is monotony, not bullets that our soldier boys dread. No fear, when the time comes, they will uphold bravely the traditions that are dear to every loyal American heart. But in the training camps and during the months of forced inaction there are going to be some tedious, home-sick days—days the Kodak can make more cheerful.

Pictures of comrades and camp life, pictures of the thousand and one things that can be photographed without endangering any military secret will interest them, and will doubly interest the friends at home. Tens of thousands of brave lads in the camps and trenches of France are keeping their own Kodak story of the war—a story that will always be intense to them because it is *history* from their view-point. And when peace comes it will make more vivid, more real *their story of their war* as they tell it again and again to mother and sister and wife and little ones.

The nation has a big job on its hands. It's only a little part, perhaps, but a genuine part of that job to keep up the cheerfulness of camp life, to keep tight the bonds between camp and home. Pictures from home to the camp and from camp to the home can do their part.

There's room for a little Vest Pocket Kodak in every soldier's and sailor's kit. The expense is small, six dollars. The cheerfulness it may bring is great. They are on sale by Kodak dealers everywhere.

EASTMAN KODAK CO., 473 STATE ST., ROCHESTER, N. Y.

## THE PASTE THAT KILLS KELLOGG'S ANT PASTE MAKES ANTS DISAPPEAR



One application of Kellogg's Ant Paste and your ant troubles will be over inside of 24 hours. No need to suffer longer when this magic preparation is available. Accept no substitutes. Look for the rattle-cap package.

25¢ AT ALL DRUGGISTS

## THE RETREAT OF THE ANTS

The advertisers in the California Cultivator are known to be reliable and we recommend them to our many subscribers.



## WHERE THE BREEZES BLOW

Written for California Cultivator  
By A Native



CALIFORNIA breezes will keep you cool if you but give them a chance. In order to do this you must cultivate the outdoor habit. Learn to live, sleep and eat where the breezes blow. No day is so hot but there is a cool corner somewhere and there you should be.

We all enjoy a camping trip and the freedom from the thousand petty conventions that harass us at home; but few of us realize the possibilities for enjoyment in our own surroundings. We have well kept lawns and prim front porches for other people to look at; while we toil in stuffy kitchens and sleep shut in by walls.

If you wish to enjoy your summer, close up the rooms that require so much attention to keep in order, and improvise quarters on porches, in shady nooks or tents. Under no circumstances allow the lack of conventional sleeping or screen porches to prevent you from enjoying the life-giving ozone blowing free for all.

A little ingenuity and work will provide substitutes for anything you may lack in the way of summer quarters. An ingenious friend of mine, who was

fortunate enough to have large trees at the back of her house, suspended her bed springs by heavy ropes from the limbs of the trees like a hammock and had an ideal sleeping room. The prettiest dining room I ever saw was a large white oak tree, from the limbs of which the table hung, suspended by wires. The green rafters overhead and hard packed earth beneath, with soft breezes playing through, left nothing to be desired.

I once spent a summer in Lake County and was charmed with the unconventional, outdoor life of the people. Under one large oak tree you would see a cook stove, with its attendant pantry shelves, under another the family dining table. Any little backyard shady nook served for a bedroom. There was a free vacation spirit about it all that removed the dragged out drudgery of hot weather.

This does not apply alone to the isolation of the country home. In a little town of the San Joaquin Valley there is a popular form of outdoor sleeping room that is worthy of imitation. Four tall posts form the corners, sheeting or muslin the walls, while the ceiling is the high blue sky, dotted with its myriad stars. Everyone knows the restful joy of sleeping under the stars. There is something

about the eternal unchanging stars keeping watch above your head that soothes the restless, chafed spirit and restores the calm serenity of the soul. In the morning the cool fresh dawn calls you from restful slumbers and the smiling face of nature greets you as you go forth to meet the day.

## KEEPING KOOL

Written for California Cultivator  
By Elinor Rives, Burbank

What's the best way to keep cool? Don't think about the weather! It's a very foolish rule to be always wondering whether it's a hotter day today than it was the day before and does the morning paper say we're likely to have any more? Don't be thinking of the beach where the cooling breezes blow, there is joy within your reach, be the mercury high or low. Keep your temper, "There's a reason" why you should not fume and fret, peace and quiet at this season you will find your "one best bet." Why not cook, eat, sleep outdoors? On the porch or 'neath a tree, save yourself from scrubbing floors, smiles on weary face you'll see. Say farewell to heavy foods, kiss the buckwheat cakes goodbye, in these "sylvan solitudes," eat more fruit and "cut out" pie. Lots of water every day, both outside and inside, too. How the kiddies love to play with the hose an hour or two. Just let old Sol do his worst, plug along the same old way, but please don't assuage your thirst with ice water, it doesn't pay. You'll be cooler if you'll send the thermometer to—the cellar—all things must come to an end. I can't find a rhyme for "cellar."

## PICKLED WALNUTS

The walnuts must be gathered while young and green and be laid in strong brine. Leave them in this for a week, changing it every other day. Take them out, dry them between two cloths and pierce each with a large needle. Throw them into cold water and leave them several hours before packing them in small jars and pouring over them scalding hot seasoned vinegar, prepared in the following proportions: Four quarts vinegar, one cup sugar, three dozen cloves, three dozen black peppers, 18 whole allspice and 12 blades of mace boiled together for five minutes.

## A WORD FOR THE CANDLE

The candle still has a place. The home that cannot have electric or gas lights probably can afford a pretty candelabra for the dining table. This, when filled with well trimmed candles, makes a table centerpiece that will give distinction as well as plenty of light for the meal. Candles are also nice for bedrooms, and many housekeepers like them to use in the kitchen to supplement a bracket lamp.—Southern Agriculturist.

The mother who always lets her children disregard the attentions that are due her pays for it, not only in the lack of good manners which her children show through life toward older people, but she also oftentimes receives from her sons and daughters less affection than the mother who rears her brood in the fear of good manners.

Friendship and charity and a kindness that includes all the varying people of this varying world are within the reach of all, while play, recreation, the art of joy and laughter, are accomplishments we may every one of us acquire, even though we begin late in life!

Are you a companionable mother? Have you time for the children and their questions even though busy with housework or sewing?

## A GLANCE AT WORLD MARKETS

Imperial is practically out of the cantaloupe market for this year. More than a week ago San Francisco was receiving her entire stock from Turlock.

Sacramento River Bartlett pears, No. 1 grade, are being held by the new Pear Growers' Association at \$40 per ton. Marketing headquarters of the organization is at San Francisco.

Contrary to earlier predictions California's apricot output will be large. It would have been still greater had the labor situation permitted.

The onion outlook in the Sacramento section is far better than a fortnight back.

Potatoes are stronger and growers are now securing around \$2.20 to \$2.25 per cwt.

Because of labor troubles in the canneries, beans and many other vegetables have struck a glutted market during the past two weeks.

Especially fine potatoes in the Los Angeles market have commanded as high as \$3.00 and will be higher before they are lower; sweets have commanded around six and seven cents.

Eggs are stiffening every day, and except for local fluctuations will probably advance for some months. Note on opposite page this year's prices in comparison with those of same date last year.

The higher prices of canned meats are reported to be the cause of lessened demand, and jobbers who bought expecting material advance, are reported to be disappointed.

Notwithstanding the immense crop of corn anticipated this year, immense quantities will be imported from South America. One particular feature noted in the corn market was fluctuation caused by conditions in Venezuela. This is the first time conditions in that country have affected the market in this country.

The sizzling heat, with weeks of drouth, is causing western Kansas, Texas, Oklahoma and Nebraska sections to materially scale earlier predictions as to this year's corn crop.

The drouth and heat have not materially affected wheat conditions. Most of the winter wheat is safe and in addition soaking rains have visited many of the wheat growing states.

Oats have been affected somewhat by the price of corn but are holding level. Holland is making heavy demands for export, but as yet has received no permit.

## Book Review

## ENFORCED PEACE

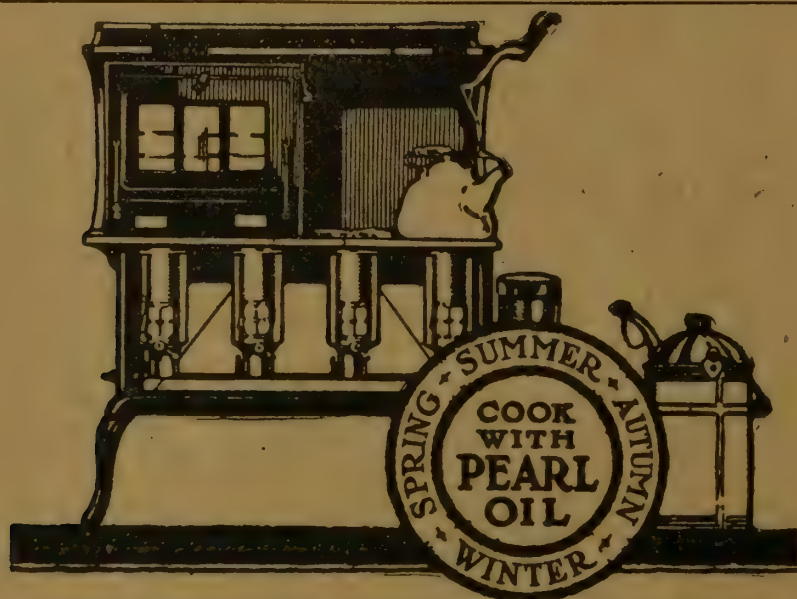
"Enforced Peace," Proceedings of the First Annual National Assemblage of the League to Enforce Peace, Washington, May 26, 27, 1916, published by the League to Enforce Peace, 70 Fifth Avenue, New York.

This league is one of the active supporters of the United States government in the present war. At the same time the book discusses in a most sensible way methods which will lead to an enforced world peace at the close of this war.

## Book Review

## ENGINEERING REPORT

The Fifth Biennial Report of the Department of Engineering of the State of California has a wonderful fund of information as to some of the problems confronting California. The report proper covers 208 pages, then follows a still greater number of pages in various appendices, with information as to irrigation districts of California, alfalfa irrigation in the Sacramento Valley, flood water control in the Coachella Valley, and other most interesting matter.



## ALL THE YEAR ROUND

Cooler cooking in summer—better and more economical cooking all the year 'round.

A good oil stove will cook anything that any wood or coal range will cook, and do it better because of the steady, evenly-distributed heat. All the convenience of gas. Meals in a jiffy, and a cool kitchen in summer.

The long blue chimneys prevent all smoke and smell.

In 1, 2, 3 and 4 burner sizes, with or without ovens. Also cabinet models. Ask your dealer today.

NEW PERFECTION  
OIL COOK-STOVE

STANDARD OIL COMPANY  
(California)

Get the Light  
and Power You Need

from your own generating plant

The UNI-LECTRIC lighting system will put electric light in every room in your house, will run your sewing machine, electric iron, vacuum cleaner, churn, washing machine, etc.

It is Economical and Efficient—Always Ready

Operates with a silent gasoline engine of high speed, generator and automatic governor. Uses standard globes and fixtures. Is easy to install.

Can be used for one or more houses, barns, sheds, work shop and any place where you need light and power.

Write today for illustrated catalogue to

Karl A. Hedberg

104-106 Clay Street,

San Francisco, Cal.



Los Angeles Market

LOS ANGELES, Aug. 1, 1917.

BUTTER

Produce Exch. Quotations.  
Price to trade 4c higher.

Rcts. wk. ending July 31, 321,300 lbs.

California extra creamery ..44

Extr. Cry. Exch. past wk.

July ... 25 26 27 28 30 31

'17 ... 41½ 42 43 .. 44 44

CHEESE

Brokers' prices:

California fresh, lb. ....23½

Oregon Longhorn ..27@27½

Tillamook Trip. ....26

Domestic Swiss .....32

EGGS

Exchange quotations:

Rcts. wk. ending July 31, 1,189 cs.

Fresh extras .....38

Case count .....36

Pullet .....34½

Fresh Ranch Exch. past wk.

July ... 25 26 27 28 30 31

'17 ... 37½ 37 36 .. 37½ 38

POULTRY

We quote to producers:

Broilers, 1½ lbs. and up .....21

Fryers, 2½ lbs. and up .....22

Hens—Leghorns 15@17, Heavy Col'd. ....21

Roasters, 3 lbs. and up.....24

Ducks, lb. ....10@15

Squabs, doz. ....3.00@4.00

Roasters, old .....11

Turkeys .....21@24

Geese .....10

LIVE STOCK

We quote cwt. f.o.b. L. A.

Cattle—

Beef steers, av. 1000 to 1100 lbs.....8.50

Heifers, good .....7.00

Cows, good .....6.50@7.00

Fair .....5.50@6.00

HOGS—

Av. 125 lbs. ....12.00

Av. 150 lbs. ....13.00

Av. 175-200 lbs. ....13.50

Rough, docked 20 lbs.; piggy sows, 40 lbs., stags, 40 per cent. ....9.50@10.00

Prime wethers .....9.00@9.50

Ewes .....9.00@9.50

Lambs .....10.00@10.50

Yearlings .....10.00@10.50

POTATOES

Wholesale selling price:

New, cwt. ....2.75@3.00

Sweets, lb. ....7@8

ONIONS

Wholesale selling price:

Brown, cwt. ....1.50

Golden, lb. ....1.18

VEGETABLES

Wholesale prices:

Artichokes, doz. ....50@90

Beans—Wax .....3½@4

Limas, lb. ....9@10

Kv. Wonder .....3½@4

Beets, sk. ....1.50

Cabbage, lb. ....1½

Carrots, sk. ....1.50

Cauliflower, doz. ....1.25

Celery, doz. ....60@1.35

Corn, lug .....45@50

Cucumbers, lug .....30@40

Egg Plant, lb. ....7@8

Horseradish, rt. lb. ....15

Lettuce, doz. ....35

Leeks, doz. ....30

Mint .....40

Onions, green, doz. ....25

Okra, lb. ....10@12

Peas, lb., Telephone .....8@8½

Peppers, Chili, lb., 6@7; Bell .....11@12

Parasips, doz. ....50

Parsley, doz. ....20

Radishes, doz. ....20

Rhubarb—Strawberry .....1.25

Romaine, doz. ....40

Spinach, doz. ....17½@20

Squash, Summer, cr. ....35

Crookneck .....35

Hubbard, lb. ....3

Tomatoes, cr. ....1.20@1.25

Turnips, doz. ....35

FRUITS

Wholesale prices:

Apples—

White Astrachan, box .....1.50

Gravensteins .....1.85@2.15

Alexanders .....1.90

Crab Apples, lug .....90@1.00

Avocados, doz. ....6.00@12.00

Apricots, lb. ....4@5

Bananas, lb. ....5

Cantaloupes—

Standard .....1.35

Paul Rose .....2.10@2.35

Special .....70@1.10

Tip Top .....1.85

Cherries, lb. ....10@12

Currants, cr. ....85@1.35

Figs, box .....90@1.00

Grapes, Seedless and Malagas, cr. ....1.65

Loganberries, bskt. ....5@6

Nectarines, lug .....1.75

Peaches, lug .....1.10@1.15

Pears, Bartlett, lug .....1.65

Packed box .....2.25

Plums, lug .....65@1.35

Blackberries, basket .....5@6

Raspberries, basket .....7@8

Strawberries, basket .....5@6

Watermelon, lb. ....2@2½

CITRUS

Lemons .....55.00@57.50

Juice .....2.50

Grapefruit .....3.00@3.50

Limes, basket .....1.00

Valencias .....3.25@3.50

HONEY

Wholesale prices:

Extr. White, lb. ....11½@12½

W. W., lb. ....12@14

Comb., case, W. ....3.75

W. W. case .....4.25@4.50

NUTS

Peanuts, raw .....12

Pine Nuts .....20

Pecans .....19

RICE

Wholesale quotations:

Cal. ....6.25

Broken .....4.75@5.00

BEANS

Wholesale Prices:

Lady Washington .....13.50

Limas .....13.50

Pinks .....10.00

Manchurian Reds .....11.00

Baby Mex. ....9.00

Garbanzos .....9.00@10.00

Small White .....13.50

Blackeyes .....8.00

Tepary .....7.00

Lentils .....18.00

HAY

Quotations by Nichols-Loomis Company. Wholesale prices to grower f.o.b. L. A. carlots.

Tame Oat .....18.00@20.00

Volunteer Oat .....13.00@15.00

Wheat .....14.00@17.00

Barley .....15.00@18.00

Alfalfa .....14.00@17.00

Straw .....7.00

GRAIN AND FEEDSTUFFS

Wholesale cwt. f.o.b. L. A.

Alfalfa Meal .....1.65

Alfalfa Molasses .....1.70

Barley, Rolled .....2.65

Barley, Re-cleaned, Whole .....2.70

Barley, Hulled .....3.25

Beet Pulp .....1.80

Bran, Heavy .....2.45

Cottonseed Meal .....2.60

Cottonseed Meal .....2.50

Corn, Yellow .....4.90

Corn, White .....5.00

Corn, Cracked .....4.95

Corn, Feed Meal .....5.00

Corn, Egyptian .....4.40

Middlings .....3.05

Milo .....4.40

Oat Chop .....1.90

Oats, White .....3.00

Oats, Rolled White .....3.05

Oats, Hulled .....4.90

Oats, Rolled Chicken Groats .....5.00

Oilcake Meal .....3.40

Wheat, No. 1 .....4.20@4.25

Wheat, Cracked, No. 1 .....4.60

Rye .....4.10

Blood Meal .....5.10@5.20

Bone, Green .....2.85@2.95

Bone, Dry .....3.05@3.15

Charcoal, 50-lb. sk. ....2.70@2.80

Clam Shell .....70@80

Grit, Granite .....65@75

Oyster Shell .....1.25@1.35

Sunflower Seed .....4.10@4.20

Soya Bean Meal .....3.20@3.30

Scratch Feed .....4.10@4.20

Gritless .....4.30@4.40

Rice Bran, ton .....40.00

Middlings, ton .....45.00

Rice Polish, ton .....49.00

San Francisco Markets

SAN FRANCISCO, July 31, 1917.

BUTTER

Dairy Exchange quotations, lb.:

Rcts. wk. ending July 30, 384,900 lbs.

Fresh extras .....43

Prime firsts .....41½

Extr. Cry. Exch. past wk.

July ... 24 25 26 27 28 30

'17 ... 40½ 40½ 41 41½ 42½ 43

'16 ... 26 26 26 26 26 ..

CHEESE

Dairy Exchange quotations:

Cal. Flats .....19@21 Y. Am. ....22@24

EGGS

Fresh Ranch Exch. past wk.:

Rcts. wk. ending July 30, 12,234 cs.

July ... 24 25 26 27 28 30

'17 ... 37½ 37 37½ 37½ 37½ 38½

'16 ... 29 23 28 28 28½ ..

Dairy Exchange quotations:

Fresh extras .....38½

Firsts .....36½

Select Pullets .....36½

Firsts .....35

POULTRY

We quote from producers, lb.

Hens, large, 21@23, Leghorns .....15@17

Small Colored .....13@19

Fryers, lb. ....26@28

Broilers .....24@26

Roasters .....23@30

Squabs, doz. ....2.00@3.50

Ducks .....16@18

Geese .....19@20

Turkeys, spring .....32@35

Belgian Hares, live 11@12; dr. ....15@16

LIVE STOCK

Prices gross weight:

Cattle:

The following prices are for grass fed stock. Hay fed bring ½ to ¾ c more.

Steers, lb., 6½@9; cows and heifers, 4@6½; calves, 7½@9½.

Sheep:

Wethers, 10@10½; shorn, 1½@2c less; ewes, 8@8½; lamb, lb., 11½@12.

Hogs:

Hard grain fed, wt. 100 to 150 lbs., 13@13½; 150 to 300 lbs., 14@14½; 300 to 400 lbs., 13½@13¾.

POTATOES

Wholesale selling prices at wharf:

New, cwt. ....2.25@2.50

Sweets .....5@6

ONIONS

Wholesale selling price on wharf:

New Red, sk. ....50@75

Yellow, cwt. ....75@1.00

Garlic, lb., New .....3@4

VEGETABLES

Wholesale selling price:

Beans, String, lb. ....2@4

Fy. Garden, 4@5; Lima .....5@6

Corn, Green, Bay sk. ....1.00@1.75

Cucumbers, box .....35@40

Egg Plant, lug .....1.00@1.25

Okra, 7-lb. box .....75@1.00

Peas, Halfmoon, sk. ....1.25@2.75

Peppers, Bell, lug .....1.00@1.25

Chili, lb. ....4@6

Squash, Summer .....60@75

Italian, lug .....75@85

Tomatoes, lug, Delta .....2.00@2.50

Merced, box .....75@80

San Pedro, cr. ....1.25@1.50

FRESH FRUIT

Wholesale selling price:

Apples—

Red Astrachan .....75@1.25

White Astrachan .....65@1.00

Gravenstein, box .....1.00@1.50

Crab Apples, box .....40@60

Apricots, crate .....75@1.25

Ton .....45.00@55.00

Bananas, bunch .....1.25@2.50

Cantaloupes, Delta, lug .....1.00@1.25

Turlock, cr., Standard .....2.00@2.25

Pony, 1.85@2.00; Flats .....75@90

Cherries, dr. ....1.00@1.25

Bings and Lamberts .....6@8

Cal. Royal Anne, lb. ....75@1.00

Small, lb. ....4@5

Figs, Bk., bx. double layer .....1.50@1.75

Grapes, chest .....6.50@8.00

Seedless, cr. ....1.50@1.75

Fountainbleau .....90@1.25

Strawberries, chest .....7.00@10.00

Peaches, cr. ....60@1.25

Pears—

Bartlett, No. 1 bx. ....1.50@1.65

Ton, 35; culls, ton .....14.00

Plums, Tragedy, cr. ....1.00@1.25

Burbank and Satsumas, cr. ....50@75

Santa Rosa .....1.00@1.25

Damson, ton .....45.00

Green Gage, ton .....35.00@45.00

Blackberries, chest .....6.00@7.00

Loganberries, chest .....4.00@5.50

Pineapples, doz. ....5.00@6.00

Raspberries, chest .....8.00@10.00

Watermelons, lb. ....2@2½

CITRUS FRUIT

Wholesale selling price:

Grapefruit .....2.00@3.50

Valencias .....2.75@3.50

Lemons .....2.00@3.50

Lemonettes .....2.00@4.00

Limes, Mex., cs. ....4.50@5.50

DRIED FRUITS

Raisins—California Associated Raisin Company prices on layer and cluster 1917 crop; October, November and December shipments:

Sun-Maid Layers, 20-lb. box, \$1.50 per box.

3-Crown London Layers, 20-lb. box, \$1.50 per box.

4-Crown Clusters, 20-lb. box, \$1.75.

6-Crown Imperial Clusters, 20-lb. box, \$2.60 per box.

(5-lb. box, 50c additional; 10-lb. box, 25c additional.)

Bulk vineyard run Layers, 50-lb. box, \$3.25.

Bulk Vineyard Run Layers, 100-lb. box, \$6.25 per box.

Sun-Maid Brand Clusters.

Fancy Clusters, 1-lb. cartons, 20 to case, \$1.85 per case.

Fancy Clusters, 1-lb. cartons, 24 to case, \$2.20 per case.

Fancy Clusters, 2-lb. cartons, 12 to case, \$2.20.

Fancy Clusters, 5-lb. cartons, 4 to case, \$2.60 per case.

All f. o. b. California common shipping points; regular California dried fruit terms; prices guaranteed against decline to January 1, 1918.

\*The 20-lb. case Sun-Maid Layers is of the new style tray pack. This style will facilitate their handling by the dealer, and make possible a very attractive display.

Our prices on 48-lbs package Sun-Maid Seedless and 50-lb. boxes bulk unbleached Thompson Seedless, as quoted in our Sales Department Circular No. 29, under date of January 27, 1917, are guaranteed against decline to August 1, 1917.

Opening prices on dried fruits of the new 1917 crop are as follows:

Per lb., Bulk basis: Apricots, quoted by Apricot and Prune Growers' Association, Standard, 13½c; choice, 14½c; extra choice, 15c; fancy, 16c; extra fancy, 17c; fancy Moorpark, 17c; extra fancy Moorpark, 18c. Prunes, 6½-cent basis with 1c premium on the 40s. Peaches, outside quotations, standards, 9c; choice, 9½c; extra choice, 9¾c; fancy, 10¾c.

BEANS

Jobbers' prices, cwt. re-cleaned:

Limas .....12.00@12.75

Bayous .....9.00@9.50

Garbanzos .....6.00@6.50

Small White .....14.50@15.00

Mexican Red .....9.50@10.00

Large White .....14.00@15.00

Pinks .....9.50@10.00

Black Eyes .....8.00@8.50

Cranberry .....10.00@11.00

NUTS

Peanuts, Jap, 7@7½; Eastern .....7½

Pecans .....19@20

Pine Nuts .....15@17

HONEY

Jobbers' prices:

Comb. lb., W.W., 13@15; A., 8@10c; Lt. A. ....11@12

Ex. Fy. W. lb. ....13c; Lt. A. ....11

Beeswax, lb. ....38

RICE

Price to growers:

Cal. Rough, cwt. ....3.00@3.25

Lower Grades .....2.00@2.75

HAY

Under date of July 28, Scott, Magner & Miller say:

Receipts past week 1785 tons, last week 2291 tons.

This decrease was wholly unexpected, but can, no doubt, be accounted for by the fact that it is already most difficult to get cars for loading hay at shipping points. The railroads claim car shortage and are refusing in many instances to give anything but gondola cars. Demands for box cars are absolutely refused. The most of the arrivals were by boat. Receipts of fancy wheat are small with a good demand. Fancy red oat is plentiful. The government is taking 2000 tons for export this week on the transport "Dix." This hay was purchased in May. In other respects export trade is dull.

Alfalfa arrivals are lighter than usual, with good demand.

Straw is nominal, new crop not having made its appearance.

We quote today wholesale prices in carload lots as appear from dealers' transfers upon the market. For prices to consumers charges of cartage, commission and handling expenses must be added.

Wheat, Fy., lt. bales .....20.00@21.00

Wheat or Wh. and Oat, No. 1 .....17.00@19.00

Wheat or Wh. and Oat, No. 2 .....15.00@17.00

Oats, Choice Tame .....18.00@19.00

Other Tame .....15.00@16.50

Wild Oat .....13.00@16.00

Barley .....13.00@16.00

Alfalfa, first cutting .....13.00@16.00

Stock Hay, new .....10.00@12.00

GRAIN

Grain Exchange prices, cti.

Wheat, Northern Bluestem .....3.75@3.85

Corn, California Yellow .....4.10@4.15

Corn, Egyptian White .....3.75@3.80

Oats, White Feed .....2.40@2.45

Oats, Red Feed .....2.20@2.30

Barley, Feed .....2.25@2.27½

FEEDSTUFF

Wholesale prices per ton:

Bran .....36.00@37.00

Cornmeal .....76.00@78.00

Cracked Corn .....76.00@78.00

Middlings .....48.00@50.00

Alfalfa Meal, carlots .....24.00@25.00

Cocoanut Meal .....35.00@36.00

Shorts .....38.00@40.00

Roller Barley .....46.00@47.00

SEEDS

Prices in round lots, lb.:

Millet, re-cleaned .....3¼@4

Alfalfa .....20@21

Flax .....5@6

Citrus Fruit Market

LOS ANGELES, August 1, 1917.

Oranges have had an uncertain week and off size and low grade fruit had a hard time to get satisfactory prices. Strictly first class fruit has sold well.

The weather has put lemons on the up grade and some spectacular sales have been made.

Shipments

Shipments of oranges from Southern California since November 1, 1916, 34,780 cars, lemons 6764, total 41,544; to same date last year oranges 27,329, lemons 5862, total 33,191. From Central California to date this season oranges 5042, lemons 164, total 5206; to same date last year oranges 5398; lemons 146, total 5544. From Northern California to date this season oranges 845 cars; to same date last year oranges 610; lemons 1.

FROM THE AUCTIONS

July 25

New York: 24 Valencias; 3 lemons. Val., \$2.10@3.90; lemons, \$3.20@4.40.

Boston: 15 cars. Val., \$2.60@3.60; lemons, \$2.60@5.65.

St. Louis: 7 cars. Val., \$1.65@2.55; lemons, \$1.40@3.65.

Cincinnati: 5 cars. Val., \$2.35@3.10; lemons, \$2.45@3.05.

July 26

New York: 25 Val, 2 grapefruit, 3 lemons. Val., \$2.50@4.50; lemons, \$3.25@5.95; grapefruit, \$1.70@3.50.

Boston: 14 cars. Val., \$1.90@3.55.

July 27

New York: 20 oranges, 1 lemon. Val., \$1.70@4.30; lemons, \$4.00@4.80; grapefruit, \$2.05.

St. Louis: 7 cars. Val., \$1.85@2.95; lemons, 95@3.40.

Philadelphia: 7 cars. Val., \$1.45@3.40; lemons, \$3.65@4.65.

July 30

New York: 35 oranges, 3 lemons. Val., \$1.75@4.40; lemons, \$4.50@6.05.

Cleveland: 9 cars. Val., \$1.85@3.80.

Philadelphia: 14 cars. Val., \$1.75@3.70; lemons, \$3.40@5.30; grapefruit, \$2.10.

Boston: 16 cars. Val., \$2.50@3.55; lemons, \$3.60@6.60.

St. Louis: 5 cars. Val., \$2.70@3.20; lemons, \$2.25@3.05.

July 31

New York: 25 oranges, 3 lemons. Val., \$1.90@3.75; lemons, \$3.75@6.85.

Boston: 13 cars. Val., \$1.60@3.20; lemons, \$5.25@8.20.

Philadelphia: 9 cars. Val., \$2.10@3.75; lemons, \$2.70@5.90.

The loan of 3840 cooks to superintend 16 army cantonment kitchens has been requested of hotel associations by the quartermaster general's department.

WEATHER CONDITION

For the Week Ending July 28, 1917

	Rainfall	Temp.	M'n.
	Wk. Season.	Norm.	Max.
Eureka	.00 .00 .00	.11	68 48
Red Bluff	.00 .00 .00	.00	102 60
Sacramento	.00 .00 .00	.00	104 54
San Francisco	.00 .00 .00	.01	82 50
San Jose	.00 .00 .00	.00	100 48
Fresno	.00 .00 .00	.00	104 82
San Luis Obispo	.00 .00 .00	.01	86 52
Los Angeles	.00 .00 .00	.00	86 62
San Diego	.00 .00 .00	.00	78 64

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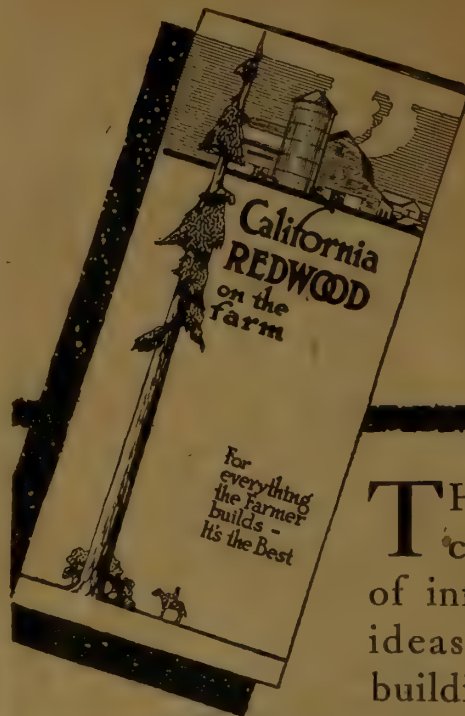
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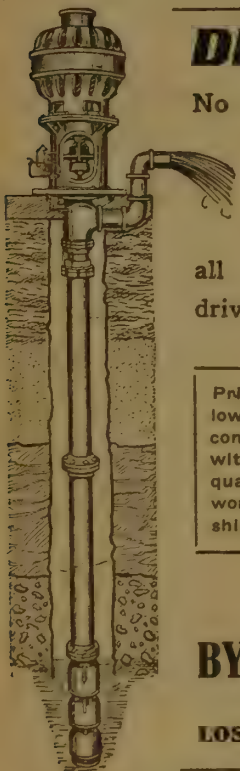
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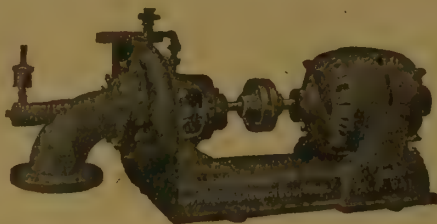


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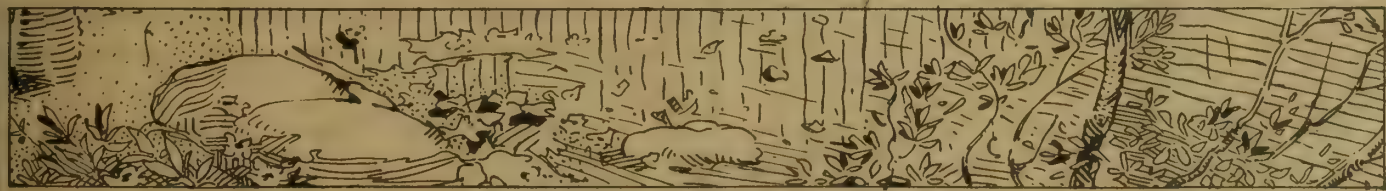
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AUG 15 1917

LOS ANGELES

August 11, 1917

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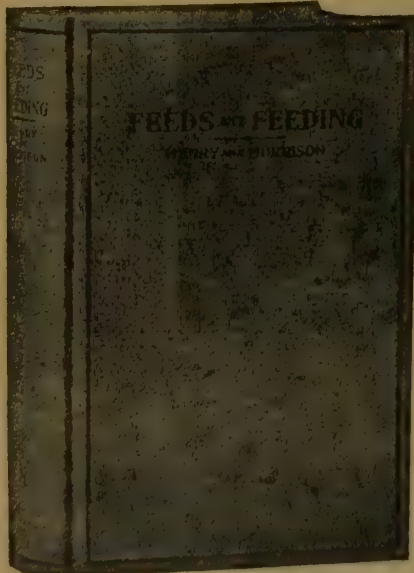
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# California Cultivator

Vol. XLIX No. 6

LOS ANGELES: August 11, 1917

One Dollar Yearly

## To Reduce Feeding Costs

Feeding Live Stock is a Problem and the Poultryman's Problem is Even Greater. Wheat has been his Standby but its Price is now Prohibitive. Corn is Almost as Impossible. How Feed Costs Can be Reduced is Touched Upon for Cultivator Readers by Cornele G. Ross.

**I**N a recent issue of the Cultivator was given under the heading "A War Time Poultry Ration" advice which would seem to me hardly applicable to California conditions. I have no doubt that this method of feeding would apply admirably to conditions in the Central states at the time it was written, but as cracked corn is not a California product, and we have to add materially to the price Prof. Quisenberry quotes to lay it down here, this makes the cost almost prohibitive, and I feel that California poultrymen should take the advice with a pretty considerable "grain of salt."

Even with cost in its favor there is one point in the article which I think needs correction, at least for California conditions, and that is that the meal and fine particles of corn screened from the cracked corn would be wasted unless put in the mash. Possibly many of the poultrymen in the vicinity of Leavenworth crack their own corn, but here we have to buy the

article, and the screenings cost as much as the cracked corn, and if added to the mash must be paid for, besides this, if added in any appreciable amount it would altogether change the composition of the mash. I think here in California we should aim to use local products, especially in the grains we feed our poultry, and with barley and the sorghums we can make up as good a grain ration as one could ask. Just at present the sorghums are rather high in price, owing to their scarcity, but barley can be obtained at very reasonable figures, and if one will compare its composition with corn he will find it comes pretty close, except that the barley carries a little less fat and more fiber.

Many poultrymen have successfully used a grain ration of sorghums alone, when prices were right, while others have been successful with an entire barley ration, so that the writer feels that with the combination of the two grains there should be no trouble in obtaining good results.

At present costs probably 75 to 80

per cent barley and the balance milo or Egyptian corn would work well with any good commercial mash, or even with the mash suggested in the article referred to, but it would be advisable to use some little time in making the change from your present ration. If used with the mash suggested by Prof. Quisenberry it would require about equal parts (by weight) of mash and grain. Some poultrymen feed the barley just as it comes from the field, others prefer to have it re-cleaned, or even scoured, while others soak and drain it before feeding, claiming that it is more palatable to the hens in this condition.

The writer is feeding it all dry on one day and on the following day about one-third of the barley soaked and drained, taking about 48 hours, so that it is hardly what one would call sprouted.

I am feeding about 80 per cent barley and 20 per cent milo, but the milo and a portion of the barley are not soaked so that when the soaked and drained barley is mixed with the dry

grain at feeding time it usually absorbs enough of the moisture from the soaked grain so it can be fed in litter without difficulty.

For comparison, taking the quotations from the daily papers of July 28, the cost of these rations would compare as follows; the cracked corn in the Quisenberry ration would cost \$4.65 and his mash \$3.18 per 100 pounds, the latter figuring bran at \$2.45, shorts at \$3.05 and beef-scrap at \$4.50, and this would make the total ration cost \$3.91, while if you substitute a grain ration of 75 per cent barley and 25 per cent milo, or Egyptian corn, with barley figured at \$2.50 and the corn at \$4.30, the cost of the ration would be reduced to \$3.06 per 100 pounds.

With California conditions so well adapted to the raising of barley and the sorghums it would seem as though it would be a great help to us if our state experiment station at Davis would give us some comparative tests as to the value of these different

Continued on Page 138

## Growing Peas in the Citrus Belt

Rainbow Chasers May Induce Effort at Intercropping Which May Result in Loss to the Citrus Grower. He Should Know His Crop and How to Grow it.

Wm. M. Bristol of San Bernardino County Writes of His Experience With Peas.

**T**HE intensely hot wave that swept the Southern California citrus belt in June and destroyed approximately 90 per cent of the young navel oranges has naturally raised the question of an alternative income for the orange growers.

In San Bernardino County it has been proposed that the citrus orchards, or the younger ones at least, be planted to peas and that a cannery be installed to can them. The project is being pushed by the commercial bodies of the towns rather than by the growers themselves, and the roseate statement is made that the plan is doubly commendable because it will give the growers an income in an otherwise lean year and at the same time establish a new canning industry in the region.

In one of the fanciful tales I heard in my youth it was said that a pot of gold might be found at the base of the rainbow—but I never heard that a single rainbow could be made to yield two pots. Whatever crops may fall in this war-ridden year it is plain that there is to be no shortage in the crop of "advice to farmers." Patient and frugal 16-hour plodders, they are too busy to give heed to the well-meant advisory measures formulated by the chamber of commerce, though they do find time to smile and chuckle as they pursue the even tenor of their industrious way. Knowing full well how many years are needed to master any certain calling even approximate-

ly they refrain from offering to the merchants and bankers any prescription for their respective callings in war-time, feeling that every consistent man, whatever his occupation, will make no radical changes, but will simply be a little more industrious and a little more economical than in times of peace. When President Wilson, addressing the members of the National Grange assembled at Washington last spring, urged them to plant bigger crops and said, "It will not do to be niggardly in respect of the world's food supply," he cast an unintentional aspersion upon the only people in the land who toil without giving heed to the clock.

Having given voice to this little preachment I shall return forthwith to the subject of peas—for I have had many years experience in growing them and feel it my duty to tell what I know in connection therewith.

Advice to those contemplating marriage is sometimes summarized in the single word "Don't." To those who are listening to the pea-planting song of my good chamber of commerce friends I would say, "Don't—unless." And then I would continue by enumerating a half dozen conditions which must be present to promise even a measure of success.

There are many things I do not know about growing peas for canning, for I have never seen them grown for that purpose and do not know that the experiment has ever been tried hereabout. The only difference, however,

between growing them for canning and growing them for immediate consumption would, if done in the orange orchards, lie in the time for planting.

I should state that my experience has been chiefly on my own place of 40 acres on the East Highlands mesa, known as the "Way-up Ranch." Lying as it does on a rather steep southern exposure and a couple of hundred feet above the adjacent valley it is plain that climatic conditions are as favorable for winter gardening as can be found in San Bernardino County. With the exception of the freeze of January, 1913, no injury has ever occurred here to even the tenderest leaves on the orange trees, and yet peas have frequently been frozen. So seldom have the half-dozen favorable conditions been in conjunction that for several years I have grown no peas at all, even where the orange trees were small enough to permit it.

Unless the soil is fertile and in good physical and mechanical condition—that is to say, well supplied with humus—peas will not thrive. It is doubtless true that leguminous plants will take nitrogen from the atmosphere, but it will surely require one pioneer generation of them to make life worth while for the next one.

In the aforesaid advice to pea planters it is affirmed that peas may be planted as late as September 1. This is equivalent to saying, plant them in August. Now, be it known, peas do not thrive in hot weather—

and September in the inland citrus belt is almost always hot. After a dozen years experience I decided that September 20 was the earliest date on which it was safe to plant. If started sooner they seem to become discouraged and the vines are frequently destroyed by a worm which has never molested the later plantings. Young pea plants will withstand a greater degree of cold than those which are in bloom; and, even if peas planted in August happen to thrive, they are likely to be in bloom when the January cold spell strikes them.


On the other hand I found that peas planted later than October 10 get into market so late that they come into competition with those grown by cheap Asiatic labor on lower-lying land—and the Caucasian has not yet mastered the Oriental mode of life.

Another difficulty in growing peas lies in the problem of eliminating the weeds. If there happens to come a rain within six weeks after planting there will be a crop of weeds that will be exceedingly troublesome—unless the weed seeds are all started by copious irrigation before the ground is made ready for the peas.

If, instead of a winter that is too cold there comes one that is warm and wet, it is almost certain that mildew will be rampant and will interfere with best results. If the ground to be planted is near any wild land there will be rabbits and quails to contend with. It is a matter of record, however, that no game warden has yet



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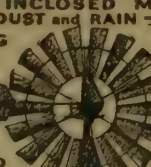
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found a jury that would protect these pests on the Way-up Ranch.

If, in conclusion, the pea crop has passed safely through all these vicissitudes, it has yet to be picked and marketed; and there is no more soul-trying experience than getting peas picked in the proper stage of development. I think it was this one difficulty more than any other that terminated the industry on my place, while there was yet abundant room between the trees.

Frankly, I think the planting of peas in orange groves for canning purposes will prove a disappointment. I do not know where the canned peas of commerce are grown but believe it is in regions of cooler summers where they may be planted after danger from winter cold is past.

#### Postscript

If one rainbow is good for two pots of gold there is no reason why one pea-planting story should not be permitted to produce two pots of pessimism—one at each end. And this is the burden of my second preachment:

The time is at hand for a new code of calculations in connection with the citrus industry in California. For a number of years prior to the big freeze the orange orchards of Southern California, the majority of them being in their prime, yielded good crops and brought good prices. Exceptional yields and exceptional prices were used by speculators to boost the price and the supposed value of land planted to oranges. Many people from the East were induced to purchase orchards at prices based upon regularly good annual crops and regularly good prices. Any man who warned a tenderfoot to wait a year before buying real estate in California was branded as a traitor.

Well, it is now apparent that orange growing, instead of being a gentleman's pastime, is simply one branch of agriculture—and agriculture in all ages and lands has been successful only when based upon industrious toil and frugal economy. Speculation has no place therein; and the evils engendered by speculation in California orchards must be eliminated. Instead of a doubtful search for something to bring an income from an orange orchard without oranges the assessment and the price of the orchards must be lowered to the point commensurate with an occasional loss of crop; and in this connection it must be remembered that the loss of one year's crop means the loss of two or three year's profits—for it costs just as much to care for the orchard during a year of failure as during a year of success.

No, I am not a pessimist, nor yet a traitor to the state of my adoption. After a residence here of more than 30 years I feel that I would rather live in a tent in California than in a palace East of the Rockies. But God forbid that I should be guilty in any degree of inducing any stranger in this land of great possibilities to spend his time and his money in digging at the base of rainbows.

#### CALIFORNIAN INVESTIGATING CITRUS CANKER

Field Deputy Avery S. Hoyt of the Southern California district of the state horticultural commission left last week for Florida and other South-eastern states to gather data on the citrus canker, which it is hoped can be used to advantage in protecting the growers of California.

# Effect of the Heat Wave on Citrus Crops

Written for California Cultivator By G. W. Waterbury

**T**HE heat wave of the middle of June, culminating in the unprecedented temperatures of June 16, 17 and 18, was disastrous to our coming citrus crops, but not to the trees themselves, except in Ventura County, where the added presence of forest fires caused such abnormal temperatures that some foliage was injured and young trees destroyed.

During this time the temperature at the government station at Needles went to 120; temperatures in the Imperial Valley were reported at 124; and for over a week the mercury registered between 110 and 118 each day in the citrus growing belt of Southern California. Central California got off easier with temperatures about five degrees below those in Southern California.

The peculiarities manifested by the heat wave upon citrus trees were noticeable in the failure of the Navel and lemon trees to hold fruit and the apparent indifference among the seedlings to such damage. Sweets set about as usual; Bloods are holding considerable fruit, as are Valencias and St. Michaels. From present indications there will be about 20 per cent of a crop of Navels; 50 per cent of lemons and 85 per cent of all other varieties in Southern California. Central California will do much better, with fully 50 per cent of a crop of Navels.

Circumstances affecting the set of fruit this past spring were an exceedingly late spring and a very abrupt ushering in of summer in June. Navel blossoms that sometimes appear the middle of March were still on the trees during May. Lemons had borne heavily during the past winter and set fruit generally late in April and during May. And it was the small fruit that universally succumbed to the forces of heat.

When the heat wave had passed it was noticed that all small fruit recently set had been charred on the trees. The form was all there but blackened and still clinging to fruit wood that would never mature it. Larger fruit, about the size of a walnut, usually remained untouched, unless exposed on the south side of the tree to the full blistering heat of the sun for a considerable portion of the day. Valencias, however, seemed to set while very small on the trees.

The set of fruit, in most sections, can be traced quite accurately to the conditions of the orchard, but this condition runs back several years. No Navel or lemon orchard that had not been properly fumigated, fertilized and pruned for several years past set fruit this spring and held it during the heat wave. It was a question of new, vigorous growth last year, which had to be helped along by heavy pruning on all old trees. Fruit wood which has borne for a number of years has outrun its purposes and then becomes a liability to the tree and to the orchardist's pocket book unless removed. The mere size of the tree should be no criterion to go by, although large sized trees, if heavily fertilized and kept religiously free from scale insects by fumigation, will yield more fruit than smaller ones, other things being equal. But no citrus trees, when annually accumulating poor and

useless wood, should ever be kept at any fixed size.

The unpleasant features of this severe crop shortage are that orchards must now be carried 18 months before much income arrives. It also means that no orchardist who is in the business to stay can let down on giving his property the same usual good care as formerly. If during the coming year scale accumulates in his orchard to an alarming degree; if cultivation is neglected and especially pruning is not well done, then the trees will deteriorate and no crop will be forthcoming when the next year's harvest arrives. Probably fertilizing can be cut some, for the absence of fruit this year will cause little loss of fertility from the soil. The growing of intercropping produce in old orchards is impractical and a heavy drain on the soil and water during the warm months.

The one good feature of last month's heat was the stimulating features to the trees themselves; and most of the older orchards needed it pretty bad. Since the first freeze new growth has not appeared on our trees as it did in former years. The leaves looked old and lifeless or tinged with mottle. The trees were filled with sapless fruit wood, and the north sides of our trees in many sections had been barren of fruit for some years past.

But the heat changed this to an appreciable degree, first by relieving the overworked trees of about all their fruit and second by warming the soil to a depth that it had not been warmed before. Two things citrus trees like: warmth and moisture in the air. Had our humidity been high during the heat of June our trees would have laughed at the warmth and set fruit and put out new growth at the same time.

Fruit trees are under their greatest strain during blossoming time, and the returning warmth with moist atmospheric conditions bring this about. But without a certain amount of moisture in the air no amount of water in the soil will cause blossoms to spring forth from even a lemon tree. After the young fruit is well set a good supply of water in the ground will cause rapid sizing of the fruit. Unquestionably large amounts of scale have been killed, but the proportion will depend upon how open and well pruned the trees were and when the hatch was maturing. A thick, dense tree provides cool, moist conditions that all scale thrives on, especially the black. The red, purple and yellow can stand a good deal of heat and the citricola thrives upon it.

Good advice relating to fumigating this fall would be for all those whose orchards were in good shape last fall and this spring to fumigate late, if at all, and for all those who have owned chronically bad orchards to fumigate early this fall and by the aid of the recent heat try to bring about normal conditions where such have not been the case for many years.

Expense should be reduced first in the packing and handling of our fruits. Common labor cannot be reduced appreciably, if at all, but packing house forces can, and the managers, where paid high salaries before for handling big crops, should not ex-



as much for handling very small puts.

Exchange houses there should be getting together for greatest efficiency and least expenditures. The members are all for vigorous cooperation except where packing houses are concerned; a place where the largest amount of duplicated waste occurs. The managers of big and profitable businesses showed us that; they began a few years ago closing up all unnecessary houses, beginning with the forest plants, and so vastly reduced the cost of the produced article. Today there is absolutely no justification in two Exchange houses being located within one mile of each other, sipping through the same Los Angeles office and using the same methods for harvesting and distribution. That is, except human obtuseness and reasonableness. We all agree that a well paid manager is better than two or three poorly paid ones and that one well equipped plant is more desirable than half a dozen poorly equipped ones. A psychological distrust of other members of the same cooperative concern is the only excuse for complicated Exchange houses in the same vicinity. And the California citrus crop has been cut by the recent heat wave to one-third its usual yield, way below operating expenses, and the citrus orchardist now has 18 months before pay day.

#### CROP REPORT

**T**HE state commission of horticulture has issued its monthly report of condition of the fruit crops of California. It is dated August 4. From it we take:

Apricot harvest finished in all counties but San Luis Obispo and San Diego; the former with 80 per cent of crop, the latter with ten. Cherries all harvested. Berries about half harvested; Alameda, Nevada, Sacramento, San Benito, Santa Clara, Sonoma and Stanislaus Counties from present indications will have a full crop, or 100 per cent.

**Almonds**  
The output of almonds for the state will be about 59 per cent. San Joaquin and Stanislaus Counties will have a full crop; Contra Costa, 70 per cent; Sutter, 65 per cent; Sacramento, 60 per cent; Yolo, 50 per cent; Tehama, 40 per cent; Butte, only 15 per cent; and Solano, only ten per cent.

**Apples**  
California will produce 90 per cent of a normal apple crop.  
Santa Cruz, which produces half the apples of the state, reports a 100 per cent crop. Kern, Lake, Mendocino, Sacramento, San Benito, Santa Barbara and Sutter Counties also report 100 per cent crops. Sonoma has an 80 per cent crop; Monterey, 75; San Bernardino, 95; Nevada, 80; Los Angeles, 85; Humboldt, 80.

**Figs**  
Figs are California's heaviest averaging crop this year, 97 per cent of normal the state over.

In figs, Fresno County, producing 53 per cent of the total output of the state, reports a 100 per cent crop. Other counties reporting a full, or 100 per cent crop, are; Butte, Colusa, Madera, Merced, Tehama and Tulare. Stanislaus will have 110 per cent; Yolo will have 80 per cent; Yuba, 90; Sutter, 60; Los Angeles, 75.

**Peaches**  
State average, 88 per cent of normal. Fresno, the largest peach producing county, reports a 90 per cent crop. Tulare, the next largest producer will have 100 per cent, as will Contra Costa, Los Angeles, Merced, Orange, San Benito, San Bernardino, San Joaquin, Stanislaus. Madera reports 120 per cent; Sacramento, 105. Kings County reports 95 per cent.

**Pears**  
State average for the pear crop is 87 per cent. Sacramento, the biggest pear county, reports a big crop, 120

per cent. Napa County will have 110 per cent. The following counties report 100 per cent; Colusa, Kern, Lake, Mendocino, Nevada, San Benito, Solano, Sutter and Yuba. Alameda reports 80 per cent; Butte, 20; Contra Costa, 70; El Dorado, 85; Placer, 50; San Joaquin, 90; Santa Clara, 65; Sonoma, 90; Tehama, 50; Yolo, 75.

#### Plums

Plums average a little better than half a crop throughout the state. Of the larger plum growing counties: Placer, growing more than one-third of the state's output, reports only a 35 per cent crop. Santa Clara will have 72 per cent; Solano, 75; Sacramento, 100; Los Angeles, 80; Tulare, 95; Yolo, 80.

#### Prunes

The prune yield of the state will be about three-fourths of normal. Santa Clara, which normally produces 55 per cent of California's supply of prunes, this year reports a 72 per cent crop. Sonoma, next in order as a prune producer, will have 70 per cent. Of the other commercially important producers, Butte reports 60 per cent; Napa, 100; San Benito, 75; Solano, 75; Tulare, 100; Yolo, 90.

#### Walnuts

Average output for the state is about 83 per cent of normal. Orange County's output will be cut down to 70 per cent. Los Angeles will have 95 per cent; Ventura, 75. Santa Barbara reports a crop above normal, 115 per cent; Alameda, Colusa and Contra Costa, 100.

#### Olives

Butte County reports a 65 per cent crop; Los Angeles, 25; Riverside, 30; Tehama, 50; Tulare, 65; Sacramento, 50; Fresno, 100; Madera, 65; San Bernardino, 35; San Diego, 40; Santa Barbara, 70; Yolo, 75; Yuba, 80.

#### Oranges

Los Angeles reports a half crop; San Bernardino, 20 per cent; Riverside, 13; Ventura, 15; Tulare, 65; Orange, 80; Santa Barbara, 90.

#### Lemons

The state over, lemons average 39 per cent of normal.

Los Angeles will have half a crop; Riverside, one-fourth; Ventura, ten per cent; San Bernardino, ten; San Diego, 60; Orange, 70; Tulare, 95.

#### Grapefruit

Santa Barbara reports a full crop of grapefruit; San Diego, 90 per cent; Butte, 25; Los Angeles, 75; Riverside, 78; San Bernardino, 75; Tulare, 80.

#### PRODUCTION OF PHOSPHATE ROCK IN FLORIDA DURING 1916

The phosphate rock industry in Florida during 1916 has been, as in 1915, very much interfered with by the European war, says E. H. Sellard, state geologist of Florida. There is a great demand for rock in the European countries, but steamers have not been available in which to make shipment and freight rates have been excessive. While the foreign business has thus been seriously interfered with the domestic demand has remained about normal.

The total shipment of phosphate rock in Florida for 1916 as reported by the producers was 1,515,845 long tons, of which only 47,087 tons were hard-rock phosphate, the remainder being land pebble. The shipments during the preceding year were land pebble, 1,358,611 long tons; hard rock, 50,130 tons. The value of the phosphate shipped from Florida during 1916 was as follows: Land pebble, \$3,874,410; hard rock, \$295,755. Total, \$4,170,165. The value of the total shipments during the preceding year was \$3,762,239.

#### NEW CITRUS ASSOCIATION

A new citrus association has been organized in the district south of Covina in Los Angeles County. It has received its charter and will affiliate with the California Fruit Growers Exchange. Calvin E. Pratt has been elected president; F. F. Barham, vice-president; Franklin Flick, secretary; Nellie M. Stange, assistant secretary; E. A. Cooper, treasurer. Other directors are A. E. Colt and B. W. Dancer.



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## Who's Who

It has occurred to the Cultivator that in its endeavor to encourage animal industry it has perhaps given undue prominence to the animal and not given the credit which may be due to the men behind. Hence, "Who's Who?", that is, amongst the livestock producers of California who are some of the men responsible for its large development. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photographs and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

We start this week with Mr. Stalder, one of California's pioneer livestock men. A dozen more similar articles are already in hand and still others are coming, written by Cultivator field men. Next week's "Who's Who" will be a Northern Californian.



**W**HEN I came to California in the early eighties a residence of six months made quite a respectable citizen, while one who had been so fortunate as to be here for a full year automatically became a pioneer. Those were the beginning of the good old boom days. Most of us were so busy farming each other that other types of farming were relegated to the natives or the old settlers. It is interesting these days to find one who was a "for sure" farmer along in '82 and '83.

Such was A. J. Stalder, who came from Nebraska and engaged in "large farming" on the red mesa lands west of Riverside and southeast of Ontario, generally considered at that time in the "wind belt." Mr. Stalder was farming anywhere from 1000 to several thousand acres, keeping hundreds of small California horses busy on gang or combined thresher, going broke some years, being financed and making a strike the next. When the

prosperity of the fat years came the debts of former years were cleared off and a fresh start made. For 35 years Mr. Stalder had been farming these lands "making and breaking" at the grain farming, but nearly a dozen years ago that type of farming ceased to appeal to him and the big combined and many of the implements used in grain and hay farming were disposed of. Dairying looked better to him, and securing 240 acres of rich bottom and mesa lands not far from the Santa Ana River he installed hay barns, silos, milking stables and sheds and proceeded to buy a bunch of Holsteins. We say he did, though associated with him in his farming operations has been F. W. Stalder, his brother. Both have lived in Riverside for many years.

But about the dairy farm. The 240 acres was planted either to grain hay, to alfalfa, to corn for silage, or to mangels for a light ration for the cows. The idea was to make the ranch produce everything the cows needed. This, and the choosing of high producing animals, has been the

prime factor in the upbuilding of the profitable and successful dairy plant. We say the choosing of high producing animals has been a great factor. This was a lesson, however, which had to be learned. A good dairy is not picked up in a day. The best of judges of dairy cows cannot go out

ticed not only convenient arrangement of hose but frequent notice prominently posted, "Positively No Smoking."

Again in reducing the H. C. of L. did not wait the war campaign "growing your own," but for years grown in a large garden near the house a big supply of potatoes, rising ears, tomatoes, everything needed on the ranch table. I ate lunches with the ranch workers, 14 of the and, believe me, those men get good meals. Every item of the meal except the flour, sugar, coffee and salt, were products of the ranch or garden. There was soup, roast pork and apple sauce, vegetables aplenty, fruit and a big pitcher of milk—all home made.

Mr. Stalder has made a successful farming and has advanced California interests for the past 35 years, and I'm glad to give from his methods a few hints which may prove helpful to the rest of us. The state record breakers in his dairy show that he has a supply of the live wire stuff which changing California from the old high and tallow days to a virile factor in the problem of feeding the world. The Rambler.

### THE CONCRETE HIGHWAY

The concrete highway has an organ devoted to its advancement in "The Concrete Highway Magazine." It urges better roads, not only for military preparedness but for agricultural preparedness, and for many other good and sufficient reasons. Concrete roads fill the gap between railroad roads that afford a speedier movement than the volume of short haul tonnage requires in economical handling, and earth roads that are not speed enough.

Concrete roads accommodate all types of vehicles and afford an unlimited and flexible service. Short line railroads afford a limited service for only one type of vehicle, and the people don't own that. Not every one owns a railroad train; nearly everyone now owns an automobile.

### BULLETINS ON CANNING AND DRYING

Farmers Bulletin 839, "Home Canning by the One-Period Cold Pack Method," and 841, "Drying Fruits and Vegetables in the Home," are timely additions to conservation literature, now so popular. Everyone who has fruit or vegetable products which may go to waste unless handled in the home should write the Department of Agriculture, Washington, D. C., and ask for these two bulletins. They are free.

### POWER ON THE FARM

Manager O'Neill of the Tractor Engine and Implement Dealers' Association writes that the plans for the tractor demonstration to be held at Los Angeles, September 18-22, are maturing and the interest shown by those who will demonstrate tractors and those who know of their ability to do things on the farm guarantees a most successful show. There will be not only a demonstration by tractor manufacturers, but implement people are vying with each other in the showing which they hope to make of farm implements. Interest in the demonstration is increased by present labor conditions and the demand for every ounce of product the soil can be made to yield.

It has been claimed that the cost of production may be cut at least 40 percent by letting gasoline do it. In any case this demonstration will offer opportunity for hearing the claims of the manufacturers and for seeing what tractors and implements will do in the hands of skilled operators.



A. J. Stalder

For 35 years a producer of California crops.

and buy, within reasonable cost, an all around high producer, rather he cannot do it every time in buying a long string.

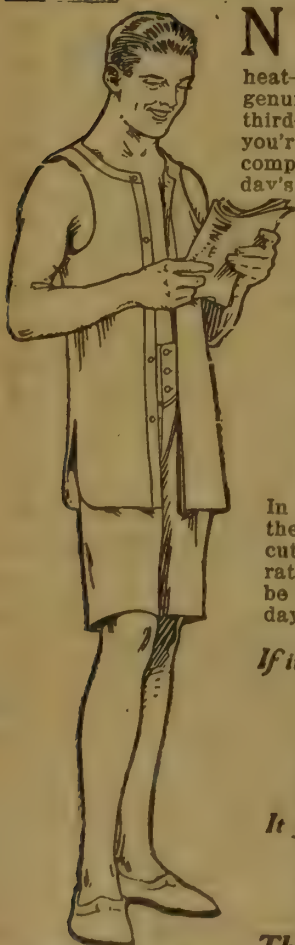
Mr. Stalder provided milking barn room for 120 cows. He later decided that half that number carefully selected would mean more profit and a material reduction was made in the number of cows. The wisdom of his choice is shown by an item in the California Cultivator of July 14 in which Stanislaus Princess Cleopatra reported in her seven-day test producing 513.9 pounds of milk, from which was made 31.04 pounds of butter, this as a senior three-year-old. This cow was the holder of three state records. Her milk tested 4.83.

But this is not the place for chronicling the production of this one of Mr. Stalder's cows nor of telling of King Pontiac Netherland Segis, a great bull who is starting on the making of a record, nor of his first daughter soon to be ready for a test. This is more the story of Mr. Stalder and his work.

He has made a success of farming because he is a business man and has applied business principles to his work. In the first place he bought good land; he has stocked it with high priced animals; he is doing his work with labor-saving implements so far as possible; his barns are arranged and fitted so as to be labor-savers. For instance, the silos of 600 tons capacity, beet-shredding and mixing bins are at one end, and from them he has carriers of sufficient capacity to take a wagonload of silage or feed along an alleyway to 120 cows, with barns, milk houses and other buildings so arranged as to reduce steps and labor. On the point of the compact arrangement of his buildings Mr. Stalder said that he faced one danger in this, that in case of fire his loss might be greater, but he considered the saving in labor more than offset this risk. In regard to fire, we no-



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# FRUIT JUICES

By W. V. Cruess

**L**OGANBERRIES, grapes, apples, lemons, pomegranates, and a few other fruits give satisfactory beverages when the juice is pressed out and pasteurized in bottles. This offers a good way to utilize the empty bottles that may be found in the household.

## Loganberry Juice

Crush the berries and heat with constant stirring in an agateware pot to about 150 or 160 degrees Fahrenheit. A dairy thermometer can be used to test this temperature. Strain out the juice from the jelly bag. Place the juice in bottles, filling the bottles within an inch of the cork. Cork the bottles with corks which have been sterilized in boiling water for ten minutes. Tie the corks down with string. Sterilize the juice as follows: Place a cloth or a screen in the bottom of a large pot or wash-boiler. Lay the bottles of juice in a horizontal position on this false bottom. The bottles may be piled one above another and the container filled with water. Fill the container with water, completely covering the bottles. Heat the water slowly to a temperature of 175 degrees Fahrenheit and not above 185 degrees Fahrenheit. A dairy thermometer can be used to test the temperature of the water. Keep the water at this temperature for 20 minutes. This can be done by setting the pot on the back of the stove when it has reached the desired temperature. Remove the bottles and dip the corks in melted sealing wax or in melted paraffine several times while they are cooling to thoroughly seal the corks with the melted material.

## Grape Juice

Use a mixture of equal quantities of Muscat and some red wine grape. The Muscat gives the flavor and the wine grape the color. Heat the mixture after crushing in an aluminum or agateware pot to a temperature of about 130 degrees Fahrenheit. This is to extract the color. Set the heated berries aside for 24 hours to allow the color to dissolve in the juice. Press out the juice and strain it through cheesecloth or a jelly bag. Bottle and sterilize as for loganberry juice. The Isabella grapes also give good results when treated in this way. No sugar should be added.

## Lemon Juice

Cut the lemons in half and separate the juice without getting any oil into the juice. The oil injures the flavor. Bottle the juice and pasteurize as directed for loganberry juice.

## Orange Juice

Oranges do not give satisfactory juice and are not recommended for this purpose. The flavor in this case deteriorates badly after pasteurizing.

## Apple Juice

Press out the juice and pasteurize as directed for loganberry juice. The apples need not be heated before pressing.

## NEW AGRICULTURAL BUILDING AT UNIVERSITY FARM

Construction work has begun on a new \$350,000 agricultural building on the Davis farm. An experimental cold storage plant is to be installed in the basement hall to develop the best methods for refrigerating fruits during shipment. Here also will be rooms filled with machinery for experiments in the utilization of wood and the handling of fruit. There will

be also student and research laboratories for the study of soils, and a work-room for citriculture.

## AMERICAN POMOLOGICAL SOCIETY FALL MEETING

The regular biennial meeting of this organization will be held in Boston, Massachusetts, October 31-November 4, 1917.

The occasion in full will be a regular meeting of the Massachusetts Horticultural Society, the New England Fruit Show, and the American Pomological Society. Very full and extended programs covering all phases of fruit growing will be rendered and an exceptional exhibition of fruits, fruit products, and allied material will be staged.

The American Pomological Society will feature the Wilder Medal, its distinct and special honor for new fruits, discoveries in pomological science, and for specially meritorious exhibits.

Unique exhibits and demonstrations with some of our newer fruit introductions such as avocado, and fruit juices as the loganberry juice will be in evidence.

Those who contemplate offering new fruits for the Wilder medal should advise the secretary, E. R. Lake, 2033 Park Road, Washington, D. C., in order that registration and entry cards can be properly made before the meeting date.

The A. P. S. program is being prepared for early announcement by the president, W. N. Hutt, Raleigh, N. C. Suggestions along this line should be addressed to him.

## DELAY OPENING OF SCHOOLS

Commissioner Hecke has asked that opening of schools be delayed one month. That the labor problem will prove a more serious one before the final harvest period is the opinion of all who have investigated conditions thoroughly, and for this reason Mr. Hecke's appeal will be received with general favor in all sections of the state.

R. P. Cundiff, newly appointed field deputy under Geo. H. Hecke, commissioner of horticulture, has been investigating general horticultural conditions, in Eldorado, Placer, Yuba, Sutter, Solano and Napa Counties. He found a practically unanimous determination to comply with the new statutes as regards standardization, squirrel control and other regulations. Mr. Cundiff will continue his investigations until he covers every county in the state. He is now in Southern California.

## MONTHLY BULLETIN

State Commissioner Hecke should be proud of the present July issue of the Monthly Bulletin. It has to do with citrus canker, a pest which is costing southeastern parts of the United States millions of dollars annually. This number of the bulletin is splendidly illustrated and every citrus grower of the state should secure it and inform himself so that he may aid in preventing this pest from getting a foothold in California. We believe as yet the pest has not crossed the Rocky Mountains.

## THE DRAINAGE OF IRRIGATED FARMS

"The Drainage of Irrigated Farms," Farmers' Bulletin 805, by R. A. Hart, published by the United States department of agriculture. This bulletin touches upon the need of drainage in irrigated lands, beneficial results,



# On the Farm

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If you attend the Tractor Meet to be held in Los Angeles, by the Tractor Engine and Implement Dealers' Association, on the Downey Road, Sept. 18th to 22nd, inclusive, be sure to call at our exhibit and watch the the Bean TrackPULL Tractor work under actual field conditions.



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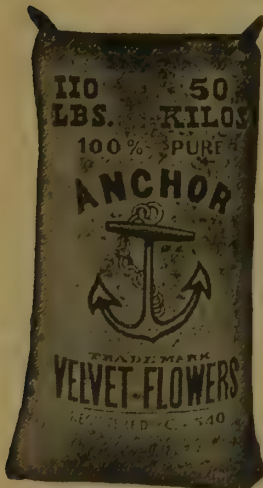
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# Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

### Blackhead Possibly

Could you tell me what to do for my big turkeys? I have just lost one big tom and the old one I think has just come down with the same trouble. Symptoms: eats little, legs seem unsteady, sits down most of the time. Have had them shut up in a park but now for the last day or two I let them range, but they hang around the park. Have a good house at night, board floor, plenty of air. Have been feeding bran, table scraps, clabbered milk, a little green, lettuce, no grain, as I had none. Perhaps they lack strong feed like a grain. The one that died would not eat at all though I put onion in front of him. He just sat around and died. Head was pale.—Subscriber, Inglewood.

Your tom's legs may merely be weak from lack of exercise and want of lime in the ration, but his pale head makes me suspect he may have blackhead. The only thing you can do is to change your method of caring for the turkeys. You have already given them free range. If they hang around the house take a stick and drive them off. If necessary stay with them a while. This takes time, but there is no other way of inducing turkeys to take the exercise they need. They should sleep in the open. The top of a six-foot chicken fence is a good place. If you have not that fix a high roost. The clabbered milk is all right—nothing better for turkeys—but I would go slow on table scraps. A good ration for turkeys that have not sufficient range for all their living consists of rolled breakfast oats mixed with chopped onion and lettuce in the morning, hard grain at night and clabbered milk or cottage cheese late in the forenoon. If they do not get much green from their range give a head of lettuce once during the day. Once or twice a week give a dish of bran in which a handful of bone meal has been mixed. There is no cure for blackhead, but if the disease is not fully developed you may head it off by a ration of greens, (especially chopped onion and onion tops) and clabbered milk. At any rate you will save the rest of the flock.—J. A. K.

### Shooting Trespassing Poultry

Please advise what penalty would attach for shooting trespassing poultry where the owner has been notified to keep same off the premises and refuses to do so.—Subscriber, Heber.

This question was practically answered in the legal department in effect that one is not justified in taking the law into his own hands. Of course there is a factor which enters into the question, that of protecting one's own property from trespass. Presumably the penalty which would attach would be that any stock or poultry destroyed might be cause for action, in which the owner would recover actual value.

### Fungus in Beans

A Pomona subscriber sends stalk of bean plant which shows the work of fungus right at surface of soil. Not only this plant but almost the entire field was affected. The specimen was referred to Prof. Clayton O. Smith of the Southern California pathological laboratory, and he writes:

"I have examined the specimen of bean recently received from your Pomona subscriber. I find it to be at-

tacked by a fungus, probably a species of rhizoctonia. You may recall that this fungus is prevalent on many different kinds of hosts and it seems to be a rather common disease of the bean. There seems to be no very practical control as the fungus lives in the soil and under certain conditions seems to be able to attack the plant."

### Radishes Pull Themselves

What ails my radishes? They grow almost entirely out of the ground. The tip of the root only penetrates the soil and not only the top and leaves but the greater part of the edible portion of the root lies on the ground.—Subscriber, South Pasadena.

This is caused by the seed being planted too shallow. Place the seed an inch deep. These have the appearance of the seed being planted only an eight or a quarter of an inch under soil.

### Tomato Worms

Please advise what to do to secure control of tomato worms. I have four acres which are almost ready to ripen but the worms are stripping the plants. Have tried to pick them off but they keep coming. What spray could one use which would not injure the tomatoes?—Subscriber, East Bakersfield.

Spray with arsenate of lead mixed with water at the rate of four pounds per 100 gallons. Keep thoroughly stirred while spraying. Arsenate of lead preparations in the dry powdered form sprinkled over the vines have also proved effective.

### Uncle Ben Plum

Mr. M. Sharpe answers very correctly your correspondent's inquiry regarding this plum. May I add to it by saying that it originated as a chance seedling in the garden of the late B. H. Crow of Crows' Landing, Stanislaus County. Mr. Crow was one of California's pioneers, familiarly known as "Uncle Ben." He called my attention to the fruit 25 years ago, when I secured buds and have propagated it ever since. Mr. Edwards of Los Gatos planted a commercial orchard of "Uncle Ben" and the crop was handled by the A. Black Company who have shipped the plums to London. "Uncle Ben" is the name, and I heartily join with Mr. Sharpe in protesting against any parties giving it any other name, which is, unintentionally let us hope, a fraud on the public.—Leonard Coates.

### Martynia Louisiana

Please advise name of plant, the seed pod, leaves and bloom of which are enclosed. Also, is the plant of any commercial value?—Subscriber, Los Angeles.

This plant is popularly known as unicorn plant. The fruit when ripe splits into sections at the tip and produces the "devil horns" that are such an annoyance to cattle on the ranges in Arizona. Botanically it is known as Martynia Louisiana. I do not know that it has any commercial value. In Bailey's Cyclopaedia of Horticulture we note: "Martynias are sometimes grown in gardens for their bright large flowers, abundant foliage and odd pods. They are treated as half-hardy annuals. They are also grown in the vegetable garden for the small tender pods which are made into pickles the same as cucumbers. It is native from Indiana to Utah and to Texas and New Mexico; naturalized farther east and north."

### Olive Oil

Please advise if olive oil contains any medicinal qualities which would make its use as a part of the diet food unwise.—Subscriber, Pomona.

The medicinal qualities of olive oil are well known and we have never heard of any injurious results from liberal use. It has been used the best of any of our edible vegetable and if there were any injurious results from its use they would have been known years ago. Use more olive oil and grow younger.

### Onions

Do raw onions contain a sufficient quantity of opium to cause injury when eaten in large quantities? Would cooking help to eliminate a portion of this?—Subscriber, Pomona.

We have never heard of the onion charged with being a carrier of opium. If one wishes to reduce the manifestation of its highly aromatic character it may be boiled before eating. This expels a large part of its more pungent character and the breath does not manifest the unpleasantness sometimes as in the case of the raw onion. It may be interesting to know that while the potato is known in a general way in certain countries of the world and our Indian corn so popular in this country is of limited distribution there is no country in the world which does not make the onion an important feature of its diet.

### Misprint—"Grain" for "Green"

An error was made in answer query as to limberneck in issue July 28, page 80, fifth line from end. It should have read "Give plenty green at noon and also in the morning." "Green" was unfortunately made "grain," which is quite a different matter.

# Veterinary

### Scab on Neck

My cow has dry scabs all over the wrinkles in her neck and down on her body. She licks and bites it into raw sores. Have tried lysol, creolin, tobacco and ointments of every description. We keep her blanketed at the time and she has been tested for tuberculosis three times. Have been feeding her epsom salts also. What can be done for her?—Subscriber, San Gabriel.

The trouble is probably due to mites in the skin. Would advise scrubbing the scabs off and scrubbing the parts clean with soap and warm water. When dry apply a solution of permanganate of potash, two drams to the gallon of water. Also have prepared an ointment of tincture of iodine two ounces, iodine crystals two drams and lard oil to make 12 ounces. Apply the ointment once a day to the spots that do not look healthy after the use of the permanganate solution. Rub the ointment in well so it will reach the mites. The ointment may be applied with a swab so it will not color the fingers.

### Cows Not Breeding

Kindly advise what to do for four cows which are not with calf. They come in season regularly every three weeks and this has been going on for three months. The cows look healthy. Two lost their calves and the other two had no trouble with theirs. Is there anything that can be done for a cow that loses her calf one month before time? We could see no reason for her doing so.—Subscriber, Alameda.

Considering the fact that two lost their calves before full time one might think that it was contagious abortion. There was a long article in the Cultivator of March 3 on page 256 fully describing the latest methods of treating contagious abortion, and all owners of cattle should preserve such articles for future reference. Your trouble may not be contagious abortion and the reason for them not getting with calf may be entirely with the bull. Try a young bull as their service seems to be oftener followed with success. Read the article referred to and compare the symptoms with those in your case and you will be better able to judge what is the trouble.



## Try California Bulbs

Written for California Cultivator By E. Branton

**E**ACH year California sends away great sums across the sea to pay for what we term Holland or Dutch bulbs. For many years California growers in various parts of the state have been growing many of these bulbs with marked success. Especially is the industry flourishing from Santa Cruz northward to Eureka. It is claimed for many sorts of bulbs that the California product is much better than those imported from Holland and that the sizes of all sorts range larger. These bulb farms grow many of the finest varieties of tulips and narcissus or daffodils. We should make an effort to procure California grown bulbs only and if they are satisfactory, to thereafter purchase no others. Encourage home products.

### Garden Fertilizers

Gardens need more fertilizer than fields for garden crops draw heavier on the soil and usually more than a crop a year. Those in rural districts find it easier to fertilize with stable manures, and none are better. They are heavy in nitrogen, the most necessary and costly element, and contain plenty of potash. But they are low in phosphorus, containing only about one-fifth as much as of the other two principal constituents. Therefore stable manure needs the addition of acid phosphate or some other form that will furnish phosphorus. Try this method on the garden and you will note marked improvement in all plant life.

### Plant Freaks

Plant life resembles animal life in many ways that I have for years believed to the belief that these two classes of life differ only in that animal life has the additional powers of thought and locomotion. But freaks and cripples are common to all life. Some plant parts are doubled in number, wanting in whole or part, become misshapen, flouenced, or crested. Odd shapes, twin growths, one flower divided into several or several combined in one. Sometimes freaks are due to unknown causes. Insects and other factors may mutilate, soil conditions or excess of plant food may be responsible for departure from type. The point of greatest interest is that freaks and cripples in plants and animals are much alike in both cause and effect.

### Soot for Gardens

It is doubtful if there are any crops that are not benefited by application of soot. It may be regarded as valuable aside from fertilizer value. Soot may be used dry or in solution, turned under or raked in as mulch, but when intended for future use it should be kept dry. It may be applied to any crop at any time and while it will not generally injure foliage it is as well not to figure the latter with such deposits. Many gardeners claim that it always darkens the color of both foliage and flowers.

### Weeds in Paths

A saturated solution of carbolic acid will kill weeds in paths or prevent them from coming up and is probably the simplest remedy one can apply. Many gardeners often dissolve a pound of powdered arsenic in three gallons of water and two pounds of powdered arsenic. Boil and stir well while boiling and apply while hot to the weedy surface.

This is about right for 25 square yards of path or 75 feet of a path three feet wide, the most common garden width. It will also kill insects of all kinds and should be evenly distributed from a sprinkling pot with a rather coarse rose.

### Weed Killers

Experiments by the United States government with various weed killers brought the rather long list down to three fundamental materials: arsenite of soda, common salt, and crude oil fuel oil. These may be considered best for combating weeds in paths and roads. Lately I saw where an oil and sand roadway of 20 feet in width was cut down to a path of six feet in width, the oiled and caked earth being removed and a fine crop of blue grass grown. I am certain, from this closely observed case, that if paths are outlined with battens, oiled and sanded, that battens may be taken away and grass allowed to grow up to oiled surface and produce an effect second to none for effective and appropriate finish and harmony. Or battens may be left to rot away. Paths are in either case permanently splendidly outlined.

### Trees from Nurseries

When one digs a young tree in the wilds it is usually found to have a few long straggling roots with small feeders along the entire length. Nearly all these are some distance from the trunk. When the roots are cut some little distance from the common center nearly all feeders are cut off and the transplanted tree has a hard time becoming again established and in many cases perishes. Not so the nursery tree. It is dug and transplanted one or more times before being sold, so that diffuse root branching is encouraged. Even if never transplanted the care and culture is bent toward inducing a fine rooting system. It pays to buy nursery stock of nearly all sorts rather than to depend upon collecting from the wilds.

### Chrysanthemum Culture

See that plants are properly supported by stalks or wires strung between stout posts. If troubled with aphids or red spider spray with a nicotine solution. Pinch out the weak buds, or all buds on weakly plants and use later sets of strong buds on a stronger growth. With early sorts begin to choose your buds and disbud somewhat. Keep up a steady degree of soil moisture and feed your plants. A good heavy mulch of stable matter is at once a mulch and a food supply and is of heavy value right now. When buds show color stop fertilizing but keep up a good water supply until flowers are picked.

### Interest in Hardy Flowers

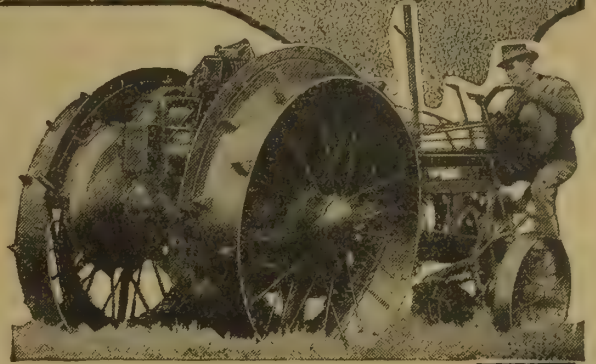
The term hardy flowers has a different meaning in California from that accorded the term elsewhere. With us it is not a matter of ability to stand frost but to cope with dry summers without irrigation. Except for "dandy" gardens, those that look as though they have been freshly barbered, shampooed and manicured, we all desire hardy material. Even the intense lover of plants gets tired of pampering and coddling and loves most those sturdy subjects standing out in full thrift in spite of adverse conditions. Let us use plant that do not have to be watched over on cold nights, hot days, or periods of heavy rain. Give us plants that thrive lustily under normal California weather. With the extensive use of this class we shall finally develop the true California garden.

### Best Deciduous Tree

For either park, garden, or street planting the best deciduous tree is the oriental plane, or the London plane. The latter is a cross between the western plane, *Platanus occidentalis*, and the oriental species, *P. orientalis*. These trees are hardy from the Atlantic to the Pacific if one does not range too far north. In California it surpasses in usefulness any other deciduous tree. Where long summer shade is needed, coupled with a short leafless period during the very coldest and wettest part of the year the oriental plane or sycamore has no equal.

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**Saturday, August 11, 1917**

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#### THIS WEEK'S COVER

Notice the little bunch, each doing his bit when photographed for use on the cover of this week's Cultivator. There is money in hogs and there is need for more of them and their products in this country. That need will apparently increase during the next year or two years.

#### LOCK UP THE DYNAMITE

The state council of defense is issuing warning to farmers, miners and others who may use explosives to keep them locked up. According to information reaching the state defense body, many tons of explosives could easily be secured by enemy plotters because of the failure of mining companies, ranchers and others to keep careful check upon them. Each county council of defense is asked to cooperate in seeing that the explosives are carefully guarded.

#### REDUCE

Note the closing paragraph on page 125, in Mr. Waterbury's article. He touches upon the effect of the hot wave, especially with reference to the citrus. The paragraph referred to appeals for reduction of packing house expense. Of course we know there will be loss from breaking up effective organization, but certainly the cooperative organizations are flexible enough to adapt themselves to conditions made by an "off year."

If 60 per cent, or possibly 90 per cent, of the navel crop is gone, certainly packing house and office overhead must come down or the growers must mortgage their places to pay salaries.

#### MORE COTTON

The Imperial Valley is making its greatest show of cotton. A few hours ride through that rich valley is

sufficient to convince anyone of its remarkable resources and of its ability to help feed and clothe the world. Thousands of acres of new lands have been brought under cultivation this past year. Now comes a still more ambitious plan which will bring another 200,000 acres "under the water." Some dairymen have seen their neighbors making more money from cotton than from dairying, and alfalfa has given way to cotton. There is difference of opinion as to the wisdom of this move. Only time can settle that point, but certainly the great need of the world for cotton guarantees a market for every pound grown this year. Besides, not a seed is lost, and the output of the Imperial Valley in oil and meal is a great factor in the world's foods and manufactures.

#### PERFECTLY SOUND

The report of the testimony before the investigation board, which had to do with the rumpus in the federal farm loan bank at Berkeley, was sent to Washington and after due deliberation it has been determined that:

"All questions of integrity of purpose have been eliminated and the bank is found in a perfectly sound condition.

"The affair will not be permitted to delay or impair the usefulness of the bank as an instrumentality of public service and that will be the chief consideration of the board in reaching its conclusion."

All of which could have been, and probably was, said before the committee left Washington to make this "investigation." The "sound condition" has been at no time questioned. There are conditions other than "sound" required before this institution can be the mighty factor it should be in feeding the world.

#### MORE BEEF

Mr. Spellmeyer's article on page 137 calls attention to a need of the country for greater production of meat producing animals. At the same time he calls attention to some of the unfair treatment which the meat producers receives. One of the points he makes is regarding the use of some of our idle millions which might be loaned to live stock breeders at a reasonable rate of interest and on long time. Cattle paper should be good, and the millionaire who is really patriotic might well spend a little time in finding means of placing his money where it would render most patriotic service.

Another point well taken by Mr. Spellmeyer is that a market is needed for Pacific Coast grown stock. This has been commented upon before in these columns. Why is it necessary for California to ship fat cattle and hogs to Kansas City? Is there not enough enterprise and capital on the Coast to handle this situation and handle it with fairness to the producers? As it is now California prices are materially lower than those of Kansas City, yet live stock is sent to Kansas City and shipped back to California as a finished product—which is neither right nor good policy.

#### NOT A FAILURE

Many of us who claim to be good farmers are able now to point at failures made in a few thousand backyard gardens which were planted because of the "produce more and re-

duce the high cost of living" campaign. There are plenty of absolute and more of indifferent failures in garden making.

But lest the "I-told-you-so" folks become too jubilant, let us remind them that the loss may not be as great as at first appears. Many a high school youngster whose highest ambition was to hold the steering wheel of an auto has this year learned the shape and general purposes for which a hoe was intended. He has done some work which has taught him a valuable lesson. He has not made a complete success as a gardener, but some time when the farmer is in sore need he may be able to train this formerly helpless boy to do effective work.

Again, there have been some cases of genuinely successful gardening, and that by men and women who knew not the name of the different tools which they were to use. Another year will show more of the successes of this year than can now be discerned. Let us be thankful for the garden campaign.

One more of its lessons we may be permitted to refer to, and that is that in addition to learning which end of a plant should be set in the soil many consumers have gained an inkling of the labor and expense required to produce food of merchantable quality that they themselves would be willing to pay for. This year they are certainly eating some queer looking specimens of their own gardening.

#### LOWER THE TAXES

We have been appealed to by all types of officials and all-round advisers to economize in our eating and in our drinking and in our dressing. The world needs the wool, cotton and all kinds of foods, and waste must be stopped. This has been dinged into us, and we believe most of us are obeying the injunction.

One place where economy will pull the hardest is in the realm of politics and municipal, state and national governments. In fact, we think it would be taken as almost a disloyal suggestion that some of the tax eaters might well be sent to the front and no one elected to take their places.

The Tax Payers' Association of California has made investigation and found that county expenditures for highways from the year 1912-13 to the year 1915-16 increased 69.62 per cent, and that during the same period the county expenditures for education increased somewhat over 27 per cent. During the same period the population of the state increased 15.33 per cent. No other expenditures of the state's funds could receive more general approval than those for education and good roads. Nevertheless, is the percentage of increase justified? If we are to economize even to the heel of the loaf of bread let's also economize in matters of county and state expenditure.

We notice that in Riverside County steps have been taken to lower the assessment and tax levies. This primarily because Riverside is a citrus county and citrus orchards have been seriously injured by the recent hot wave. The tax rate for the next year will be lower than it has been for the past ten years.

Why may not other counties in California follow Riverside's example?

#### Agricultural News Notes

New York's apple packing law attacked in the supreme court and been held to be valid.

Greece will produce 160,000 tons "currants." The holdover crop last year in addition is 20,000.

The New York State Food Supply Commission has purchased 40 tons. These will be loaned to responsible farmers for fall plowing.

The seventh annual rose show at the Tacoma, Washington, Rose Society, held June 29, 30 brought some wonderful new varieties.

Chicago poultry markets are, charged, being manipulated so almost prohibitive prices for dressed poultry are being charged.

The Ohio state horticultural society met recently at Chillicothe and adopted partial plans for a state apple show to be held in Cincinnati, November 17-23.

All exports from the United States are now under government control and license must be secured before shipment can be made outside of country.

Colorado has over 7000 honey producing farms. The beekeepers there are organized with a strong marketing committee and good prices are being secured.

The board of grain supervisors of Canada has ruled that after August the maximum price of wheat at Williams, Ontario, shall not exceed \$2.40 per bushel.

The Royal Horticultural Society of London held its usual annual show on June 5. The society's show has been taken over by the military authorities so that the show was elsewhere.

The official food commission of Norwegians, headed by Nansen, Arctic explorer, is in this country endeavoring to secure permits for ports of foodstuffs to their country. The commission gives assurance none of this food is destined for many.

The potato crop of Ohio has been severely damaged by blight because of weather conditions. The state agricultural college has advised spraying with a solution of four pounds copper sulphate, four to six pounds fresh burned lime, all diluted to gallons.

The National Apple Growers Association held their meeting this year at Niagara Falls, August 13 and 14. There was discussion of grading of apples, packing in more than one size, securing of cars for transportation and the labor problem. The president of the association is Henry M. Lap of Savoy, Illinois.

The winter wheat crop of the United States has astonished practically all farmers in producing a fair crop where it was thought to be almost a total failure for a time. Many farmers who plowed up and planted spring wheat are now regretting it because the favorable season has induced general stooling and a fairly good crop will be given in nearly all sections.

The commissioner of agriculture of New York has suggested to various county fair associations the awarding of \$250,000 of state money, usually given for premiums, direct to the farmers, the awards to be on the basis of crop yield per acre and excellence of crops, determination to be made by a committee which shall look over the crops and keep account of totals at harvest time.



# Agricultural News Notes of the Pacific Coast

## Northern California

Gridley City is to have free mail delivery.

Sutter County fruits are very late in ripening.

Alameda County is having a good roads campaign.

The Alameda County farm bureau has a free employment agency.

Buyers made contracts for 100 cars of peaches at Gridley, Butte County.

Oakland has a free market which represents an investment of \$350,000.

Early rice in Colusa County will be ready for cutting the first of September.

Humboldt County sheep growers are reported getting 62½ and 63 cents a pound for their wool.

Commissioner Gould of Yolo County has a number of men cutting star thistle on the highways.

The Humboldt County Dairymen's Association held its big annual picnic at Loleta Saturday, July 28.

A Humboldt milling company is completing a contract for 100,000 red-wood trays for drying raisins.

A new use is reported for rice hulls in Butte County. They are being used as a mulch around orange trees.

Grapes are ripening very slowly in Sutter County. Some contracts are reported at \$30 a ton for drying.

Farmers of the Palo Cedro district of Shasta County have organized an irrigation district to water 2000 acres of land.

It is announced that 75 per cent of the pear growers of the Sacramento Valley have joined the new pear growers' association.

The California Central Creameries Company at Ferndale has packed over 1,000,000 pounds of butter for the use of the United States troops.

There will be local meetings of the Glenn County farm bureau at Codora, August 13, 14, Jacinto 16, 17, Orland 20, 21, Plaza 23, 24, Elk Creek 27, 28.

A serious brush fire recently threatened a 45,000 acre grain field east of Sacramento. The fire was finally brought under control with only a few hundred acres destroyed.

Davis, Yolo County, reports the biggest grain crop in many years, with warehouses full and many thousand acres awaiting harvest because of shortage of labor supply.

A Mendocino County sheep raiser sheared 345 sheep, which averaged eight pounds wool which sold at 62 cents per pound. The best buck of the lot yielded 15 pounds.

People of Oroville, Butte County, are endeavoring to secure the establishment of the International Celulose Company. It will work up the sawdust and wastes of the mountains.

Experiments made in bean raising on the "second bottom" lands east of Elkhorn, Yolo County, have been so successful that it is predicted at least 20,000 acres will be planted to beans on such lands another year.

Representatives of milk producers' associations of California met July 28 in the office of the state market director in San Francisco to organize a cooperative association dealing with the general problems of the dairymen of California.

## Central California

The cannery at Exeter started on peaches July 24.

Salinas, Monterey County, has a new rural delivery route.

The cannery strike at San Jose was settled by a compromise.

Fruit packing plants at Atwater, Merced County, are working to capacity.

Fires in Patterson, Stanislaus County, recently destroyed large wheat fields.

Forest and field fires near Coalinga consumed hundreds of acres of pasture.

Modesto has a free employment bureau supplying workers on the ranches.

Central California newspapers are offering free advertising space to men out of a job.

Cantaloupes of the Turlock section are now commanding from \$1.90 to \$2.50 for standard size.

The sugar factory at Visalia is in operation and will have an output of approximately 100,000 sacks.

It has been suggested that owing to shortage of food it will be wise to can bass and trout of Tulare Lake.

The large barn and haystacks on the Whitten Ranch near Terra Bella, Tulare County, recently burned.

Horticultural Commissioner Beers of Merced County is serving notice to clear off all weeds from ditch banks.

Fresno fruit growers are planning to keep the soldier boys who go from that section supplied with fresh and cured fruits.

San Joaquin Valley irrigators are receiving a large supply of water from the Sierra Nevada because of last season's heavy snows.

The cannery at Hanford, Kings County, is now running on peaches and this year for the first time will put up a large pack of grapes.

The Modesto plant of the Pratt-Lowe Preserving Company has 400 employees at work. It has been putting out 50,000 cans of apricots daily.

Merced County harvesters are busy. The farmers are receiving \$2.00 and \$2.10 per cwt. for barley. The elevator at Merced is already filled to capacity, 4000 tons.

The Associated Raisin Company has raised wages for all men in its packing plants two and one-half cents per hour. The Associated prides itself on the fact that it has never had any wage trouble.

The newly formed Valley Fruit Growers' Association has 12,000 acres already signed up. Day wages paid by the Association during August will be 27½ cents per hour, 30 cents during September.

The state railroad commission has fixed rates to be charged by the Madera Canal and Irrigation Company. The rates are: October 1 to March 1, 50 cents per acre foot; March 1 to June 1, \$1.00; June 1 to October 1, \$1.25.

The Merced County farm bureau announces local meetings through August at Delhi August 11, Stevenson 13, Winton 15, Amsterdam 17, Livingston 20, El Nido 22, Le Grande 24, Merced 27, Los Banos 28. Humification of soil will be the principal subject considered.

## Southern California

Lemons are bringing big prices in Eastern markets.

Pomona is harvesting 2000 acres of potatoes.

Growers of fall crops of potatoes are busy planting.

The earlier walnut harvest will begin in August.

Hemet has just stored 23,000 bags of barley.

The recent hot spell did considerable injury to lima bean fields.

Imperial Valley's grape shipping season closed the last of August. One hundred carloads were shipped East.

Brawley, Imperial County, tried the experiment of shipping cantaloupes in bulk to nearby points.

The sugar factory at Chinio opened August 4, later than usual on account of the late cold spring.

The cannery at Placentia, Orange County, has been overhauled and supplied with new machinery.

The canneries at Hemet, Riverside County, in the week ending July 21 put up 700 tons of fruit.

Covina, Los Angeles County, women are discussing drying and fruit processing.

The board of directors of the Ventura County fair has been reorganized and is considering the holding of a fair this season.

Shortage of cars prevented the shipping of 2500 boxes of Valencias from the Fillmore packing house for several days.

Riverside and San Bernardino County beekeepers held their monthly meeting at Urbana Springs, San Bernardino County, Friday.

New kelp harvesters are being constructed and the output of potash and other products of kelp will be greatly increased during the coming year.

Governor Harding of Iowa will address the Iowa people at their picnic at Bixby Park, Long Beach, Saturday, August 11.

Imperial Valley was visited last week by heavy showers which caused some damage and stopped auto travel over its highways for some days.

With several hundred acres of apples coming into bearing next year the Devore Fruit Growers' Association contemplates putting in packing machinery next year.

A man who left a camp fire burning in the Angelus national forest was given a 50-day jail sentence, which was suspended on condition that he stay away from the forest reserve for a year.

Hemet, Riverside County, is discussing its future fruit crops. It produced this year about 9900 tons of apricots and is anticipating that within five years this will be increased to 23,000 tons.

Apricot growers in the Devore section have harvested a hundred dollars worth of apricots per acre from their four year old trees. The older groves have brought in four and five hundred. It is a bumper crop.

The department of the interior has closed the contract with Mark Rose for the construction of a canal from Laguna Dam which will carry water to from 120,000 to 200,000 acres of rich Imperial Valley lands.

## The Coast

Yakima Valley, Washington, will have a big fruit crop.

Yuma had a third of an inch rainfall the last week of July.

Bellingham, Washington, is marketing its record raspberry crop.

The Hood River Valley produced 1,250,000 barrels of apples last year.

In the first six months of the year Maricopa County, Arizona, shipped out 35,000 head of hogs.

Guernsey breeders of Clackamas County, Oregon, have organized a breeders' club.

Salmon canners of Washington will supply the government at regular wholesale rates.

Every state on the Pacific Coast has produced more potatoes than any preceding year.

The fruit crop in the Lost River district of Washington is very poor this year due to winter killing of fruit trees.

It is stated that every fruit district in the state of Washington will have one or more evaporators in operation this season.

The Southwestern Stockman Farmer is authority for the statement that Maricopa County, Arizona, is growing 125,000 acres of alfalfa.

Harvey Allred, Idaho's farm market director, is advising hay growers to hold for better prices as the hay crop for 1917 is short the country over.

The Wenatchee Valley, Washington, is having a big cherry season. It shipped 125 cars of apricots and will ship over 7000 cars of apples.

Bellingham, Washington, is having a fair cherry crop but anticipates short apple crop. Pears, plums and prunes will be a full crop.

The state of Washington proposes to grow its own cranberries and save \$600,000 now sent out annually for that fruit.

Call has been issued for the meeting of the Oregon State Poultry Association at the time of the state fair at Salem in September.

Three hundred dairymen of Snohomish and Island Counties of Washington have organized a dairymen's association.

Chandler cotton growers have organized a Citizens' Protective League to protect the cotton gin from agitators who have threatened to burn the cotton.

Farmers of Columbia County, Washington, have organized to protect their crops from incendiaries. Many anonymous letters have been received threatening to burn the crops.

The irrigation district at Horse Heaven, Washington, has bonded itself in the sum of \$18,000,000. About 250,000 acres will be put under water. The cost will be about \$47 per acre.

The Pacific Coast Nurserymen's Association held its annual session in Tacoma, Washington, the last week in July. M. McDonald of Orenco, Oregon, was elected president, C. A. Tonneson of Tacoma, secretary.

Twelve million pounds of wool are said to be stored in warehouses in Portland. For the first time buyers from the great wool markets of the East are coming to Portland instead of growers sending their fleeces to the markets.



# The Indigo Industry of the Philippine Islands

By E. D. Doryland, Agricultural Inspector, in the Philippine Agricultural Review



HERE are a variety of common names for the commercial few of the nearly 300 tropical species of the Indigofera—a genus of the leguminosae, so called because of the ability of some of its members to produce a glucoside indican from which indigo is extracted by a mechanical, solvent process. The old Sanskrit name for indigo, Indigofera tinctoria, until recently the principal commercial dye producer, is nili, or nila, while the old Latin name for the same plant is indicum, thus showing that as far back as Roman times it was recognized that indigo came from India, and was probably indigenous to that place. Doubtless, it was from India or some other neighboring country that the plant was first introduced into the Philippines.

The common names employed throughout the Philippines other than the English form "indigo," are anil, and tayom, or a similar name. Tayom is the name used on the Island of Luzon by the Tagalog, Ilocano, and Pangasinan peoples, and it is the rise and fall of the industry among these peo-

ple with which we are principally concerned.

Indigo in recent years yielded its once superlative position as a colorer of fabrics, to a product born of science, the anilin dyes of commerce, which became particularly aggressive about 1880. The creation of this benzol-anilin industry has delivered a lingering deathblow to an agricultural enterprise that was once a flourishing industry throughout Southern and Central Asia, Malaya, South and Central America, and to a limited extent in practically all other tropical, and some semitropical countries.

Only recently, since its most favored days, has the price of the vegetable indigo been such that it could be produced on a remunerative basis under Philippine conditions. This recent high price was brought about by the German dyestuffs being cut off from their old markets, and the vegetable dyes were used instead. Thus through the influence of the European war has indigo again become a source of profit. This recent boom is perhaps the last struggle for life of an industry that can only be made profitable where pitifully small wages are paid for labor.

This recent show of life of the vegetable indigo industry is perhaps the last, because the civilized nations of the world have received a severe lesson by having German dyestuffs shut off from them, and are now developing their own coal-tar dye products, so that in event of another world catastrophe these countries will not be dependent upon the vegetable product.

During the early days of the vegetable indigo industry in the Philippines the process of extracting the indigo from the plant was crude. Planting was done during the latter part of the rainy season, and if the ravages of locusts left sufficient foliage the plants were cut in May or June of the next year; after cutting they were placed in casks filled with water, then steeped; after steeping for several hours, usually 10 to 16, the plants were removed and a certain quantity of lime was mixed with the water for flocculating purposes; the solution was then poured into other casks where it remained until the coloring matter had completely precipitated;

as soon as this had taken place the water was drawn off and the indigo left to dry, after which it was cut into small pieces ready for the market or for home use.

As imperfect as this method of manufacture was the indigo brought a good market price and paid an excellent profit, sometimes as high as 90 per cent. This, however, was back in the days when 60 per cent of the people of Narvacan and Santa Catalina, Ilocos Sur, were engaged in home dyeing, and before the anilin dye of commerce penetrated to the farthest markets of the globe.

The Philippine indigo plant is rich in indigotine, but the crude process of manufacture of the dye made it rank second in quality to the indigo from other sources.

The market price in 1914 before the war began was 30 pesos per quintal, while its maximum price years ago was 100 pesos to 120 pesos, but this was during the "bonanza" years from 1864 to 1875, when the export ranged from 98 to 158 tons per annum, respectively.

In recent years a Chinese started a dyeing establishment in Vigan, Ilocos Sur, in which imported dyes were used, and this was the beginning of the end, commercially, of the indigo industry of the Luzon provinces, revived only by the recent strife in Europe, and doomed to certain failure again after the war. To attempt to revive this industry so as to compete with modern science would be like trying to reverse the hands of time, plainly an impossible task. However, the old concrete steeping vats and wells will remain, then as now, as landmarks of practically an extinct industry, that has helped to lay the foundation of many a fortune.

## STATE HEADLIGHT LAW



THE state headlight law is now in effect. H. A. French, superintendent of the state motor vehicle department, has issued a bulletin touching upon the features of the law. The principal portion is here given.

"At times and under the conditions in this section hereinbefore specified the headlights of all motor vehicles upon the highway shall give sufficient light to reveal any person, vehicle or substantial object on the road directly ahead of such motor vehicle for a distance of at least 150 feet, and shall also give sufficient side illumination to reveal any person, vehicle or substantial object ten feet to the side of said motor vehicle at a point ten feet ahead of the lamps; provided, however, that such headlights shall be so constructed or arranged that no portion of the beam of reflected light when measured 75 feet or more ahead of said lamps shall rise or shall be capable of being raised from the driver's seat, to more than 42 inches above the level surface on which the vehicle stands ahead of such vehicle; provided, further, that the term headlight, as used herein, shall denote any light, irrespective of its location upon the motor vehicle, the rays of which are projected forward, except sidelights of not to exceed four candlepower, and that the term 'beam of reflected light' as used herein, shall denote the approximately parallel focalized rays gathered and projected by a reflector, lens or other device; and provided further, anything herein to the contrary notwithstanding, that where there is sufficient light within the lateral boundaries of the public highway within any incorporated city, town or city and county, to reveal all persons, vehicles or substantial objects within said boundaries for a distance of 100 feet, no lights shall be required to be displayed on any vehicle while the same is not in operation, provided that the wheels of such standing vehicle nearest the sidewalk are located within six inches of such sidewalk."

## Fair Dates

Ukiah Fair, Ukiah, August 8-11.  
Sonoma and Marin Fair, Santa Rosa, August 15-18.  
Santa Rosa Fair, Santa Rosa, August 20-27.  
Yolo County, Woodland, August 29-September 1.  
Dixon Fair, Dixon, August 27-September 2.  
Yuba County, Marysville, September 4-7.  
State Fair, Sacramento, September 8-16.  
Almond Festival, Arbuckle, September 13-14.  
Pleasanton Fair, Pleasanton, September 17-22.  
Ventura County, Ventura, September 24-29.  
Modesto Fair, Modesto, September 24-29.  
Glenn County, Orland, September 26-29.  
Fresno County, Fresno, Oct. 1-6.  
Kern County, Bakersfield, October 1-6.  
Kings County, Hanford, October 8-12.  
Riverside Fair, Riverside, October 9-13.  
Hemet-San Jacinto Fair, Hemet, October 16-19.  
Visalia Fair, Visalia, October 22-27.

## OTHER STATES

Spokane Interstate Fair, Spokane, Washington, September 3-8.  
Kings County Fair, Renton, Washington, September 14-16.  
North Yakima Fair, North Yakima, Washington, September 17-22.  
Pendleton Round-up, Pendleton, Oregon, September 20-22.  
Idaho State Fair, Boise, Idaho, September 22-29.  
Oregon State Fair, Salem, Oregon, September 24-29.  
Montana Fair, Helena, Montana, September 24-29.  
Pacific National Dairy Show, Portland, Oregon, November 12-17.  
Pacific International Live Stock, Portland, Oregon, November 19-24.

## HOME-MADE POLISH FOR AUTO

For furniture or automobile bodies an excellent polish can be made by thinning down boiled linseed oil with turpentine. This should be applied sparingly to the clean surface with a cloth and should be rubbed briskly with a soft dry cloth or cotton waste. It is best not to use body polish on a car until the gloss has become dull.

Another polish recommended by automobile experts is made from one gallon of turpentine, three and one-half ounces of citronella oil, one pint of paraffine oil or light cylinder oil and one and one-half ounces of oil of cedar. When the finish on a car has become very dull the appearance can be greatly improved by rubbing with a mixture of cylinder oil and kerosene.

## ALFALFA IN KANSAS

One of the most complete reports we have seen on that greatest of all legumes is that of the Kansas state board of agriculture, "Alfalfa in Kansas." There are almost 500 pages in the book and hundreds of illustrations and charts. The bulletin refers to alfalfa as Kansas' greatest forage crop.

"Kansas raises more alfalfa than any other state. It is therefore fitting that the methods of our best growers be investigated and that the information thus acquired be disseminated throughout the commonwealth. To this end the state board of agriculture sent out nearly a thousand blanks, each containing 115 questions, to prominent alfalfa growers in every county in Kansas. The replies received from hundreds of these growers have been compiled and analyzed and the consensus of opinion on all the points and phases of the culture of alfalfa is herewith presented."

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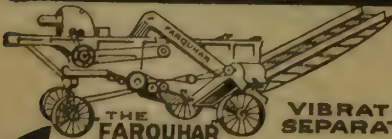
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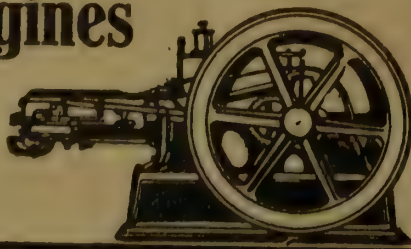
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# Making the Dairy Pay

Written for California Cultivator By M. E. Bemis

**S**OME one may have written a book with the above title. In fact, I am almost certain that there is such a book, but as it most certainly did not apply to Arizona or California conditions, and as no other words so well express the story of this Salt River Valley dairy, I will take a chance of being accused of plagiarism in using the title.

When a man makes a herd of 40 cows produce an average of 328.6 pounds of milk for each cow, and in a cow testing association with more than 300 cows has five out of his 40 that are among the ten best individuals of the association, it makes one wonder if it is altogether chance that has brought such results.

Frank M. Wilkinson is the man and he lives and is raising a family on his farm about 12 miles west of Phoenix, Arizona, on the outer edge of the big Salt River Valley.

The story of his success in the dairy business is not so different from the success of thousands of other dairy farmers probably, because it is a combination of those essential things that go to make dairying profitable and therefore successful.

He was among the first of the dairy farmers to build a silo in the Salt River Valley. For two years previous to the organization of the cow testing association he had weighed and recorded the weights of the milk from each cow and tested about four times each year. Naturally he had weeded out the unprofitable cows so that when he joined the association he was not only continuing the work which had been done before. It was only natural that in this two years' work he had observed a good deal and done a good deal of earnest thinking, for he is the sort of man that thinks and then acts.

Along with the scales and tester and the silo, there was of course a registered Holstein-Friesian bull, for his herd is composed of grade Holstein-Friesians. He believes in good feeding, recognizing the fact that there can be no improvement of the progeny unless either the sire or dam be better than the sire and dam of a breeding stock. So he has built a foundation wisely and then rejects relentlessly those that do not come up to the requirements.

With his firm belief in the importance of breeding and the necessity for doing by systematic work, he believes that is only part of the important work of dairymen. In other words, he believes that the matter of feed is a great big factor quite as important as the others.

A quite common practice among the Salt River Valley dairymen is to turn the cows that are milking into an alfalfa field that is about in the last stage to cut for hay, and let them run on it until they begin to fall

off in milk flow and then change to another field that is in the same stage. The dry cows and young stock are then turned on the field vacated, to be cleaned up.

Here is where Mr. Wilkinson is different. He says, "One never loses anything by giving a dry cow as good as the cow that is giving milk. I have found that any fat you can put into a good cow when she is dry, you get back in the milk pail."

Now, if there is anything that he is doing which has contributed more to his success than any other one thing, possibly it is in the matter of feed, but as I pointed out at the beginning, it is a combination of all the important factors that spells success.

As to what he feeds, he says, "Silage and alfalfa makes almost a perfectly balanced ration" and he added, "I feed no grain to amount to anything."

Like many other farmers with silos, he has tried various kinds of forage for silage. Feterita he has found makes good silage, but he prefers corn to anything else. The variety of corn which he prefers is the same as that planted by the majority of the best farmers of this valley, Mexican June. The rotation which he advises is alfalfa six to seven years, then grain and corn for two years. In this way the alfalfa is kept up to its maximum, and the alfalfa sod when turned under makes an ideal soil for growing big crops of corn and grain. "Land that has been in alfalfa for a number of years will produce double the grain that can be produced on the same kind of land which has been continuously put in grain for a series of years," he said.

He has a milking barn with concrete floors and a milking machine. There is also a manure spreader, and there are not many of these implements in the Salt River Valley—more is the pity—but this only serves the more to show that Mr. Wilkinson is one of the progressive kind of dairy farmers.

Lots of hay is being put up for winter feeding, and every effort is being made to save the most valuable part of it. In the usual wholesale method of stacking hay here the buckrake plays a prominent part and incidentally breaks up a good deal of the fine stalks, loses a large part of the leaves and scatters considerable that is lost forever. On the Wilkinson farm the hay is cut and raked into windrows, then bunched with a horse rake. Floats which are like big stone boats, except that they are made of one inch pine plank, are used for hauling the hay to the stack instead of the cumbersome and wasteful buckrake. These floats will hold probably 500 pounds or more. A common hay sling is spread out on the float, a team hooked to one end, and two men with forks throw on the load in a very few minutes. The float is pulled to the stack and the team hitched to the pulley rope of the derrick stacker and the load pulled up over the stack very quickly and the most valuable parts of the alfalfa plant are saved without loss.

This is only one of many details that have been carefully studied out, but which have helped to make this the highest producing dairy herd in the two cow testing associations.

## Field Notes from the Live Stock Men

Geo. Hemming, chief herdsman for E. Nixon's Revada Guernseys, will have a great string ready for the state and other fairs this fall. He was with Frank Morgan's herd in England for years before he came to this country and had a lot of blue ribbon winners at the Island and London shows. He came over with J. L. Hope, in care of big importation of Island cattle,

and was afterward with Walter Dupee at Edgemor, whence he comes to Mr. Nixon.

Mrs. Eliza Shepard is continuing the policy of the late Jack London, her brother, in maintaining the splendid Shorthorn herd, the Shire stables, and the Duroc-Jersey herd at Glen Ellen. Mrs. Shepard is an enthusiastic stock woman, and Shorthorns are her fav-

orites. Roselawn Choice, senior grand champion bull at Sacramento last year, will be exhibited again this year. He is in fine condition. The Scotch cow, Pine Grove Secret, bred to Selection, a former International grand champion, and Sittytton Secret, the junior yearling bull calf, are two of the best in the lot Mrs. Shepard brought West last spring. However, London's Lavender Lady, a junior heifer calf sired by Roselawn Choice and bred by the London ranch, is going to be one of the hardest to beat in her class. She is nicely covered, back line straight as a string, is smooth and has remarkable character.

Geo. Sim, Scotch herdsman on the A. W. Foster Hopland ranch, is expecting his two year old heifer, Hopland Lass, to make her competition hustle for first money this year. She is a granddaughter of Ringmaster. Hopland Duchess and Hopland Mirth are two mighty good senior yearling heifers which go to Sacramento. The junior yearling bull, Hopland Lord, and a typey senior heifer calf are noteworthy Hopland fair selections. George has been a Shorthorn cattleman all his life from the time he roamed the heather in Aberdeenshire till he brought a shipment over to America for Frank Harding from whom Mr. Foster secured him.

C. S. Rasmussen, Humboldt County Guernsey breeder, has been getting some remarkable results with his dairy herd the past few years. One hundred twenty-five cows have averaged 300 pounds butter fat each for the last seven years. With the exception of less than six weeks around holiday time these cows never got a pound of grain. Gypsons Isabella 28978, made 590 pounds of 85 per cent butter at two years old. It would be interesting to know what this great cow would have done had she been fed a regular test ration. Mr. Rasmussen is in the county testing association but will soon be doing official work as his herd will compare favorably both in quantity and quality with the best. Glenwood blood predominates in this herd although it is strong in Ne Plus Ultra and the Masher and May Rose families.

Chas Rule, who ranges registered Hereford cattle in Sonoma County, is immensely pleased with his great young sire, Sonoma 62500, a Cook bred September, 1914 bull purchased at the Denver show last January for \$2000. He will get Mr. Rule some outstanding calves if breeding and individuality count for anything. He is by Beau Perfection 9th, a full brother to Woodford, the \$12,000 Taylor sire. Sonoma is Beau Donald breeding on his sire's side and Beau Brummel on his dam's side. He was champion senior yearling at the Denver show and won several blues at the Montana state and Spokane fairs last year. It is to be regretted that Mr. Rule was unable to secure a herdsman to fit a herd for the fall shows as his Anxiety bred stock would have been a welcome addition to the big beef exhibit at Sacramento.

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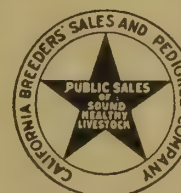
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KING OF HOLLOW-HILL 25876

The sire is a son of Itchen Daisy's May King of Langnater 17349, which was recently sold to a California breeder for the record price of \$8000, and of Caroline of Chilmark 24812 which has just finished an A. R. test with 15,185.9 pounds milk and 722.97 pounds butter fat.

King of Hollow-Hill combines the May Rose blood of Imp. Itchen Daisy III 15630 and Dolly Dimple 19144 with that of Imp. Mashers Galove 8572, Imp. Cora's Governor of Chilmark 8971 and Governor of the Chene 1297 P. S.

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### Large Type Poland Chinas



W. H. Browning  
Woodland, Yolo County, Calif.

## Humphrey's First Annual Sale

Written for California Cultivator By C. A. Briggs



EXCEPTIONALLY fine young registered Berkshires, 30 of them were sold at public auction on the Escalon farm of A. B. Humphrey on August 2. L. E. Frost conducted the sale in his usual efficient manner. Brief opening remarks were made by Mr. Humphrey, who expressed the hope that as this was a farmers sale that the farmers in his immediate neighborhood would be able to secure some of the animals offered and assist him in making the Escalon district a Berkshire headquarters. Dean C. F. Curtiss, of the Iowa Agricultural College at Ames, gave a fine talk on the need for more and better hogs on all farms, and predicted 20 cent pork at an early date. The auctioneer, "Col." Seeley, was assisted in the ring by Mr. Frost who is to say the least, not "a frost" but a hot wave in getting after bidders. Together they make a full team. The auctioneer was new to Coast sales and the crowd liked him. He is a good one, all business and on the job every minute.

The animals sold were of high quality and found new homes in Oregon, Washington, Iowa and California. High prices did not prevail, but good was done in getting new meat started to raising the "snub nosed" ones. As the greater portion of the sales was of young stock with their days of usefulness all before them, the sale can be classed as a notably successful one. Mr. Humphrey made a fine host, taking the crowd before the sale in an auto trip over the farm and later serving a lunch of good things.

Homer Hewins, Jr. of Calistoga walked away with the highest priced animal, Escalon Artful Belle 4th, a sow of splendid type and breeding. Other buyers were Dean C. F. Curtiss, Ames, Iowa; F. R. Steele, Grant, Pass, Oregon; Charles M. Talmage, Newport, Washington; E. L. Thompson, Tipton; Jos. Levy, Manteca; Geo. A. Stingle, San Gabriel; T. G. Meckfessel, Hanford; L. Cole, Oakdale; Napa State Hospital; F. A. Brush, Santa Rosa; W. M. Carruthers, Mayfield.



Left to right, Col. Lloyd L. Seeley, auctioneer; L. E. Frost, sales manager; R. P. Royce of state farm, Davis.



Familiar Faces Seen at the Carruthers and Humphrey Sales  
Left to right, W. M. Carruthers, San Francisco; F. A. Brush, Santa Rosa; Dean Curtiss of Iowa Agricultural College.

## Carruthers Second Annual Sale

Written for California Cultivator By C. A. Briggs



AT Mayfield on August 1, a notable public sale of Berkshires took place. Twenty-eight head of registered hogs belonging to W. M. Carruthers sold to buyers from a dozen towns and four states for \$4975, an average of \$177 a head. The usual auction crowd was absent, but a small number of keenly interested buyers kept the auctioneer, Lloyd L. Seely of White Hall, Illinois, on the move. The veteran editor and expert ring man, L. E. Frost, who knows Berkshire hogs in every line, point and possibility, assisted in the ring. What would a Berkshire sale be without him? He opened the sale introducing the speakers in the follow-

ing order: Dean C. F. Curtiss of the Iowa Agricultural College at Ames, president of the American Berkshire Association, who paid compliments to the breed and breeders as he had found them in a trip through the state, to the ability of Mr. Carruthers and to the sale offering which he said was among the finest that he had ever seen. A. B. Humphrey of Escalon spoke of the need of all fruit farmers keeping stock to maintain the fertility of orchards and vineyards. F. A. Brush, banker, big farmer, stock man and breeder of Santa Rosa, won applause by his remarks about his chosen breed. Charles M. Talmage, a big man in every way, from Newport, Washington, gave a practical talk that



was followed with keenest interest. The "Colonel," Mr. Seeley, hammered his points into the "pulpit" and his keen eyes never missed a bid. The "top notcher" of the sale, a magnificent boar of splendid breeding, Mayfield Champion 223391, was knocked down after a hot fight to Charles M. Talmage of Newport, Washington, for \$1175. Mr. Talmage has since sold him at private sale to Dean Curtiss for \$1500. He goes to Ames, Iowa, the home of good hogs.

Mrs. Carruthers, assisted by a small battalion of ladies, served a fine lunch at noon which was appreciated by all. The buyers were Chas. M. Talmage, Newport, Washington; Dean C. F. Curtiss, Ames, Iowa; F. A. Brush, Santa Rosa, who purchased the highest priced sow, Rookwood Lady 100th, for \$585; F. R. Steele, Grants Pass, Oregon; H. P. Murphy, Perkins; Chas Turner, San Jose; Hopland Stock Farm, Hopland; John M. Ratto, San Francisco; A. B. Humphrey, Escalon; V. A. Schellar, San Jose; F. N. Woods, Jr., Menlo Park; Merrill & Sons, Morgan Hill; W. H. Saylor, San Francisco.

## A Guernsey Club Organization Meeting

Written for California Cultivator By C. A. Briggs

On Saturday, August 4, a number of the leading Guernsey breeders of the purpose of discussing the advisability of perfecting an organization to make



The Makin's of a Butter Factory

state met at luncheon at the St. Francis Hotel, San Francisco, for the the breed better known. It was found that there were about 600 head of

registered animals in the northern part of the state, the bulk of them being represented by the owners present at the meeting. It was decided to organize under the name of Northern California Guernsey Cattle Club for the purpose of fostering and promoting the interests of Guernsey cattle and Guernsey breeders. B. E. Nixon of Napa was elected president; W. H. Saylor of San Francisco, vice president; A. J. Welsh of Redwood City, secretary. The officers, together with M. H. Tichenor of Palo Alto and M. A. Harris of Redwood City, were made the executive committee. Dr. J. W. Henderson of Berkeley and Prof. Gordon H. True of the university farm at Davis are among the charter members of the club. It is the intention of the club to make this excellent breed of cattle better known, and a most earnest spirit was manifested by all who were at the meeting.

As a rule, when hogs are lot fed practically all the manure is lost. There was never a time when manure was worth so much as it is today, and every effort should be made to save it.

### FIRST FIGURES ON WOOL SUPPLY

**F**OR the first time in this or any other country a survey has been made of the wool stocks on hand, and the figures representing the holdings June 30, 1917, have just been made public by the bureau of markets of the United States department of agriculture. According to this summary there are 370 million pounds of grease wool in the hands of dealers and manufacturers who reported; 47 million pounds of scoured wool; 29 million pounds of pulled wool; 23 million pounds of top; and 18 million pounds of noil. About 56 per cent of the grease wool, 62 per cent of the scoured wool, and 45 per cent of the pulled wool was reported by manufacturers, and the remainder by dealers.

An effort was made to obtain information from all dealers and manufacturers in the United States who had wool, tops, and noils on hand June 30, 1917. Approximately 2,200 blank forms were sent out and only 54 firms failed to return these schedules. About half of the total number, or 1,138, indicated that no stocks were held. Many of the latter reports, however, were from enterprises which, though listed in wool trade directories, do not carry stocks of wool, and others whose stocks were included in reports received from central offices.

Six grades are reported, ranging from fine combing and clothing wools down to carpet wools, all the latter being of foreign origin. Even without these carpet wools, the stock of domestic wools now held is less than the foreign.

Since these are the first figures of the sort, the department says it does not feel justified in making any statement as to the relative size of the supply on hand. It is assumed, however, that the war is making unusual demands on the wool supply. Comparisons can be instituted when future reports are issued. The next survey will be made September 30, 1917. Each succeeding one will give a comparison as to all classes and grades of wool, tops, and noils, both foreign and domestic, held by dealers and manufacturers.

One strong argument in favor of hogging down corn is that it returns the manure directly to the land.



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Redwood was unknown before the settlement of California, hence no man now alive knows how long a Redwood tank will live. But there are tanks in use in 1917 which were built in 1859, and still show no evidence of decay. Neither heat, cold, desert dryness nor tropical dampness affect Redwood.

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Redwood costs much less than steel and lasts many times as long. It weighs far less and that saves freight.

Why pay \$165 for a 5,000-gallon steel tank when you can get a Pacific Redwood tank for \$58.00 that will outlast three of the others?

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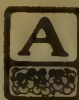
## Breed Leaders

Every breed of live stock has its outstanding character the same as the human kind. A great dairy cow has proved her ability to produce anywhere up to 15 tons of milk annually; the trotting horse has secured his record around two minutes; the beefmaker has shown his ability to make the least amount of feed into the greatest amount of food; swine, sheep and others of the live stock family have shown themselves great characters. In addition—and here is where their worth is proven—these animals can transmit their productive power to their offspring.

Beginning with the issue of August 4 the Cultivator gave an account of Pietertje Bloom of the university farm dairy herd. Some things she has done and more that her daughters have done were chronicled. She was a most worthy leader in this series of articles. Others of her kind are to follow. This week we touch upon a great pork maker. More of the "handsome is as handsome does" type of animals will be given in the columns of the Cultivator during the next few months.

## Lamb's American Beauty

Written for California Cultivator By C. A. Briggs



**A** GOOD mother, a good nurse, large litters of strong well built pigs, plenty of milk to eat. These are things that one should be able to say of a first class sow. Lamb's American Beauty, a splendid Duroc-Jersey owned by Elmer Lamb of Ceres, fills the bill. Her breeding, her show ring record and her performance as a mother

and champion bred by exhibitor at the Panama-Pacific. This is the pedigree record that has made her what she is: Sire, Modesto King, winner of California State Fair first, three years in succession; great grand sires Hanley, the first boar of the breed to sell for over \$1000, and Tip Top Notcher, a 1000 pound junior champion at the St. Louis Interna-



A Leader

Lamb's American Beauty, grand champion at state fair, 1914, sweepstakes at Fresno, 1915, second in class at P. P. I. E. Owned by Elmer Lamb, Stanislaus County.

all entitle her to mention among the breed leaders.

Facing strong competition she won second in class at the Panama-Pacific International Exposition, sweepstakes at Fresno 1915, and was grand champion at the Sacramento State Fair in 1914. She is a full sister to Bettie A 2nd who was junior champion, reserve grand champion,

tional Exposition. Her dam, Bettie A, was sired by Hoosier Lad, one of the best, bred by P. M. Barker of Thornton, Indiana. About all the good points that any sow can have belong to this one. A full blocky style with sufficient length and depth, good hams, good heart girth, standing well on her toes, with every fancy point well toward perfection. Mr. Lamb did well when he bred her.

## Fine Durocs on Conejo Ranch

Written for California Cultivator By R. K. Walker, Secretary Southern California Duroc-Jersey Association

Southern California received another boost towards establishing its record of being the greatest Duroc-Jersey section in the West, when the Janss Investment Company of Los Angeles imported from the Middle West a whole carload of the choicest

Durocs to their Conejo ranch.

This ranch is under the management of Mr. Braly and he has secured the services of E. N. Manley of Lyons, Nebraska, to handle this top Duroc herd. Duroc men will recall the class of Durocs showed by the Manleys at the recent worlds fair at San Francisco.

In visiting this herd last week I was impressed with the uniformly big type of his mature sows; his six and seven hundred pound sows were as active as yearlings and all of them showed that uniformly perfect back and feet and legs so characteristic of the Golden Model family. Most of these animals are sired by or out of dams by Golden Model 31, and several are sired by or bred to the famous boar, Critic D. In this breeding the Conejo ranch certainly has a combination hard to beat.

This herd will probably make the shows this year and will certainly be heard from. Their aged sow by Dusty Critic is sure some sow, being of the extreme big type with perfect feet,

legs and back. There is a junior yearling sow there bred to Golden Model 31 that would make a judge in any show take notice, one of these big high stretchy animals with plenty of quality. They have two junior yearling boars, both sired by Critic D and out of Golden Model 31 dams. One of these, especially, weighing close to 500 now is going to look well by fall.

This herd will be a big help in making the Riverside Fair, October 9-13 the great Duroc show which the Southern California Duroc-Jersey Association is planning.

### POINTS IN FEEDING GOATS

The following points on feeding goats are from an article by Holmes Pegler, an English authority, and should be of especial interest now when so many people are considering the feasibility of acquiring a goat for supplying the family with milk.

"The goat keeper must bear in mind three important points in feeding his stock. The first and most important consideration is absolute cleanliness, both in the food itself and in the receptacle for it. The best form of receptacle is a metal pail; wooden mangers are objectionable as they get gnawed away and are more difficult to keep sweet. The second point is that variety of food is essential; no animal tires so quickly of the same food as the goat, and it will soon give up eating if a change is not provided. The third point is one of economy. If the goat is fed carelessly, without due regard to its tastes or capacity, it may cost as much as its return in milk is worth; thus hay may be wasted to any amount if thrown on the ground or if placed in the hayrack in needlessly large quantities. In order that this fodder may not be too easily pulled out and only tit-bits consumed, it is necessary that the bars of the hayrack should be not more than one and a half inches apart. A still more economical plan when hay is scarce and dear is to give it only in the form of chaff mixed with oats and bran. Oats again will be wasted if mixed with the residue of the previous meal. Bran is best given by itself, either dry or still better as a mash. It may be added to chopped roots or potatoes, but never to grain, since to obtain the grain more readily goats will often blow away the bran. Middlings or sharps may be given instead of bran for a change with chopped vegetables.

From their kid stage goats should be encouraged to eat all vegetable waste from the kitchen, or household scraps, such as broken bread, bits of meat, boiled potatoes, etc. In the garden there is scarcely any plant which is not acceptable. The greatest care should be taken, however, to prevent goats from eating such more or less poisonous shrubs as rhododendrons, yew, privet, and laurels. When the supply of garden produce fails, swedes and mangolds should be purchased if they can be obtained at reasonable prices. To save trouble to the attendant, and also to keep the goat occupied, these roots are best given whole, after careful washing, but they may be chopped into "fingers" as for sheep. In the former case the goat will scoop out the flesh, leaving the outside skin as a shell.

In summer, grass may be cut and supplied instead of hay; this is the most economical way of utilizing it. People who live in the heart of the country can take a goat along the lanes for a walk like a dog, allowing it to nibble at the roadside as it goes along.

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Use it instead of whitewash in stables, poultry houses, cellars, etc. Carbola is a mineral paint combined with a germicide 20 times stronger than Carbolic Acid, but not poisonous or caustic. Has no disagreeable odor. It dries a snow-white—not dark or colorless. Kills lice, mites, fly eggs, etc. Prevents contagious disease germs from getting a start in flocks or herds. One gal. covers 250 sq. ft.

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F. A. Langdon  
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Llano Vista Ranch, Perris, Cal.

F. V. Gordon  
Owner



## More Beef Needed

Written for California Cultivator By A. L. Spellmeyer



**P**OPULATION is increasing faster than the supply of cattle. Livestock is a basic industry on which the permanent prosperity of the country depends. In war times there is an extra demand upon cattlemen to do their duty in raising and finishing feeders and beef and safeguarding the future supply.

A cattleman has one of the most difficult occupations, for to make a

and grain. It is discouraging to realize the ignorance of the first economic principles shown by some of our best and most prominent citizens who urge food conservation in small matters and overlook the waste of excellent grass which can be made so easily into meat fat. One man of prominence, I have in mind, is urging food conservation and has lying idle in California enough grass land to fatten a thousand steers. Much land

pay interest and be paid back.

In California there has not been enough meat demand to take care of the beef produced in the state. Thousands of cattle have been shipped to Kansas City during the last year to secure the better prices there prevalent, but the fat on many thousands of other cattle would not stand such long shipping, so those cattle remained unsold in California, the fat wasted and became lean again, and another good grass season must come before they will be fit to kill. It would seem that there was a great opportunity in California for a great meat canning establishment. Califor-

demand of the cities of San Francisco and Los Angeles not considering the balance of the state or other states. Neither the public nor those who represent them know that while beef is high feeders and stock cattle are cheap, and the producer of yearlings and stock cattle on whom the development and increase of the livestock industry depends is today securing considerably less profit than before the war. Expense has doubled and yearling steers are the same or less in price than a year ago, the bulk of last spring's actual sales being considered in Arizona and California.



Wonderful Producers of Beef  
Herefords on D. O. Lively Stock Farm near San Francisco.

cow man takes many years of experience and effort; many thousands who try the business fail. In the entire Southwest the standards of efficient breeding, grazing and beef finishing are set by comparatively few men who are increasing their herds to meet the demand for the millions of yearling steers and stock cattle absolutely vital to the Middle West farmer and the Northern grazer.

It is indeed patriotic to increase the supply of meat, meat fats, hides and other products so badly needed.

California is a country which can raise stock cattle and also fatten them, and every head of beef from grass makes available more forage

now lying idle could be made to produce more meat fat from cattle and sheep than the most economical stinting and saving of thousands of families.

What more patriotic use could be made of a hundred million dollars than to loan it at six per cent to the livestock men of this country on a basis of five years time? It is vital to maintain and increase our livestock. To develop ranges, fence and improve so that better methods will enable more stock to be carried and fattened, take money, and six months money now prevalent will not accomplish the purpose. Besides, this hundred million would not be spent, but would

nia livestock prices are cheaper than in Kansas City or Chicago. It is said that at present California meat canners cannot commence to supply the local

### LIVE STOCK AT RIVERSIDE COUNTY FAIR

Secretary R. L. Tabor of the fair management writes: "A stock show without any equal is what the management of the Riverside County Fair, October 9-13, has scheduled for this year. With cash premiums much larger than ever before in the departments devoted to horses, cattle and swine, exhibitors of blue ribbon stock from Eureka to San Diego will be present.

"The National Duroc-Jersey Record Association has recognized the Riverside fair this year and will give a beautiful silver trophy for the best litter of four Duroc-Jersey pigs.

Jersey breeders are being encouraged to exhibit this year by premiums offered by the management. The Riverside Jersey Breeders' Association offers special cash prizes to juniors exhibiting grade Jersey heifer calves.

"Boys and girls interested in Guernseys will find it much to their advantage to select the best grade female calf under one year. It is to the young people as well as their fathers and mothers that the Riverside fair is catering this year.

## Look Out for Stock Poisoning Plants



**U**ST now there is special need for stockmen to watch out for stock poisoning plants. It is when food is scanty and animals underfed that they are most likely to eat injurious plants, and most California ranges are now so heavily stocked that stockmen need to be alert for this danger. Care should be taken not to confine stock to small areas if poisonous plants are present. Water and salt should be made available at reasonably frequent intervals.

The California species of plants that cause stock-poisoning are not numerous, reports Professor H. H. Hall of the University of California, but a few are responsible for very heavy losses. Water hemlock does its greatest damage in summer, especially where tule swamps have been burned off and sheep admitted. This plant is prevalent also along creeks and sloughs in northeastern California.

Most of its poison is in the thick rootstock, which is chambered (unlike wild celery and other harmless plants with which it is often confused). Much loss may be avoided by proper methods of herding or fencing, and by eradicating water hemlock around watering places.

Lupines may be profitably fed if used in moderation, but they are sometimes a menace in summer and autumn if eaten when the pods are full of seeds. They may be eaten without harm before the seeds form or after they have shelled out of the pods.

Milkweeds are injurious to sheep when closely herded, or on long drives. They should be cut down and allowed to dry before the sheep reach them or the flocks should be driven by another route.

Death camas and larkspur are injurious, but the dangerous season for these is now nearly past, except in the mountains.

## California State Fair

Sacramento, Cal., Sept. 8th to 15th, inclusive

Make the War Time Fair the Biggest Ever

Show What You Have Done—Learn What Others Have Done  
WE NEED MORE SOIL PRODUCTS—BETTER LIVE STOCK  
Exhibit Your Best to Help Solve the Nation's Food Problem

PATRIOTISM—PROFIT—PLEASURE

The Key Notes of the 1917 California State Fair

Great Display of Vocational Work by School Pupils—Over 500 Prizes divided between city and rural schools for Domestic Art and Science, Manual Training and Home Gardens. Greatest incentive ever offered to California Boys and Girls.

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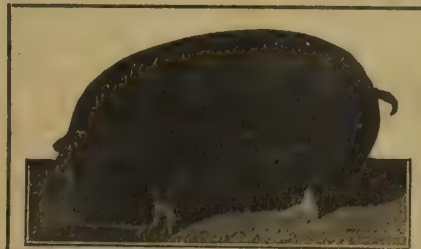
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## Poland Chinas, Medium Type

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain. 12 firsts, Junior Champion and Reserve Grand Champion Boar, Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

**M. Bassett**

Hanford, Kings County, Cal.







## Are Your Hen Profits Satisfactory?

If not, there is something wrong; and by adopting the

### "LEE WAY"

the wrong can be easily corrected. **Cash Prizes**

Those who will report to us by December 15th, 1917, the results received from use of the "Lee Way" and the "Lee Way Assortment" during the months August, September, October and November, we offer Cash Prizes for the 15 best reports:

First Prize .....	\$25.00
Second Prize .....	20.00
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Fifth Prize .....	5.00
Ten Prizes of (each) 2.50	

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Has the highest protein at the lowest price, \$2.90 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or

**The Globe Mills, Los Angeles**



## TO REDUCE FEEDING COSTS

Continued from Page 123

grains in the ration, but until this is done it seems better to go by what has been and is being done on many large commercial ranches, and I think that they can be found in large numbers where but little corn and less wheat has been used for more than two years. I trust that this may help some brother poultryman to reduce his feeding costs, while I fear the reverse would be true in attempting to follow the ration previously referred to.

\*\*\*

Touching upon the same question or, rather, answering a question which has come in from a subscriber; Mrs. Koethen refers to the same article to which Mr. Ross has replied. From her first sentence it might be assumed that there is radical disagreement between her point of view and that of Mr. Ross, but we think careful reading of both articles will show they are not at variance. Mrs. Koethen says:

Mr. Quisenberry's article entitled "A War Time Poultry Ration," on page 70 of the issue of July 21 should be carefully read by every poultry keeper. The mash formula given could hardly be improved upon, at present prices, though the use of oat chop in place of bran would be just as good and just as cheap. The scratch feed, however, which is cracked corn and nothing else, is better suited to Missouri than to California. Corn is extremely dear and is not suitable for a steady diet in this warm climate. If a sprouted grain is used (either barley or oats) milo alone might be used for the dry grain. Feed men now are selling what is known as "mixed feed," a combination of milo, oats and a very, very little cracked corn. This, with sprouted barley for the morning meal, makes a good evening scratch feed and is comparatively cheap. Now more than ever before we need to heed the admonition,

"Feed what you have or what you can get for least money." If you have undersized potatoes or other vegetables such as turnips, carrots or cabbage, which will not bring much in the market, use them for the chickens and save grain.

\*\*\*

Continuing the same subject we have a letter from M. C. Sayer, which was referred to Mr. Ross, and he adds his comment. Mr. Sayer writes:

Will you please tell me what you think of the following dry mash: 60 pounds rolled barley, 60 pounds heavy bran, 30 pounds fish meal, 3½ pounds dry green bone, 5 pounds soy bean meal, charcoal being kept in separate hopper. The grain feed has been milo and rolled barley, equal parts by weight. The birds have done well on it but I had a lot of swelled heads and could not locate the cause as there were no cracks in the back of the house or ends, the front is boarded up about half way with a hip roof, plenty of scratch litter. Am inclined to think the barley caused indigestion and weakened the less vigorous ones. They would stand around half dead and seemed too lazy to move. Spraying is done once a week, so I am certainly up against it for fair.

Mr. Ross replies: Replying to your letter of the 31st, ult. and Mr. Sayer's enclosure, would say that my first criticism of his mash would be the use of the rolled barley as I think it enables the birds to pick it out too readily. Should use ground barley instead and then each bird would have to eat all the ingredients in the mash, which would not be the case when they could pick out the rolled barley and leave the balance, thus defeating the attempt to give them a balanced ration.

I should think this mash deficient in fat and that the use of so much barley gives a rather high fiber content.

I have hastily figured the composition of such a mash, calling it as 38 per cent each of ground barley and heavy wheat bran, 19 per cent of high grade fish meal, three per cent of soya bean meal and two per cent of bone and find it runs about as follows:

Moisture .....	10.39
Ash .....	7.76
Digestible Protein .....	19.43
Dig. Carb-Hy. ....	41.31
Crude Fiber .....	6.79
Digestible Fat .....	3.05

This would give a nutritive ratio of about 1:2.47 for this mash and as Mr. Sayer does not state the proportions of grain and mash that he feeds, but if he uses a scratch of equal parts, by weight, rolled barley and milo, and feeds an equal amount, by weight, of scratch and mash, it would give his ration a nutritive ratio of 1:3.88, while 1:4.65 is about what is considered proper for Leghorns in California.

I would suggest his changing his mash to get a higher fat content, say not less than 4.50 digestible fat, and if he does this by reducing his bran and barley he will likely get rid of some of the surplus fiber.

I doubt whether the feed has had anything to do with the "swelled-head" he complains of (although certain individuals may have "hogged" so much of the rolled barley for the mash that the excess of carbohydrates and fiber may have had a tendency to cause liver troubles and so weakened the birds and made them susceptible to colds which undoubtedly started the other trouble. I suppose that he feeds plenty of green feed, such as alfalfa, kale, lawn-clippings or the

like, as this is absolutely essential, especially where birds are confined in yards and fed such forcing rations as we use when after commercial eggs, and for that matter it is just as essential when after hatching eggs, and I have come to feel that if a poultryman cannot get an abundance of succulent green feed he had better stay out of the business.

I am aware that some think they can substitute alfalfa meal for "green feed" but I do not believe it and I consider soaked or steamed alfalfa hay a poor substitute for the succulent green alfalfa, although better than nothing if we are not well provided with green barley, beets, or some similar feed in the winter when we cannot get our alfalfa to grow. In feeding barley as a grain feed I prefer the whole barley to having it rolled, and I have never seen any trouble that I could really lay to the beards on the grain as it comes from the thrasher. However, it is probable that re-cleaning, or even "scouring" can be resorted to and still give us a grain that will be cheaper than any other we are likely to get this season. I trust the information here given may be what you need but if not will be glad to supplement it if I can be of any further assistance.

## INTERNATIONAL EGG LAYING CONTEST

Storrs, Connecticut, July 25, 1917.—Report for the thirty-eighth week ending July 24, 1917.

The Leghorns in the laying contest are hammering away in fine style. They were largely responsible for an increased yield of 50 eggs as compared with the preceding week and of more than 30 eggs over the corresponding week last year. The Leghorns constitute 38 per cent of the birds entered in the contest but last week they laid 50 per cent of the total number of eggs. No pen of Rocks, Reds, Wyandottes, Orpingtons or Campines laid over 50 eggs for the week but 14 pens of Leghorns were able to pass this mark. The total yield for all pens was 3957 eggs.

The three best pens in each of the principal varieties are as follows:

### Barred Plymouth Rocks

Fairfields Poultry Farms, 1606; Merritt M. Clark, 1388; Michigan Poultry Farm, 1331.

### White Wyandottes

Merrythought Farm, 1460; Joseph Moreau, 1302; Obed G. Knight, 1299.

### Rhode Island Reds

Allan's Hard to Beat Reds, 1485; Hillview Poultry Farm, 1391; Geo. W. Harris, 1381.

### White Leghorns

A. P. Robinson, 1721; J. O. LeFevre, 1542; Hilltop Poultry Yards, 1539.

### Miscellaneous

Cloyes & Sullivan, (Buff Wyandottes, 1417; Holliston Hill P. Farm, (White Rocks) 1360; Obed G. Knight, (White Orpingtons) 1304.

## CLEANLINESS—FREEDOM FROM LICE

Every effort should be made to keep the coops and houses clean and sanitary. Disease most frequently starts in unclean, poorly ventilated houses. The house should be cleaned at least once a week. Sand or litter of some kind should be scattered over the floor of the house to assist in keeping it clean. When chicks are confined to a limited range the ground should be spaded up at frequent intervals to provide fresh ground for them to scratch in. Chicks should be examined frequently to see if they are infested with lice. When lice are found every effort should be made to get rid of them by applying a small portion of a mixture of equal parts of vaseline and lard to the top of the head and around the vent.

# Science Says Buttermilk



Is the only preventative for White Diarrhoea. It further states that many birds that are apparently in perfect health have the germs in their system and that these germs are transmittable from both male and female to their progeny. Reference Bulletin No. 162—issued by the Department of Agriculture, Berkeley, Calif. Write Berkeley for this bulletin.

Don't take any chances, use Globe "A-1" Buttermilk Mash. It prevents White Diarrhoea, it increases the appetite, it aids digestion, it produces more eggs for market and better eggs for hatching and it costs No More than other good mashes.

It's the Lactic Acid in Buttermilk that does the good work. The dry buttermilk we use, chemically shows 10,000 Live Active Lactic Acid Bacilli to the cubic centimeter. Write us for Free Literature and sample of this wonderful feed. Not an ounce of filler used. Satisfaction guaranteed or money refunded.

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Wheeler's Hot Springs offers to the pleasure, rest and health seekers one of the most attractive mountain resorts. The good auto roads and hotel and camp accommodations are complete. Make reservations now. Free circular.

**Wheeler's Hot Springs, Ventura Co., Cal.**

## Mr. Poultryman: TRI-STATE MOLT MASH

will help your hens through the molt and make it possible for you to stay in the business.

SOLD by our agent in each town or inquire of GLOBE MILLS, LOS ANGELES, Southern Wholesale Distributors, or TRI-STATE POULTRYMEN'S COOPERATIVE ASS'N., Headquarters, Fresno, California.

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TREES

Here is Your Opportunity to Secure All citrus trees. We offer several thousand 2-year-old lemons; Eureka and Villa Franca, also Washington navel; also several hundred Valencia on sweet root. We call these good trees and we know whereof we speak. ALBERT JACKSON, Upland, Cal.

By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator. The cost is only 3 cents per word per issue, with a minimum of 35 cents.

For Sale—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. Randall Bros. Nursery Co., Whittier, Calif.

Citrus Trees—All kinds, any quantity. Butler's Morning Side Nursery, Laramanda Park, Cal.

Sour Orange Seedlings.—About 10,000 fine plants about 2½ years old. Ready now for immediate planting; \$20 per thousand, fine root. McMillan Citrus Nurseries, Puente, Cal.

Citrus Nurseries, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

WANTED

Wanted—Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' travel to right parties. Address J. H. Yetter, Sales Department, 810 Santa Marina Building, 112 Market St. San Francisco, Cal.

Wanted—Position as dairy foreman or herdsman by experienced man. Understand compounding rations and productive feeding. Will get results for employer through modern efficient methods. Box O, Cultivator.

Wanted—40 to 60 acres of alfalfa land, stocked, to work on shares. Have a herd of pure bred hogs which I will give an interest in. Land must be first class. Roy Dawson, General Delivery, Visalia, Calif.

We Buy Weed Seeds—Mustard, rape, anise, bitter clover, etc. Send samples. Write us, stating quantity and price. Globe Mills, Los Angeles.

One of the Most perplexing problems to farmers and ranchers is that of help. A small liner ad in California Cultivator is the quickest and easiest means of securing farm help.

Wanted—Peacock, female, at least three years old. State lowest price. "Peacock," Box 218, Route 1, San Diego, Calif. Will be in the Market this fall for 1500 or 2000 Bartlett pear trees. Must guarantee to be true to name. J. D. Evans, Box 63, Downey, Cal.

Wanted to hear from owner of farm or unimproved land for sale. O. K. Hawley, Baldwin, Wisconsin.

Wanted government relinquishment or small stock ranch in Antelope Valley to rent, lease or buy on easy terms. W. J. Quimby, Waterford, Cal.

Wanted—Experienced operator for Sharples milking machine. C. H. Stiles, McFarland, Calif.

Canvassers Wanted for Poultry Novelties—Big pay. Write today. California Sales Co., Watsonville, Calif.

FARM LANDS FOR SALE

For Sale or Exchange 74 acres sandy loam, planted to alfalfa and beets, near factory and towns on good roads, near school. Splendid water, modern buildings, electric lighted, ornamental shade and fruit trees. F. G. Easton, Manteca, Cal.

For Sale at a Sacrifice.—Ten acres 6½ year old apple orchard, with plenty of water. Good crop now on the trees. Located in the center of the famous Yucalpa Valley. Address Dike & Logie, Redlands, Cal.

Oregon, California Government Lands. Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

For Sale—Four acre ranch with 3 room and bath, new, modern cottage and large garage with sleeping room, fronting on paved boulevard. Family orchard, 80 walnut trees, chickens, rabbits, ducks, and furniture if wanted. Water piped for irrigation and domestic purposes. Electricity. Rich sandy loam soil. Price \$7000, including Ford delivery truck. Part cash and 6 per cent on balance. Geo. W. Snider, Chatsworth, Calif.

POULTRY

Day Old Chix—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Calif.

Poultry Wanted — We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 307 E. Third St., Los Angeles, Cal.

200-290 Egg Leghorn, Wyandottes, Rocks, Reds, Anconas, Orpingtons, pullets, cockerels, breeders. August half price sale. Money-makers. C. Beeson, Pasadena, Calif.

"Eastman's Bred-to-Lay" Barred Plymouth Rocks, August chicks and eggs. Fairmead Poultry Farm, Fairmead, Cal.

HORTICULTURAL PRINTING

Catalogues — Good Printing. Specialists in preparing nursery, seed, poultry and live stock catalogues and all kinds of commercial printing. For prices and information address WOLFER PRINTING Co., 424 Wall St., Los Angeles.

HOGS

Chester Whites, the Billiken Brand.—Your duty is to raise more hogs and increase the meat supply. The demand for pork exceeds the production. Get started with some of these Chesters: 3 bred sows farrowed in April, 1916, due to farrow in September, and October; 18 October gilts bred to farrow in October; 3 October boars ready for service. All first class in every respect and good enough to fit and show at the different fairs this fall. All are cholera immune and will be registered free. Write for price list and booklet. C. B. Cunningham, Box C, Mills, California.

Grape-Wild Farm Berkshires — World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

Large Yorkshires — Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.

For Sale.—One car of 5 to 7 months old feeder hogs. In fine condition for 2 to 3 months feeding. Have been on alfalfa pasture and barley stubble. S. Williams, Bakersfield, Route B.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

Duroc-Jerseys—The most uniformly BIG TYPE herd in the west. Peters, Lamson & Walker, Devore, San Bernardino County.

Wanted—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

Rancho Rublo Durocs.—Nothing to sell at present. A fine bunch of gilts and a few extra good service boars for this fall. Elmer Lamb, Ceres, Cal.

Big Type Durocs. Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

Cholera Immune Duroc-Jerseys. Big type. Weaned boars and gilts from 500 to 700-pound sows. Prize winning stock. Derryfield Farm, I.O.O.F. Temple, Sacramento.

Choice Boar Pigs for Sale — Sired by Superba 220620, champion Poland boar at San Francisco. Prices right. C. R. Hanna, Riverside, Cal.

Poland-China Swine Recorded. Stock for sale at all times. We please you or refund your money. W. A. Young, Lodi, Cal.

Most Money in Duroc-Jerseys. Bred sows and weanings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

One Large and two medium type boars extra choice, 9 and 10 months old. W. Bernstein Ranch, L. C. Trehwhitt, Mgr., Hanford, Cal.

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.

Duroc-Jerseys—Few choice March males from best eastern stock. Reasonable prices. W. M. Taylor, R. D. No. 1, San Bernardino.

Large Type Poland Chinas are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Calif.

Model Herd Berkshires bred for size and quality. Weanings and gilts. J. L. Gish, Laws, Calif.

Carruthers' Farm Berkshire Hogs. "Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

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Large Assortment slightly used and agents' sample plows, harrows, cultivators, wagons, Cal and see them before buying. Save 50 per cent on some Four floors. Largest stock. Arnott & Company, Ranchers' Supply House, 112 to 118 South Los Angeles St., Los Angeles

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Lumber—Sash — Doors — Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A.\*R.W. Shingles 50c per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.

LIVE STOCK

For Sale 24 head high grade Angora goats, descendants of the great Davis herd. Prices on application. Albert Sykes, Red Bluff, Cal.

D. E. Kellner, importer and breeder of Hampshire sheep, Eugene, Cal., offers for sale a choice lot of Hampshire ram lambs, sired by Walnut Hill and Butterfield Rams, purchased at Salt Lake, August, 1916. Lambs ready for delivery after July 15th, 1917. Inspection and correspondence invited.

Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

At Last the Perfect Silo—the Stay Round. No hoops, no bolts. No experiments. Any one can erect. Close price. Address D. O. Lively, 215 Hobart Bldg., San Francisco.

For Sale—100 good young dairy cows and heifers, 25 calves, 150 hogs, pigs, Percheron stallion, year-old jack. Want to lease pasture near Madera. A. H. Tilton, R. D. Box 164, Madera.

Registered Shires — Blackhawk Stock Ranch. Importers and Breeders. Easton & Ward, Burlingame, Cal.

Shropshire Sheep. — About one hundred good grade ewes and their lambs. Box 362, Red Bluff, Cal.

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Registered Holsteins out of A.R.O. Dams. Grandsons of King Korndyke Hengerveld Ormsby who has 20 A.R.O. daughters with records of over 29 pounds. Look up this sire. Geo. Kounias, Modesto Farms, Modesto, Cal.

D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.

Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

Thirty high-grade Holstein Cows and one registered Holstein bull. Chas. Hubbard, Riverdale, Calif.

Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Calif.

N. H. Locke Co., Lockeford, Cal.—Choice young Jersey bulls for sale

Holstein Bulls from record cows. Prices right. A. M. Bibens, Modesto, Calif.

MACHINERY

WHY BUY NEW? SAVE HALF Material guaranteed. It's second hand after used few times, but not worn out.

Few engine snags: 3 h. p. Cushman, \$38; new 1½ h. Olds, cost \$75, for \$39; 2 Fairbanks with pump jack complete, \$68; 3 Fairbanks with new piston, cylinder and rings, \$68; 6 Stearns, \$89; 9 Foss, \$135; 12 Fairbanks, \$165; Samson sieve grip tractor, only used 60 days, \$500; new Ford tractor attachment, \$135.

NEW AND USED WOOD, GALV.

TANKS All sizes, 200 gal., \$7.50; 15 tanks, heavy 1500 gal. galv., cost new \$60, for \$28, have metal covers; 10,000 redwood, \$75. Fine, heavy 10,000 galvanized, \$135. 800 heavy corrugated, \$19.50. 2200 heavy corrugated, \$47.50. 16,000 corrugated galv., \$250. Galv. 4x4x4 tank, \$15.

SWEETEST, LARGEST tank in city, 100,000 gal. 3-inch redwood with round lug hoops, cost \$1200, our price \$400. Why build cement reservoir when you can get one like this and use it 10 years, then sell it for as much as it cost you?

WINDMILLS, SPECIAL PRICE THIS WEEK

8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel.

PUMPS, CYLINDERS, PIPE 2½-in. two-runner hor. centrifugal pump, \$50; 2-in. rotary, \$22.50; 5-in. two-stage Byron Jackson hor. cent. pump, \$150; 8-in. hor. cent. \$150. Pumps 200 inches water, 7 vert. cent. Krough, deep well double-acting. Addison 24-inch stroke pump, good for 50 inches, complete with 85 ft. 10-in. casing, double acting rods and 9-in. brass double-acting cylinder, all for \$475; cylinder alone \$68. Plunger pumps, \$2 up. 5x6 air compressor, \$29. 400 ft. 4-in. riveted pipe, 16c. 90 ft. 7-in. irrigating pipe, 32c. All kinds brass pump cylinder rods, big pipe fittings of every description.

RANCH MACHINERY Walking plows, \$2.75 up; spike harrows and cultivators, \$2.50 up; 4 and 5-ft. Fresno, \$9 to \$12; wheel barrows, \$2.50 up; 350 ft. ¾-in. cable, 6c; water troughs, \$4; bone grinder, \$6.50; feed mill; sprayer; mowers, rakes, buck rake, \$20; belting, all sizes; sundries too numerous to advertise. Material guaranteed as represented or money refunded. Down town office DEMMITT CO., UP-STAIRS 120 N. Main. Yards, 816 Yale, Los Angeles.

For Sale—Pumping plant, 25 h. p. Commercial engine. No. 5 Krogh pump, belt, shafting, drums, tanks, etc. Ready to start work. Price \$300.00. Ward N. Fancher, Indio, Calif.

Several new and slightly used engines at a bargain. Best makes. 1 to 35 h.p. Arnott & Company, Wholesale Machinery and Implements, 112 South Los Angeles St. Los Angeles Cal

MISCELLANEOUS

To Fruit Growers—New simple process for crystallizing figs and all other fruits. Instructions, terms, on application. Correspondence with fruit growers solicited. Monteith & Co., Santa Rosa, California.

Slacked Lime—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road Pasadena.

Bird Alarms Protect Everything from birds, rabbits, rats, etc. Neat, durable, effective. Six for 50 cents. California Sales Co., Watsonville, Cal.

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

SEEDS AND PLANTS

\*\* ORDER YOUR SEEDS NOW \*\* If you are going to need any seeds for next season now is the time to render your orders. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbutle, Cal. \*\* ALFALFA SEED OUR SPECIALTY \*\* Seed Potatoes—A limited supply of Burbank, American Wonder and British Queen for August planting. H. A. Hyde, Watsonville.

RABBITS

Raise Rabbits For Us—We sell you foundation stock and buy back what you raise, paying \$1.75 and \$2.00 each for them. Send 25c for our proposition, our book on rabbit culture and our supply catalog. Gilmore's Rabbit Farm, Dept. C, Santa Barbara, Cal. (The rabbit farm of international reputation.)

"The Western Rabbit Book" containing everything pertaining to the rabbit business. 15 chapters, illustrated. Price 50c. Mrs. C. A. Richey, 616 N. Benton Way, Los Angeles, Calif.

HOW TO FEED HENS IS TAUGHT IN SHORT COURSE

How to feed hens is to be taught in a six-weeks short course in poultry to be given by the University of California at the university farm at Davis from October 2 to November 14, short courses being in progress at the same time in agriculture, horticulture, and dairy manufactures.

Results of experiments indicate, says the University, that it makes little difference what kinds of feeds are fed to laying hens so long as the ration contains some animal feed, has an approximately correct nutritive ratio, and has the feeds properly proportioned in the ration. How hens are fed is just as important as what they are fed.

Students will be taught how to hatch, rear, feed, breed, and care for fowls. Instruction will be given also in practical carpentry work in building poultry-houses and making coops, nests, hoppers, crates, etc. Demonstrations will be given of the best way to grow such crops as alfalfa, rape, kale, beets, etc., for green feed for fowls. There will be instruction in how to irrigate crops, plow and handle soils of different types, and operate, repair, and care for such farm machinery as gasoline engines, bonecutters, field tools, and keep a clear, concise set of accounts which will show him the exact cost of operation of every branch of his enterprise.

A PROTECTIVE ASSOCIATION FOR POULTRYMEN

Poultry stealing seems to be becoming more prevalent each year, says C. S. Anderson of the Colorado agricultural college. With the rapid advance in prices of poultry and the feeds necessary to produce it, many poultrymen cannot afford to have the results of a season's work disappear in a single night.

The idea of a poultry protective association has been proving effective in some Eastern sections. The poultrymen in a locality, usually adjacent to some town, become members of the association. A nominal fee of two or three dollars is paid annually, and a permanent metal sign indicating their membership is given them to be placed on their poultry houses or yards. This shows would-be thieves that the poultry in these particular yards is under protection.

At the very first case of a member being robbed of his poultry, the most severe methods are followed to hunt down the thief and bring about his prosecution. Some associations maintain bloodhounds for their immediate use as soon as a member reports a loss.

After one or two thieves have been made an example of by prosecution, the associations usually have very little further to do. The annual fee can be reduced after the first year, for the membership in the association will naturally increase and the difficulty with thieves will be greatly overcome. The very presence of the association then serves as sufficient protection.



## The Cultivator Patterns



8439—Children's Dress. Cut in sizes 2, 4, and 8 years. The dress is cut in one piece and is plaited at the front and back.

8467—Ladies' Waist. Cut in sizes 36 to 42 inches bust measure. The long sleeves are finished with cuffs.

7819—Ladies' Waist. Cut in sizes 36 to 44 inches bust measure. Linen or crepe de Chine can be used to make this waist.

7969—Ladies' Dress. Cut in sizes 36 to 46 inches bust measure. The dress has a plain waist and a four gored skirt.

8465—Ladies' House Dress. Cut in sizes 36 and 40 inches bust measure. The dress closes at the back.

8477—Children's Rompers. Cut in sizes 1/2 and 1 year. The rompers are to be slipped on over the head.

7745—Ladies' Skirt. Cut in sizes 24 to 32 inches waist measure. The skirt is cut in three gores.

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Los Angeles

## Household Department

### SPEED UP!

By Clinton Scollard

Speed up! Speed up! we say;  
Danger lies in delay;  
Let it be ours to strike ere we are stricken!  
Lest we be forced to sup  
Some bitter cup.  
Lest perils round us thicken,  
Speed up! Speed up!

Speed up, lest we should face  
Disaster and disgrace!  
Now is the vital, now the crucial hour;  
Though if some needs must sup  
The stirrup-cup.  
With all our virile power,  
Speed up! Speed up!

Speed up, for Freedom's sake!  
From shore to shore, awake,  
Land that has had base insults thrust upon her!  
To thy just cause we sup  
A brimming cup.  
Home that we love and honor!  
Speed up! Speed up!

### JELLIES AND JELLY STOCKS

By W. V. Cruess

**F**OR the production of jelly three things are necessary; namely, fruit pectin, fruit acid, and sugar. The pectin and acid are supplied by the fruit and are extracted from the fruit by crushing and pressing, or by cooking the fruit and pressing. The sugar must be added. The sugar has two functions: It makes the setting of the jelly possible and it acts as a preservative for the jelly. The general principles of jelly making are practically the same for all fruits. The main steps in the process are the extraction of the pectin by cooking, and pressing, and the clearing of the juice by filtration or settling, and the boiling of the juice that the jelly may be formed with the sugar. The directions given below for loganberry jelly may be applied with a few modifications to other jellies.

#### Loganberry Jelly

Crush the berries and heat to boiling in an agateware or aluminum pot without the addition of water. Boil about two or three minutes. Press out the juice through a cheesecloth or jelly bag. Add a very small amount of water to the pressed pulp and heat to boiling. Boil for about ten minutes and press out the water solution. This may be added to the first pressing. Test the jelling qualities of the juice by mixing one glass of sugar and one glass of the juice in a small pot. Boil until the jelly will sheet from a spoon or until it boils at 220 degrees Fahrenheit, or until it will test 32 degrees Baume or 59 per cent Balling in the heated juice. A candy thermometer or a good chemical thermometer can be used to test the boiling point. If this is not used, a Baume hydrometer, obtainable through any drug store for about 50 cents, may be employed. In using the Baume hydrometer the hot juice is poured into a tall glass cylinder and the hydrometer is inserted. The reading is made at the surface of the liquid. However, the use of an hydrometer or thermometer is not necessary to make jelly. It is only necessary to boil it down until it will sheet from the spoon. If this preliminary test shows that the loganberry juice has enough pectin to make a satisfactory jelly the whole lot may be made up into jelly by adding an equal quantity of sugar and boiling down until the jelly will freely sheet from a spoon. It may then be poured boiling hot into glasses and sealed with melted paraf-

fine. To make clear jelly the fruit juice, immediately after it has been pressed from the fruit, must be filtered several times through a thick cloth or through a felt jelly bag. The filtering must be done before the sugar is added because the sugar makes a syrup so thick that it can not be filtered.

#### Other Fruit Jellies

Apples must be covered with water and boiled before pressing. A mixture of one lemon and two oranges, sliced and covered with water and boiled for one hour will make very satisfactory jelly. The oranges furnish the pectin and the lemons furnish the acid in this case. Blackberries, currants, and other berries do not require the addition of any water. The juice from all of these fruits may be made into jelly by the addition of an equal quantity of sugar by volume and by boiling down to the jelling point. A number of other fruits notably, apricots, peaches, pears, strawberries, raspberries, do not contain enough pectin to give jelly. Therefore, the juice from these fruits must be combined with the juice from fruits rich in pectin. Such combinations as loganberry and strawberry, loganberry and raspberry, or apple and apricot juice may be used satisfactorily if enough of the loganberry or apple juice is added to furnish the needed pectin.

#### Jelly Stocks

The juice from fruits prepared by boiling and pressing as described above may be sterilized and kept indefinitely in bottles or in jars and used as needed for jelly making. The juices are sterilized immediately after pressing from the fruit and before any sugar is added. This makes it possible to distribute the cost of the sugar over the entire year and also makes it possible to blend any two fruit juices desired. The method is as follows:

Heat the fruit to boiling, with or without water, as the case may be, and boil for the required length of time. Press out the juice as for jelly making. Strain it through a cloth several times to clear it. Place it in a pot and heat to boiling. Pour it boiling hot into scalded jars or cans and seal at once. It will keep until needed in these containers.

An alternate method is to place the juice after filtering into clean bottles. The bottles are filled to within about an inch and a half of the top. These are then corked with corks sterilized by boiling in water for ten minutes. The corks are tied down with a string. The bottles are placed in a horizontal position in a large pot or washboiler in which has been placed a false bottom to protect the bottles from the direct heat of the fire. A wire screen, wooden grating, or a

towel may be used as a false bottom. The bottles are covered with water and the water is heated to almost boiling point and kept at this point for about ten or 15 minutes. The bottles are then removed and the corks are dipped in melted paraffine or melted sealing wax to seal them.

The bottles or cans or jars may be stored in a convenient place and made up into jelly as occasion demands. To make a jelly from this jelly stock, shake the container thoroughly to mix it, pour out the contents, and add an equal quantity of sugar. Boil the mixture down until it jellies. It may then be poured into glasses and other containers in the same way as with ordinary jelly.

### THE CROOKEDEST RIVER

**S**OUTH AMERICA'S "River of Doubt" has a rival in the Humboldt River in Nevada which comes forward with an entirely new claim to distinction. The Humboldt flows southwesterly through the central portion of Nevada. This river is declared to be, in point of size and length, the crookedest river in the world. It is so crooked that sportsmen bring strange tales of fish and game that become confused in trying to follow the river's course and act as though intoxicated.

At one place between two points two and a half miles apart, the river's length is eight miles and by actual count its course is alternately north 25 times, east 18 times, south 30 times and west 41 times; also it may be stated that at 33 different points it is within 150 feet or less of itself, the current flowing in opposite directions by these points. This "runaway river" crosses the Southern Pacific tracks 23 times necessitating as many bridges costing in all \$654,000.

By way of showing how completely "locoed" it is, the Humboldt ends its course by running into the middle of the desert and corkscrewing its way out of sight in a huge sink.

On account of its devious way this stream is a sportsman's paradise. Ducks and geese, after following its treacherous course a short distance, become deluded and forget their direction, returning five and six times to the point at which they were disturbed. Fish experience the same difficulty and become so perplexed that they refuse to swim. The Indians have discovered this and simply net the fish while they are dazed.

Fred A. Riecker, valuation engineer of the Southern Pacific, and not Baron Munchausen, is responsible for this account of the peculiarities of Nevada's crooked river.

### NOT SO WRONG

A Russian applicant for naturalization papers was asked, "What is the Constitution of the United States?" "Rugged and healthy," he answered. Of course, there is a laugh, but still he said something. — Washington Herald.



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### OUR SUB-HUMAN ARMY

By F. W. Fitzsimons in "Our Dumb Animals"

OUR sub-human army runs into millions of units. Without this army all our offensive and defensive operations at the various fronts would utterly collapse. In Egypt and Mesopotamia the camel is part and parcel of the fighting forces. He blusters, rumbles, bites and kicks, and is at times otherwise objectionable, but he does his bit all right. Death alone breaks him. He marches along, keeping pace with the infantry, laden with great loads of munitions. At other times he carries two fully armed soldiers. Notwithstanding his surly ways, the men love him. They admire his grit, the indomitable spirit which carries him on and on until he drops to rise no more.

Then those noble sub-human fighting units, the horses. True altruism is exemplified in the horse. He asks no payment. For a bare living he performs herculean work at the front. Without him our armies and those of our allies would melt away like mist before the rising sun. He carries his rider straight at the enemy; drags the guns into position; brings munitions up to the fighting lines; transports the men from point to point in situations impossible for motor traffic. At Marne and Mons he upheld the honor of the French and British. Side by side with his heroic masters, he fights on, torn with shot and shell; gassed; squirted with liquid fire; bombed from the skies; blown up by subterranean mines; drowned at sea on his way to the front.

Can we do enough for him? No! However strenuous our efforts, we cannot compensate him for his services on our behalf. We can at least help him. We can save the lives of large numbers of his kind, and ameliorate his sufferings of others.

In our army of sub-human helpers we must not forget the so-called stubborn mule which plods along, content to subsist and do his bit at any time on the shortest of commons. His ally and relative, the ass, also renders sterling service. Where horse and mule perish of hunger, exhaustion and cold, the tough and hardy donkey toils on through the mountain passes and ravines; and anywhere his master is able to go he follows, laden with the necessities of life and munitions.

Last but not least is the dog. He does his turn in the trenches doing sentry go. While the men slumber, and his master who is on guard with senses dulled and body numbed with the cold, is feebly peering into the dense mist, or endeavoring to detect signs of a night attack, his faithful ally, with every sense tuned to the highest pitch of intensity, watches by his side ready to give the alarm the instant there is a movement in the enemy trenches. This is but a small part of his work. He goes out in couples and succors the wounded. He scours the battlefield, and finding a helpless wounded man, sympathetically licks his face or hand, as much as to say, "It's all right, old fellow; I will soon bring help."

Off he goes and brings up an ambulance party who do the needful. Bounding out from a trench he races in the open across the fields and hillsides, running the gauntlet of the enemy fire, in order to carry a despatch which may mean the difference between life and death to a battalion of men. In pairs he swiftly transports machine guns, ammunition, wa-

ter, and food to the men at the various points, and aids them in similar ways to move from place to place.

Can we do enough for him and his allies, the horses, mules, donkeys and camels? Assuredly no. We can do a little, and that is all, and we are going to do it today, everyone of us.

\* \* \*

In the same number of "Our Dumb Animals" we note: "A hospital has been opened in Paris to treat the wounded dogs which have played so large a part on the French side in this present war. The official Red Cross dogs, the messenger dogs, and even those kept by the troops as mascots are being cared for here when sick or injured."

The "Red Star" has been organized here to do the same kind of work for our "sub-human army" that the Red Cross is doing for the human.

### CANNED TOMATO SAUCE OR PUREE

Cut the tomatoes into fairly small pieces and add a large sized onion chopped and one cup chopped sweet red pepper to one gallon tomatoes. Cook until tender. Put through a sieve and add a mixture of one-third salt and two-thirds sugar in proportion of one teaspoon to each quart of mixture. Cook until the consistency of ketchup, stirring constantly. Pack hot into sterilized jars or bottles. Adjust rubber and cap, place containers on a false bottom in a vessel of hot water sufficiently deep to reach almost to their tops and allow to remain at a boiling temperature 25 minutes. Remove jars from the water bath and tighten the lids immediately.

### BAKING THE POTATO

By Eugene H. Grubb

Place the potato in a moderate oven for 20 minutes, then increase heat to finish. If heat of oven is too fierce the cortical layer becomes a hard shell and when opened sticks to the skin, thus the protein and mineral constituents are lost to the consumer.

Upon taking from the oven, take the potato in the napkin and knead gently to soften and break the pulp. Then break the skin slightly on one side. This allows the moisture to escape and when the potato is opened the pulp will be dry and mealy and have a glistening, crystalline appearance. The cortical layer will be softened and come from the skin with the pulp and none of the food value is lost.

### NAGGING WIVES

"I have seen more men fail in business through the attitude taken by their wives in their younger days than from all the vices put together," wrote Charles M. Schwab, chairman of the Bethlehem Steel Corporation, in the American Magazine. "A nagging wife, or one who is not in sympathy with a man's work, who expects impossible things of him, and is incapable of taking a general intelligent interest in his work, is one of the worst handicaps he could have."

### DID HE HOLD BY HIS TEETH—OR HIS TOES?

He was fortunate enough to catch hold of the overturned boat and hung on grimly, waving his arms and shouting for help.—Waukegan (Ill.) Sun.

### BEST KID STORY

Willie—"How fast the horse is running!"

Teacher—"You forgot the 'g.'"

Willie—"Gee! How fast the horse is running!"

### THE STIRRUP-CUP

By Louis Untermeyer in Youth's Companion

Your eyes—and a thousand stars  
Leap from the night to aid me;  
I scale the impossible bars,  
I laugh at a world that dismayed me.

Your voice—and the thundering skies  
Tremble and cease to appal me—  
Coward no longer, I rise  
Spurred for what battles may call me.

Your arms—and my purpose grows strong;  
Your lips—and high passions complete me . . .

For your love, it is armor and Song—  
'And where is the thing to defeat me!

### HOW TO SELECT FOODS

Farmers Bulletin No. 817, by Caroline L. Hunt and Helen W. Atwater, published by the United States department of agriculture, Washington, D. C., is the second of a series on how to select foods. This one bulletin touches upon cereals. Every housewife should find it of interest. Write United States Department of Agriculture, Washington, D. C.

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Sweetheart,  
Brother or Son?

*Is He Going Away?*



**Training  
Camping  
Hiking  
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There's nothing so cool as an oil stove for summer cooking. All the heat is concentrated on the cooking and not radiated about the kitchen.

Cooks everything any wood or coal range will cook, and cooks it better, because of the steady, evenly-distributed heat.

Use it all the year 'round—more convenient than a wood or coal stove, and more economical.

The long blue chimneys prevent all smoke and smell.

In 1, 2, 3 and 4 burner sizes, with or without ovens. Also cabinet models. Ask your dealer today.

**NEW PERFECTION  
OIL COOK-STOVE**

**STANDARD OIL COMPANY**  
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Get a Stephenson Patent Cooler and have everything cool and wholesome.

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Now comes the MAYROSE HAMS and BACON, the top notch quality.

Your dealer will tell you he is so satisfied with the quality that he will, if promptly notified, take back any

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The Buying Power of Your Dollar is Wonderfully Increased!

—In furnishing the home—as in every other line of human endeavor—there is the ONE SUPREME OPPORTUNITY. Barker Bros.' Great Annual Sale of Furniture and Home Furnishings is YOUR BIG OPPORTUNITY—a momentous time for you to GET MORE FOR YOUR MONEY or to furnish two rooms for the price of ONE.

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—Every out-of-town home furnisher will appreciate the helpful service rendered by our MAIL ORDER DEPARTMENT.  
—It is only necessary to tell us your wants and we will reply promptly with information, prices and photographs where practical. The many bargains now in force throughout every department will help you cut the cost of your furnishing.

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### LET'S EAT RAISINS

Written for California Cultivator  
By Mrs. A. Stainton



HAVE never yet been able to understand why so many women look upon housekeeping as a bore and find the ordering and cooking three meals a day for three hundred and sixty-five days of the year difficult. In reality there is nothing finer in life than housekeeping—home making is a better word, for upon that rests the whole fabric of civilization. The work is interesting too, for the food must be wholesome and nourishing, varied to tempt both the eye and palate, and yet it must conform to the amount of the income.

Nothing wearies the appetite more than a continued round of meats and best known vegetables in their various forms, and fruits, nuts and cereals should be used freely. The use of fruit is not always understood as well as it deserves to be. Instead of considering fruit a food accessory, their extreme palatability makes them a necessity to every meal. Dried fruits are really concentrated foods and are the cheapest of all food products. Take for instance raisins. Raisins are grapes that the sun has dried, "cured" is the technical term, and in the process of drying much of the water which enters into the composition of the grape is evaporated leaving the real food, the protein, the sugar, the fat and mineral matter behind. In the drying, the protein is so transformed by the action of the sun's rays that it is rendered very easy of digestion. Raisins require no cooking to make them either palatable or digestible but for variety's sake they are served in many cooked forms. When we get raisins for our table, we are getting nourishment at a very low cost for raisins are cheap and when their food value is taken into consideration, they are among the cheapest of foods, and in selecting foods we cannot afford to overlook the cost. It is just as important to live economically as to live well, and the continued use of raisins will do much to lower our market bills.

**Raisin Corn Bread.** Mix 1 cup sifted flour, ½ cup yellow corn meal, 2 teaspoons baking powder, ½ teaspoon salt, 1 tablespoon sugar, stir in 1 cup milk, 1 well beaten egg and 2 tablespoons melted butter and a cup raisins. Bake in well greased pan in quick oven about 20 minutes.

**Gingerbread.** Four teacups flour, 1 of butter, 1 of sugar, 1 of syrup, 1 of buttermilk, 1 dessert spoon ginger, 1 dessert spoon cinnamon, 1 teaspoon caraway seeds, 1 teaspoon baking powder, ¼ pound Sultana raisins, 2 ounces lemon peel (candied), 1 egg, pinch of salt. Mix all dry ingredients, add beaten egg, melted butter and syrup warmed and buttermilk. Mix thoroughly and pour into buttered tin. Bake in rather slow oven. When cold cover with chocolate frosting.

**Raisin Rolls.** Three cups flour, 3 teaspoons baking powder, ½ teaspoon salt, 2 tablespoons sugar. Sift thoroughly and add ½ cup butter creamed and milk to make a soft dough. Roll out on a floured board, brush over with melted butter, sprinkle with chopped raisins, sugar and powdered cinnamon. Roll up closely, cut across the roll in inch thick slices, lay them on a buttered tin and bake in a quick oven. Cover with plain icing.

**Raisin Pie.** Three-quarters cup each of chopped apples and raisins, ¼ cup sugar, ¼ teaspoon cinnamon, ½ teaspoon salt, ¼ teaspoon cloves and nutmeg, 2 tablespoons cornstarch, 2 tablespoons sifted crackers, ½ teaspoon soda, 1 cup sour cream. Mix chopped apples and raisins and let them stand 30 minutes. Add the sugar, spices, corn starch and cracker crumbs, seasoning. Dissolve the soda in the cream (sour milk may be used). Beat well and add dry ingredients to fruit mixture; bake between crusts of rich pastry.

**Raisin Rice Pudding.** One and one-

half cups cooked rice, add two-thirds cup sugar, ¼ package of seeded raisins, 3 well beaten eggs, 1 quart milk, 1 teaspoon vanilla. Pour into buttered pan, grate nutmeg over top and bake until brown.

**Raisin Pudding.** In a well buttered pie dish lay some sandwiches made from white or brown bread sliced thin, spread with butter, sugar and raisins. Make two layers of sandwiches and pour over a custard made of one quart of milk, three well beaten eggs, half cup sugar, vanilla and nutmeg to flavor. Bake until custard is set.

**Raisin Cookies.** Chop one package of seeded raisins, add two cups finely chopped nut meats, two cups sugar, two tablespoons corn starch and ¼ stiffly whipped whites of four eggs. Mix thoroughly, drop in spoonfuls on buttered paper and bake delicately brown.

**A Dainty Tid-bit.** Put seeded raisins through the food chopper, weigh and add one-third the weight in sugar using a little honey if necessary. Work sugar into the paste. Mold with the fingers into tiny balls. Dip in melted chocolate.

**Raisin Sandwiches.** Equal quantities chopped raisins, figs, dates and walnuts mixed with cream cheese spread between bread and butter. On one slice place a leaf of lettuce; cover the other slice with mixture.

**Raisin Fudge.** Two cups sugar, cup milk, butter size of an egg, cup chocolate. Cook, stirring continually until bubbles break slowly. Have ready ½ pound walnuts chopped fine and 1 pound chopped raisins. Add these, stir until stiff and pour into buttered pans.

### A GLIMPSE AT THE WORLD'S MARKETS

A suit in the San Francisco court shows reason for the May slump in onion prices. A large dealer bought from an importer 75 tons Australian grown onions. The purchasers refused to accept the onions and they were thrown on the market at about a third their cost to save something. The suit is now calling for payment of the balance.

The state railroad commission has authorized the Farmers' Transportation Company, operating boats on the Sacramento River, to increase its rates 5 cents a ton. This on grain, beans and potatoes.

Eggs are advancing sharply on the San Francisco market. Outside shipments have practically been discontinued. The advance in six days was six cents.

The last large shipment of butter and eggs to Alaska before the closing down of the season was on August 4. Heavy shipments will not be resumed until opening of navigation in the spring.

San Francisco reports great shortage of all dairy supplies caused by the extreme heat.

The training camp at Palo Alto will require 1200 pounds of butter daily.

Imperial cantaloupes having ceased to come to market, Los Angeles is now depending upon supplies from nearby farms.

Watermelons are still holding up at a good price, Los Angeles markets paying around two cents.

Some barley growers are demanding \$2.40, with jobbers endeavoring to force prices to a lower level.

San Francisco reports potato and onion market exceptionally strong, with promise of higher levels being reached. This is being assured, in part at least, by heavy Eastern demand.

Kansas and other corn states are reporting welcome rains which have caused a slight lowering in corn quotations.

Prices of oats have been slightly shaded because of heavy rains and satisfactory crop conditions.

Chicago prices of good hard winter wheat, spot delivery, are around \$2.40 per bushel.

The minimum of \$2.00 per bushel for wheat, which has been fixed upon a conference committee of congress is not to apply in any way to the 1917 crop, but is intended as a guarantee for the 1918 crop and will be binding until May 1, 1919.

The hot wave which has been general over the East has caused a cleaning up of all lemons on track or stored, and has greatly lessened the packing house supplies in California. Even with heavy imports prices must remain good on the few locals still in packing houses. One car sold in New York close up to \$9.00 average and many sales netted around \$5.00 and \$6.00 per box.

Potatoes are higher. Los Angeles is paying around 3.35 and 3.50. Reports from Stockton state that labor shortage has had some effect upon prices, by preventing the marketing of the river crop with sufficient rapidity to fill all demands. Values there have moved up substantially the last few days. However, this has been offset to some extent by an improvement in the transportation situation.

Idaho apples have been damaged by hot spell. Hood River will have good crop, Northern California crop somewhat damaged by heat.

Cotton is stronger. Sales for August delivery show sharp advance. At New York it is selling at \$27.70. This is the highest quotation made in the future market in 45 years.



Los Angeles Market

LOS ANGELES, Aug. 8, 1917.

**BUTTER**

Produce Exch. Quotations.  
Price to trade 4c higher.  
Rets. wk. ending August 7, 405,550 lbs.  
California extra creamery .....44  
Extr. Cry. Exch. past wk.  
Aug. 1 2 3 4 6 7  
17 .....44 44 44 44 44 44

**CHEESE**

Brokers' prices:  
California fresh, lb. ....28 1/2  
Oregon Longhorn .....27 1/2  
Tillamook Trip. ....26  
Domestic Swiss .....32

**EGGS**

Exchange quotations:  
Rets. wk. ending August 7, 1131 cs.  
Fresh extras .....42  
Case count .....41  
Pullet .....38 1/2  
Fresh Ranch Exch. past wk.  
Aug. 1 2 3 4 6 7  
17 .....38 39 40 40 42 42

**POULTRY**

We quote to producers:

Broilers, 1 1/2 lbs. and up .....21  
Fryers, 2 1/2 lbs. and up .....24  
Hens—Leghorns 15@17, Heavy Col'd. ....21  
Roasters, 3 lbs. and up .....24  
Ducks, lb. ....10@15  
Squabs, doz. ....8.00@4.00  
Roosters, old .....11  
Turkeys .....21@24  
Geese .....10

**LIVE STOCK**

We quote cwt. f.o.b. L. A.

Cattle—  
Beef steers, av. 1000 to 1100 lbs.8.50@9.00  
Heifers, good .....6.50@7.00  
Cows, good .....5.50@6.50  
Fair .....5.00@5.50

**HOGS**

Av. 125 lbs .....11.50  
Av. 150 lbs .....12.50  
Av. 175-200 lbs. ....13.00  
Rough, docked 20 lbs.; piggy sows, 40  
lbs., stags, 40 per cent.  
Prime wethers .....9.50@10.00  
Ewes .....9.00@9.50  
Lambs .....13.50  
Yearlings .....10.00@10.50

**POTATOES**

Wholesale selling price:  
New cwt. ....3.35@3.50  
Sweets, lb. ....6@7

**ONIONS**

Wholesale selling price:  
Brown, cwt. ....1.75  
Garlic .....8

**VEGETABLES**

Wholesale prices:

Artichokes, doz. ....50@90  
Beans—Wax .....3 1/2@4  
Limas, lb. ....5@6  
Ky. Wonder .....4 1/2@5  
Beets, sk. ....1.50  
Cabbage, lb. ....1 1/4  
Carrots, sk. ....1.50  
Cauliflower, doz. ....1.25  
Celery, doz. ....60@1.35  
Corn, lug .....45@50  
Cucumbers, lug .....30@40  
Egg Plant, lb. ....5@6  
Horseradish, rt. lb. ....15  
Lettuce, doz. ....35  
Leeks, doz. ....30  
Mint .....40  
Onions, green, doz. ....25  
Okra, lb. ....10@12  
Peas, lb., Telephone .....8@8 1/2  
Peppers, Chili, lb., 5@6; Bell .....5@9  
Parsnips, doz. ....50  
Parsley, doz. ....20  
Radishes, doz. ....20  
Rhubarb—Strawberry .....1.10  
Romaine, doz. ....40  
Spinach, doz. ....17 1/2@20  
Squash, Summer, cr. ....35  
Cucumbers, doz. ....35  
Hubbard, lb. ....3  
Tomatoes, cr. ....1.20@1.25  
Turnips, doz. ....85

**FRUITS**

Wholesale prices:

Apples—  
White Astrachan, box .....1.50  
Gravensteins .....1.85@2.15  
Alexanders .....1.90  
Crab Apples, lug .....90@1.00  
Avocados, doz. ....7.00@8.50  
Apricots, lb. ....4@5  
Bananas, lb. ....5  
Cantaloupes—  
Standard .....1.85  
Tip Top .....1.00  
Pony .....1.65  
Casabas, lb. ....2 1/2  
Figs, box .....90@1.00  
Grapes, Seedless and Malagas, cr. ....1.65  
Loganberries, bskt. ....5@6  
Nectarines, lug .....1.50  
Peaches, lug .....40@75  
Pears, Bartlett, lug. ....1.35  
Plums, lug .....65@1.35  
Blackberries, basket .....5@6  
Raspberries, basket .....7@8  
Strawberries, basket .....5@6  
Watermelon, lb. ....2

**CITRUS**

Lemons .....5.50@6.50  
Juice .....2.50  
Grapefruit .....3.00@3.50  
Limes, basket .....1.00  
Valencias .....3.25@3.50

**HONEY**

Wholesale prices:  
Extr. White, lb. ....11 1/2@12 1/2  
W. W., lb. ....12@14  
Comb. case, W. ....8.75  
W. W. case .....4.25@4.50

**NUTS**

Peanuts, raw .....12  
Pine Nuts .....20  
Pecans .....19

**RICE**

Wholesale quotations:  
Cal. ....6.25  
Broken .....4.75@5.00

**BEANS**

Wholesale Prices:  
Lady Washington .....13.50  
Limas .....13.50  
Pinks .....10.00  
Manchurian Reds .....11.00  
Baby Mex. ....9.00

Garbanzos .....9.00@10.00  
Small White .....13.50  
Blackeyes .....8.00  
Tepary .....7.00  
Lentils .....13.00

**HAY**

Quotations by Nichols-Loomis Com-  
pany. Wholesale prices to grower f.o.b.  
L. A. carlots.  
Tame Oat .....13.00@20.00  
Volunteer Oat .....13.00@15.00  
Wheat .....14.00@17.00  
Barley .....15.00@18.00  
Alfalfa .....11.00@17.00  
Straw .....7.00

**GRAIN AND FEEDSTUFFS**

Wholesale cwt. f.o.b. L. A.

Alfalfa Meal .....1.75  
Alfalfa Molasses .....1.89  
Barley, Rolled .....2.95  
Barley, Recleaned, Whole .....3.00  
Barley, Hulled .....3.55  
Beet Pulp .....1.80  
Bran, Heavy .....2.50  
Cottonseed Meal .....2.60  
Corn, Yellow .....4.90  
Corn, White .....5.00  
Corn, Cracked .....4.95  
Corn, Feed Meal .....5.00  
Corn, Egyptian .....4.65  
Middlings .....3.10  
Milo .....4.65  
Oat Chop .....1.90  
Oats, White .....3.30  
Oats, Rolled White .....3.35  
Oats, Hulled .....5.10  
Oats, Rolled Chicken Groats .....5.20  
Oatmeal Meal .....3.40  
Wheat, No. 1 .....4.30@4.35  
Wheat, Cracked, No. 1 .....4.70  
Rye .....4.10  
Blood Meal .....5.10@5.20  
Bone, Green .....2.85@2.95  
Bone, Dry .....3.05@3.15  
Charcoal, 50-lb. sk. ....2.70@2.80  
Clam Shell .....70@80  
Grit, Granite .....65@75  
Oyster Shell .....1.25@1.35  
Sunflower Seed .....4.10@4.20  
Soya Bean Meal .....3.20@3.30  
Scratch Feed .....4.20@4.30  
Gritless .....4.40@4.50  
Rice Bran, ton .....40.00  
Middlings, ton .....45.00  
Rice Polish, ton .....49.00

San Francisco Markets

SAN FRANCISCO, August 7, 1917.

**BUTTER**

Dairy Exchange quotations, lb.:  
Rets. wk. ending Aug. 6, 487,800 lbs.  
Fresh extras .....43  
Prime firsts .....42  
Extr. Cry. Exch. past wk.  
July 31 Aug. 1 2 3 4 6  
17 .....43 43 43 43 43 43  
16 .....26 26 26 26 26 26

**CHEESE**

Dairy Exchange quotations:  
Cal. Flats .....18@23 1/2 Y. Am. ....22@24

**EGGS**

Fresh Ranch Exch. past wk.:  
Rets. wk. ending Aug. 6, 11,130 cs.  
July 31 Aug. 1 2 3 4 6  
17 .....38 39 41 42 43 43 1/2  
16 .....29 30 30 30 31 1/2

**POULTRY**

We quote from producers, lb.

Hens, large, 22@24; Leghorns. ....16@18  
Small Colored .....19@20  
Fryers, lb. ....26@27  
Broilers .....25@27  
Roasters .....28@30  
Roosters .....28@30  
Squabs, doz. ....2.00@3.50  
Ducks .....15@17  
Geese .....19@20  
Belgian Hares, live 11@13; dr. ....15@16

**LIVE STOCK**

Prices gross weight:

Cattle:  
The following prices are for grass fed  
stock. Hay fed bring 1/4 to 1/2 c more.  
Steers, lb., 6 1/2@9; cows and heifers,  
4@6 1/2; calves, 7 1/2@9 1/2.  
Sheep:  
Wethers, 10@10 1/2; shorn, 1 1/2@2c less;  
ewes, 8@8 1/2; lamb, lb., 11 1/2@12.  
Hogs:  
Hard grain fed, wt. 100 to 150 lbs., 13@  
13 1/2; 150 to 300 lbs., 14 1/4@14 1/2; 300 to 400  
lbs., 13 1/4@14.

**POTATOES**

Wholesale selling prices at wharf:

New, cwt. ....2.50@2.70  
Sweets .....6@6 1/2

**ONIONS**

Wholesale selling price on wharf:

New Red, sk. ....50@75  
Yellow, cwt. ....30.90@1.00  
Green, bx. ....50@60  
Garlic, lb., New .....3@4

**VEGETABLES**

Wholesale selling price:

Beans, String, lb. ....4@5  
Fy. Garden, 4@5; Lima .....5@6  
Corn, Green, sk. ....1.25@1.75  
Cucumbers, box .....35@40  
Egg Plant, lug .....75@90  
Okra, 5-lb. box .....75@1.00  
Peas, Halfmoon, sk. ....2.50@3.00  
No. 2, .....1.25@1.50  
Peppers, Bell, lug .....1.00@1.25  
Chili, lug .....60@75  
Rhubarb .....85@1.00  
Squash, Summer .....85@1.00  
Italian, lug .....50@75  
Tomatoes, lug, Delta .....2.00@2.75  
Merced, box .....75@90  
San Pedro, cr. ....75@1.00

**FRESH FRUIT**

Wholesale selling price:

Apples—  
Red Astrachan .....75@1.25  
White Astrachan .....75@1.10  
Gravenstein, box .....1.00@1.65  
Alexander .....75@1.00  
Apricots, cr. ....1.00@1.25

Bananas, lb. ....5 1/2  
Cantaloupes, Delta, lug .....75@1.00  
Turlock, cr., Standard .....1.00@1.25  
Pony, 75@1.00; Flats .....40@60  
Cherries, dr., 1.00@1.25; lb. ....8@10  
Figs, Blk., box double layer .....1.25@1.50  
Grapes, Sweetwater, cr. ....1.00@1.25  
Seedless, Malaga, Blk., cr. ....1.25@1.50  
Nectarines, cr. ....1.25@1.50  
Strawberries, chest .....7.00@9.00  
Peaches, cr. ....60@75

Fears—  
Bartlett, No. 1 box .....1.00@1.50  
Ton, 35; cull, ton .....15.00@20.00  
Plums, Tragedy, cr. ....85@1.00  
Burbank .....75@1.00  
Santa Rosa .....1.25@1.50  
Damson, ton .....40.00@50.00  
Green Gage, ton .....40.00@50.00  
Wickson .....1.00@1.25  
Satsuma .....50@75  
Blackberries, chest .....4.00@6.00  
Loganberries, chest .....6.00@7.00  
Pineapples, doz. ....5.00@6.00  
Raspberries, chest .....9.00@12.00  
Watermelons, lb. ....1/4@1

DRIED FRUITS

Raisins—California Associated Raisin  
Company prices on layer and cluster 1917  
crop; October, November and December  
shipments:  
Sun-Maid Layers, 20-lb. box, \$1.50 per  
box.  
3-Crown London Layers, 20-lb. box.  
1.50 per box.  
4-Crown Clusters, 20-lb. box, \$1.75.  
6-Crown Imperial Clusters, 20-lb. box,  
\$2.60 per box.  
(5-lb. box, 50c additional; 10-lb. box,  
25c additional.)  
Bulk vineyard run Layers, 50-lb. box,  
\$3.25.  
Bulk Vineyard Run Layers, 100 lb. box,  
\$6.25 per box.  
Sun-Maid Brand Clusters.  
Fancy Clusters, 1-lb. cartons, 20 to  
case, \$1.85 per case.  
Fancy Clusters, 1-lb. cartons, 24 to case,  
\$2.20 per case.  
Fancy Clusters, 2-lb. cartons, 12 to  
case, \$2.20.  
Fancy Clusters, 5-lb. cartons, 4 to case,  
\$2.60 per case.  
All f. o. b. California common shipping  
points; regular California dried fruit  
terms; prices guaranteed against decline  
to January 1, 1918.  
\*The 20-lb. case Sun-Maid Layers is of  
the new style tray pack. This style will  
facilitate their handling by the dealer,  
and make possible a very attractive dis-  
play.  
Our prices on 48-lb. package Sun-Maid  
Seedless and 50-lb. boxes bulk unbleached  
Thompson Seedless, as quoted in our  
Sales Department Circular No. 29, under  
date of January 27, 1917, are guaranteed  
against decline to August 1, 1917.  
Opening prices on dried fruits of the  
new 1917 crop are as follows:  
Per lb., Bulk basis: Apricots, quoted by  
Apricot and Prune Growers' Association,  
Standard, 13 1/2c; choice, 14 1/2c; extra  
choice, 15c; fancy, 16c; extra fancy, 17c;  
fancy Moorpark, 17c; extra fancy Moor-  
park, 18c. Prunes, 6 1/4c extra basis with 1c  
premium on the 40s.  
PEACHES—New crop, quoted by  
Peach Growers' Association, unpeeled  
peaches, standard, per lb: Muirs, 8 1/2c;  
yellow, 8 1/4c; choice Muirs and yellows,  
8 1/2c; fancy, yellow, 8 3/4c; extra fancy  
yellow, 8 1/2c; slabs, 7 1/4c; practically peel-  
ed peaches, 11 1/2c.

BEANS

Jobbers' prices, cwt. recleaned:

Limas .....12.00@12.75  
Bayous .....9.00@9.50  
Garbanzos .....6.00@6.50  
Small Whites .....14.50  
Mexican Red .....9.50@10.00  
Large White .....14.00@15.00  
Pinks .....8.75@9.00  
Black Eyes .....8.00@8.50  
Cranberry .....10.00@11.00

RICE

Price to growers:

Cal. Rough, cwt. ....3.00@3.25  
Lower Grades .....2.00@2.75

HAY

Under date of August 4, Scott, Wagner  
& Miller say:  
Receipts past week, 2085 tons, last  
week 1785 tons.

A good part of this arrived by water,  
cars being scarce and hard to obtain.  
Considerable activity has been shown  
throughout the country districts during  
the week and many sections report trade  
quite brisk with considerable hay chang-  
ing hands. Arrivals have consisted prin-  
cipally of No. 1 to choice grades, stock  
hay being scarce, with a good demand.  
Trade throughout the city is dull, con-  
sumers still holding back from buying  
winter supplies, awaiting larger re-  
ceipts. Export trade shows no improve-  
ment. Alfalfa arrivals are light with  
fair demand.

Some new straw arrived during the  
week but as it was pressed in heavy  
bales it was sold by the ton and not by  
the bale as usual.

We quote today wholesale prices in  
carload lots as appear from dealers'  
transfers upon the market. For prices  
to consumers charges of cartage, com-  
mission and handling expenses must be  
added.

Wheat, Fy. lt. bales .....20.00@21.00  
Wheat or Wh. and Oat, No. 1 .....17.00@19.00  
Wheat or Wh. and Oat, No. 2 .....15.00@17.00  
Oats, Choice Tame .....18.00@19.00  
Other Tame .....15.00@16.50  
Wild Oat .....13.00@16.00  
Barley .....13.00@16.00  
Alfalfa, first cutting .....13.00@16.00  
Stock Hay, new .....10.00@12.00

**GRAIN**

Grain Exchange prices, ctl.

Wheat, Northern Bluestem .....4.35@4.50  
Corn, California Yellow .....4.25@4.40  
Corn, Egyptian White .....3.75@3.80  
Oats, Red Feed .....2.60@2.65  
Barley, Feed .....2.50@2.55

**FEEDSTUFF**

Wholesale prices per ton:

Bran .....38.00@40.00  
Cornmeal .....86.00@88.00  
Cracked Corn .....86.00@88.00  
Middlings .....49.00@50.00  
Alfalfa Meal, carlots .....24.00@25.00  
Cocoanut Meal .....38.00@40.00  
Shorts .....40.00@42.00  
Rolled Barley .....51.00@52.00

**SEEDS**

Prices in round lots, lb.:

Millet, recleaned .....4 1/2@5  
Alfalfa .....20@21  
Flax .....6@6 1/2

Citrus Fruit Market

LOS ANGELES, August 8, 1917.  
The last week has been one of spec-  
tacular ups and downs, especially with  
lemons. Oranges have been affected  
somewhat by the weather but the mar-  
ket as a general thing has been most  
satisfactory. Prices have ranged, how-  
ever, according to quality from well  
down towards one dollar to above five  
dollars.

The hot wave has stimulated the lem-  
on market and prices have gone higher  
than for years. Some sales have been  
made well up toward \$14 per box.

**Shipments**  
Shipments of oranges from Southern  
California since November 1, 1916, 35,254  
cars, lemons 6969, total 42,223; to same  
date last year oranges 27,791, lemons  
6035, total 33,826. From Central Califor-  
nia to date this season oranges 5042,  
lemons 164, total 5206; to same date last  
year oranges 5398, lemons 146, total 5544.  
From Northern California to date this  
season, oranges 845 cars; to same date  
last season, oranges 610, lemons 1.

FROM THE AUCTION

August 1  
New York: 20 oranges, 2 lemons, 1  
grapefruit, lemons much higher. Val.  
\$1.45@3.95; lemons, \$8.35@10.50; grape-  
fruit, \$0.75@2.45.

St. Louis: 6 cars, oranges lower, lem-  
ons higher, Val. \$2.50@3.30; lemons,  
\$3.15@4.85.  
Pittsburgh: 11 cars; Val. \$1.65@3.55;  
lemons, \$7.60@10.70.

Cleveland: 6 cars; Val. \$1.85@3.75;  
lemons, \$9.55.

August 2  
New York: Market active on Valen-  
cias, excited and much higher on lem-  
ons. Val., \$1.70@4.70; lemons, \$3.20@  
13.60.

Boston: 13 cars; higher; Val., \$1.90@  
3.10; lemons, \$9.40@11.10.

August 3  
New York: 15 Val. 1 lemon; market  
higher; Val. \$1.90@4.80.

Boston: 15 cars; lemons slightly lower;  
Val., \$1.55@3.45; lemons, \$5.90@9.36.

St. Louis: 6 cars. Easier on oranges;  
Val., \$2.06@3.30; lemons, \$4.45@8.35.  
Cincinnati: 2 cars; Val., \$2.45; lemons,  
\$7.80.

August 6  
New York: 35 oranges, 1 grapefruit, 2  
lemons. Oranges higher, lemons lower.  
Val., \$1.80@5.05; lemons, \$2.35@7.40;  
grapefruit, \$0.80@2.40.

August 7  
New York: 32 oranges, 1 lemon; or-  
anges lower; Val., \$2.15@4.70; lemons,  
\$2.80@5.30; grapefruit, \$2.30@2.95;  
sweets, \$2.15@3.30.

Philadelphia: 7 cars; Val., \$2.75@4.40.  
Boston: 7 oranges, 1 lemons; Val.  
\$2.70@4.05; lemons, \$5.70@8.55.

POTATO PLANTERS and DIGGERS



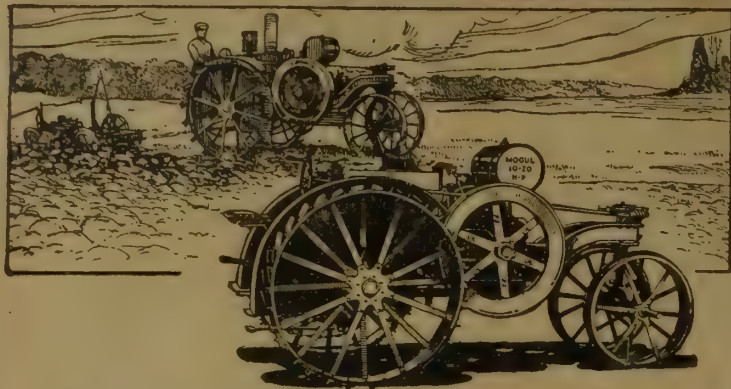
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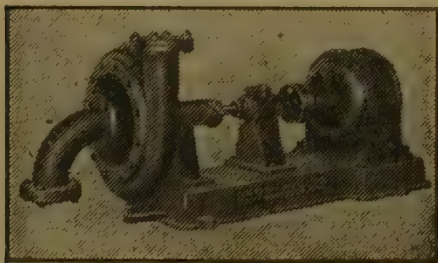
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The draft for war service which has been made upon the Bell System is summarized in a recent Government report.

Government messages are given precedence over commercial messages by means of 12,000 specially drilled long distance operators all over the country.

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Special connections have been established between all military headquarters, army posts, naval

stations and mobilization camps throughout the United States.

More than 10,000 miles of special systems of communication have been installed for the exclusive use of Government departments.

Active assistance has been given the Government by the Bell System in providing telephone communications at approximately one hundred lighthouses and two hundred coast guard stations.

Communication has been provided for the National Guard at railroad points, bridges and water supply systems.

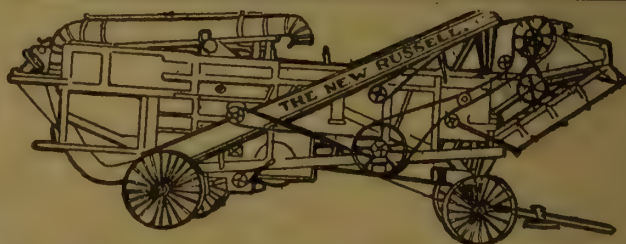
A comprehensive system of war communication will be ready at the call of the Chief Signal Officer, and extensive plans for co-operation with the Navy have been put in effect with brilliant success.

As the war continues, the demands of the Government will increase. And the public can help us to meet the extraordinary conditions by putting restraint on all unnecessary and extravagant use of the telephone.



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# CALIFORNIA CULTIVATOR

**THE LIVESTOCK** *Combined with* **CALIFORNIA**  
*and DAIRY JOURNAL* **CULTIVATOR**

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

August 18, 1917

SAN FRANCISCO





## Of Interest to Citrus Fruit Growers

### IS FUMIGATION A PROFITABLE INVESTMENT?

Several years ago in a meeting of citrus fruit growers at Redlands Mr. James Mills, then the general manager of the Arlington Heights Fruit Company of Riverside, California, in a talk on methods of scale control, among other things said:

"I bought ten big spraying outfits and went to work, and for years contended that I was right, and contended that I was saving money, because I was treating my trees for one-half or one-third of what it cost to fumigate in those days, if not less than that, and I felt that all the rest was saved. I felt that it was an economic question and that if I could do it for less, that I was saving money. \* \* \* \* \*

"After my spraying operations had been done, I found that I **COULD NOT GET OVER 80 PER CENT** of the scale; and the **OTHER 20 per cent** left me almost as bad as that sinner in the Scriptures; **A GREAT DEAL WORSE AFTERWARDS THAN BEFORE.** So I went to my manager and said: 'I want five thousand dollars.' 'For what?' 'To buy an outfit for fumigating the trees.' \* \* \* I got the money, I got the tents, and I got to work. At the end of two years I had expended forty thousand dollars in cleaning up, and I **CLEANED** and I **USED THE STUFF** and I **GOT THE SCALE**, and I **REJOICED**, and may I say it, **EXCEEDING GLAD.** I was able to say, and **SAY TRUTHFULLY** to my general committee, to my directors, it has cost forty thousand dollars, but **IT HAS NOT COST YOU A CENT.** Apparently you have expended the money but I know that I have **PRODUCED TWO DOLLARS IN FRUIT EXTRA** for every dollar of money that I have expended in these operations; I know that; **YOU HAVE PROOF OF THAT IN YOUR DIVIDEND.** There was no question about it; there could be no question; it was a demonstration that could not escape anybody; we were satisfied with our expenditure because **WE HAD THE FRUIT THAT WE GREW BEFORE**, and **SO MUCH MORE THAT WE HAD OUR MONEY AND ANOTHER DOLLAR ALONG SIDE OF IT; THAT WAS A GOOD INVESTMENT.** Any business man will put a dollar in if he gets it back accompanied by another dollar; only some fruit men are not business men.

"I have stated to you that I spent forty thousand dollars, and was able to say that it did not cost them a cent. Do you see the point? That if I had not spent the forty thousand dollars I would not have gained half the crop, and that is the fact, I gained so **MUCH MORE FRUIT**, directly as the **RESULT** of the **CLEAN-UP** of the trees that I produced that **MUCH MORE MONEY—THE FORTY THOUSAND DOLLARS** and **ANOTHER FORTY THOUSAND DOLLARS ON TOP** of it, **AND STILL SOME MORE.** \* \* \* \* \*

**NOW, DID IT PAY? YES.**

"**BETWEEN FUMIGATION AND SPRAYING THERE CAN BE NO QUESTION.** \* \* \* I have a block of 400 acres that I have not fumigated in four years. It was dirty; I sprayed, and I sprayed, and then I sprayed year after year, and while I denied then that it hurt the trees I know now that it did; I know that the tree was weakened; I can show you trees that have not recovered from it! Trees that I have had to apply more fertilizer on, that I have had to agonize over and to little purpose; trees that had to be cut away to get the new growth, the new live wood with the sap coursing through its ramifications, and now setting and holding the crop of fruit."

Superintendent Little now says:

"It is our experience that the Hydrocyanic acid gas is most satisfactory to use to eradicate or hold in check the various scale that affect the citrus trees.

"We have tried various sprays and combinations of sprays but the results were unsatisfactory and until something else is shown to be better than Hydrocyanic acid gas we will continue to use the same.

"The citrus fruit grower cannot afford to let his trees become infested with scale if he is dependent upon the returns from his fruit for a living."

G. HAROLD POWELL in Bulletin No. 123 of the U. S. Department of Agriculture, among other things says:

"The necessity for **WASHING** the orange **SHOULD BE AVOIDED** by a proper fumigation of the groves with cyanide" (this of course means fumigation with hydrocyanic acid generated from cyanide). "**FUMIGATION**, on the other hand, is one of the operations that **PROMOTES GOOD ORCHARD MANAGEMENT**; it **MAINTAINS STRONG, HEALTHY TREES** and **FRUIT**; and it **REDUCES** the **COST** of **PREPARING** the **ORANGES** for the market in a manner that **INCREASES THE KEEPING QUALITY OF THE FRUIT.**"

The results of **SURVEYS** and **EXHAUSTIVE INSPECTIONS** of citrus groves covering several thousand acres made this year in the counties of San Bernardino, Riverside, Orange and Los Angeles, show that **FUMIGATION EFFICIENCY** stands at **99.5 PER CENT.** The average efficiency for **SPRAYING OPERATIONS** SHOWS **LESS THAN 45 PER CENT**, WITH **SERIOUS DAMAGE TO TREES AND FRUIT.**

**CYANEGG WILL**, this year, be available for the full needs of the citrus fruit growers. There is no need for growers to resort to the more expensive and less efficient spraying. **EVERYONE OWNING A GROVE SHOULD FUMIGATE.**

Interested parties desiring additional information may obtain same by addressing

**F. W. Braun**

363-371 New High St., P. O. Box 55, Los Angeles



# California Cultivator

Vol. XLIX No. 7

LOS ANGELES: August 18, 1917

One Dollar Yearly

## Where Fruit Trees are Propagated and Nursed

A Couple of Large Nurseries Where Trees are Brought to Life, Nursed and Trained in the Way They Should Grow. Written by A. Layman

**E**VERYBODY — everybody as is an optimist—loves to take home a package of seeds or a potted plant or a tree and then spend hours in imagining how it will grow and produce

rant and beautiful, its fruits are luscious, its owner is prosperous. There are millions of such trees in California. They form the most beautiful feature of our landscape. They bring the lover of things beautiful to Cali-

conditions, all make for growing a fine stock. Then come the difficulty of securing experienced and honest help; pests without number; horticultural laws, which are an effort to protect the industry on which he depends for his living, yet sometimes unjust in some of their workings; finally the transportation question which, in combination with horticultural laws and county ordinances, is a most serious one. The tree handler is confronted by the law which says

an output of citrus trees as has the citrus nursery at San Dimas. California has had olive nurseries where literally millions of twigs were turned into orchard trees and nurseries where rose cuttings are propagated, which are amongst the world's greatest. In an issue of the Cultivator a few months ago reference was made to Central California nurseries where thousands of acres are given up to the culture of grape vines or figs or peach trees.



John S. Armstrong

The entrance to Mr. Armstrong's office and sales yard is especially attractive and an indication of thrift and careful work.

owers or fruits. There is a fascination in roaming about a seed house or nursery. There is so much of promise everything you see, especially the catalogue. The promises do not always come true. Why? Well, that's a awful long question or rather a tree letter question which calls for a long answer. Quickly and easily we can say "It's the nurseryman's fault." Here are not many of him to come

fornia to spend millions. They require tens of thousands of cars to take their fruits overland and bring back the wealth they create.

All because a tiny seed sprouted and was nursed into a lusty tree planted by rivers of water, its leaf not allowed to wither because it fell into the hands of one whose "delight is in the law of the Lord and in his law doth he meditate day and night."



Sizing up Heat Effects

R. M. Teague, without coat at right discussing with F. H. Thomas effect of hot weather on navels. Mr. Teague not only grows citrus trees but fruits as well.

he cannot deliver trees until a county inspector releases them. The county inspector may be many miles away on other inspection work. Perhaps the weather conditions are such as to decrease the vigor of the young trees to be planted. Then when the season is over thousands and possibly tens of thousands of "holdovers" must be burned or otherwise disposed of.

California is the first state in the Union in the production of plants and trees. The business now totals an-

R. M. Teague has been in the citrus nursery business since the late eighties. He has supplied world's fairs with bearing orchards; he has shipped trees into Southern Africa and even into Central India. They have been months on the road, and the most severe criticism received was "The trees were all alive, but a little slow to start." These were citrus trees which are not supposed to be dormant and are known to be most difficult to transplant. The nurseries are located in eastern Los



Under the Lath at Armstrong's

A side entrance to office opens from the lath house. Hanging baskets and almost every shrub and tree are exhibited in this lath house.

ack at us with denial and there are so many of us who have failed with some plants or trees, that in preponderance "evidence" we would be able to make proof.

But in common fairness isn't a division of responsibility wise? We all agree there is failure at times. But first, as we started with the suggestion that we are largely optimists, what happens when a tree, a perfectly proper tree, is planted in a perfectly proper way, then cared for? It grows, it thrives, its leaves are glossy and dark, its flowers are frag-

But that other who fails to meditate, and hustle, but burneth much gas, there's the rub.

There is where the nurseryman gets his. For Mr. Orchardist comes back with "Say!" Then the nurseryman sits down and explains how thrifty the trees were, their fine root system and other points. It ends in more trees being planted and usually better results.

So the nurseryman has his troubles. His own training and experience, usually abundance of capital, ability to choose right soil and water

nually in excess of \$3,000,000, and as usual has some of the greatest plant growing concerns in the world engaged in it.

No nursery has ever had such

Angeles County at San Dimas.

The seed used for citrus stock is now almost exclusively secured from the sour orange grown in northern

Continued on Page 150



Capacity for 20 Carloads of Citrus Trees

The R. M. Teague Nurseries take up trees from nursery and harden or season in lath house before shipping. Most of the trees are shipped with "bare roots" packed in wet shavings.



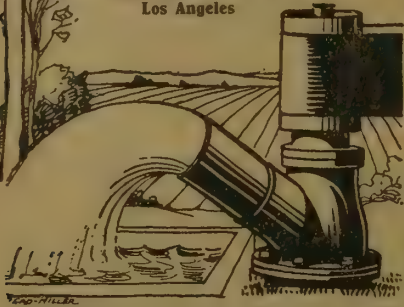
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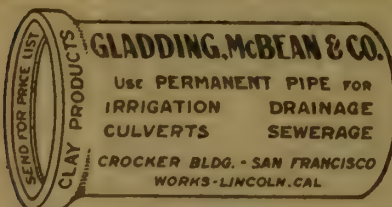
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## Treatment of Navel Orchard This Year



THE San Antonio Water Company of Ontario, in its effort to gather information of value to its patrons on the subject of intercrops, has asked Dr. H. J. Webber of the citrus experiment station as to the best handling of citrus orchards in view of the present situation. Dr. Webber answers:

Navel groves are left in large measure without a crop of fruit. In general they have not been otherwise injured and are now showing great vigor where they were in good condition before the hot weather. They have no crop to mature and it is evident that the fertilizer requirements for this season will not be so great as where a large crop is maturing. In probably all navel groves it will be safe to cut out all future fertilization this year. Nitrogen is the element most needed in our soils and is at the same time the element most readily lost. To keep up the fertility requirements and prevent loss, it may be found desirable in some cases where a grower has sufficient water to plant cow peas or black eye beans immediately as a summer cover crop to be turned under about the last week of September in time to allow the planting of a winter cover crop. Probably in such a case as this better results would be obtained by disking under the crop than by plowing. Such a summer cover crop to be worth while, should be planted at least by the first of August and seeded rather more thickly than when growing the crop for seed. This summer cover crop should not in my judgment be allowed to take the place of the winter cover crop which is more important.

The winter cover crop of some legume, such as Melilotus, Windsor beans, or vetch, should not be neglected this year, as by this means the grower secures the cheapest possible fertilization with nitrogen and organic matter, the two elements of fertilization most needed by California soils. If the grower finds it possible to grow and add to the soil two fairly good cover crops between now and early next spring, it is possible that a grove in good condition now could be carried through the season of 1918 without further fertilization, and at the same time carry a good crop of fruit next summer.

It is certain that our ordinary fertilization will from necessity be greatly interrupted next year, as it is becoming almost impossible even now to secure the ordinary materials. Potash is very expensive and cannot be obtained in quantity. In view of the fact that experiments have shown that this element has very little effect in citrus fertilization in California, its omission from our fertilization for several years will certainly cause no loss either in fruit or condition of trees.

Phosphoric acid fertilization, while more noticeable in effect than potash, is nevertheless not very quickly visible in effect on the tree or fruit, and as this element is usually present in considerable abundance in California soils, it is probable that its entire omission from fertilization for two or three years will cause no visible effects. In the present emergency, therefore, it is believed that citrus growers may safely omit potash and phosphoric acid from their fertilization for two or three years, providing their land and groves are now in good condition.

During the war period fertilizers will be expensive and difficult to secure, and growers will be compelled in large measure themselves to produce such as are required. It is fortunate that we have so many leguminous crops that can be grown in the groves to supply the necessary nitrogen and organic matter. Under present conditions, therefore, it becomes more than ever important to grow good cover crops to turn under as green manures. Some growers still continue to grow cereals, such as barley and rye, for the purpose, apparently failing to understand that cereal crops do not possess the faculty of gathering nitrogen from the air as do the legumes.

It is also important in this crisis to strongly advocate the careful conservation and use of all manure produced, and of all spoiled alfalfa hay and other organic materials.

### Pruning

It may be suggested that where navel groves need pruning or thinning out, the present conditions offer excellent opportunity to do this without injury to the crop. Such pruning, however, should be done as early as possible so that the new growth stimulated by the pruning will become fully mature before there is danger of severe frost. In the case of run-down groves, that it is desired to bring up, a severe pruning at this time can be made without loss of fruit, and would probably put the trees in good condition for a crop next year, if at the same time the other conditions of culture are improved.

### The Use of Intercrops for Profit

Many questions are being asked regarding the intercropping of groves

with crops grown for profit and for the purpose of increasing our supply of food stuffs. There are probably nearly as many opinions regarding this matter as there are growers, and very little exact experience from which to formulate policies.

It appears to the writer that the citrus grower should clearly recognize that he is a citrus grower primarily and that nothing must be done in the grove that is even remotely likely to injure it. The citrus grove is a long time crop and the investment in it too great to jeopardize. There is undoubtedly no doubt but that in young groves up to possibly five or six years of age certain intercrops can be grown without injury to the trees and probably at a profit. Such intercrop, however, should be selected with caution. Foremost among such crops we would rank the bean, but it is too late now to plant beans in a grove and have them mature in time to plant a winter cover crop to advance age. At this late period in the year it is thus questionable whether it will not be best in the long run, even in young groves, to direct the attention to growing the necessary green manures to keep the grove in good condition, waiting for the longer period next summer to grow the intercrop.

After the groves have reached an age of eight or ten years, the writer feels pretty strongly that the greatest revenue to the grower and the greatest good to the grove will result in using such space as is available in growing green manures to turn under, thereby saving on the fertilizer bill. Unless we reach a condition of great extremity as a result of the prolongation of the war, probably the attempt to intercrop groves would not be justified, and such a critical condition of trust is not likely to occur.

## Weekly Market Review of Fruits and Vegetables

Kansas City, August 7, 1917.

### Potato Market Unsettled

During the middle of this past week, July 31 to August 7, potato prices declined to the lowest level of this season, due primarily to diminished consumption during the recent very hot spell. However, the hot weather also decreased shipments and the supply so that prices in producing sections are now advancing to a level considerably above that of a week ago. Today f.o.b. prices of \$3.00 to \$3.25 were reported from the Eastern Shore of Maryland and Virginia sections. New Jersey shipments amounted to only 131 cars this past week as compared with 1061 cars for the corresponding period a year ago. Potatoes from Eastern Shore of Maryland and Virginia which form the bulk of the shipments, are jobbing \$2.25 to \$4.00 per barrel in most markets with some selling as high as \$4.75 to \$5.00 on Western markets. The total potato shipments for the past week were 2031 cars, or about 700 less than the previous week.

### Cantaloupe Shipments Heavier

Cantaloupe shipments were about 350 cars heavier this past week than the week previous. Turlock, California, is now the heaviest shipping section. Turlocks are the best quality cantaloupes on the market and are bringing good prices, jobbing at \$3.25 to \$6.00, as compared with \$1.50 to \$3.25 per crate last year during the corresponding period. F. O. B. prices of Turlocks are \$1.40 to \$1.45 as compared with \$1.50 to \$1.90 per crate

a week ago. F. O. B. prices of Arkansas cantaloupes have also declined, and they are jobbing at \$2.00 to \$3.75 compared with \$1.50 to \$1.75 last year at the corresponding time. The Arizona season is now about over. Shipments from that state to date have been 1209 cars as compared with 88 cars last year up to the corresponding time and the total for the season.

### Peach Prices Hold Firm

Arkansas and Texas peaches have varied little in price this past week from the price of a week ago. Arkansas are jobbing at \$1.50 to \$4.00 compared with \$1.75 to \$3.25 last year for the corresponding period. The total movement of peaches this past week has been 1111 cars, or about 100 cars less than a week ago. Texas is nearly through shipping, with total movement to date from that state 77 cars as compared with 1716 cars last year up to the corresponding time.

### Busy Watermelon Week

This past week 2954 cars of watermelons reached market as compared with about 2123 cars last year at the corresponding time. Despite the heavy shipments and the fact that many cars arrived overripe, the weather has stimulated consumption so that prices advanced in the past week. Georgia, Texas and South Carolina have been the heaviest shipping states. The Missouri movement is now starting with 163 cars this past week as compared with 798 cars to the corresponding time last year. Up to date 163 cars have been shipped from that state as compared with 140



last year to the corresponding. It is estimated that the production for the state will be about 35 per cent less than last year.

#### Fruits and Vegetables

**Tomato** shipments for the past week of 560 cars, a few more than the previous week. New Jersey was the largest shipper, with 224 cars. However, shipments from New Jersey are behind last year. The shipments in that state to date have been 1591 cars as compared with 1591 cars corresponding date last year. Most markets at present are supplied with tomatoes from nearby producing sections.

**Massachusetts** began shipments of this past week, and with a view movement from Washington total for the week amounted to 155 cars as compared with 155 for the previous week. The Kentucky season practically ended. Prices have remained about the same with no improvement in demand.

## Government Crop Report

**SUMMARY** of the August crop report for California and the United States, as compiled by the bureau of crop estimates, United States department of agriculture:

**Wheat:** August 1 forecast, 2,580,000 bushels; production last year (December estimate), 2,048,000 bushels. United States: August 1 forecast, 2,000,000 bushels; production last year (December estimate), 2,583,241 bushels.

**Wheat:** August 1 forecast, 6,530,000 bushels; production last year (December estimate), 5,600,000 bushels.

**Wheat:** August 1 forecast, 6,530,000 bushels; production last year (December estimate), 639,886,000 bushels.

**Wheat:** August 1 forecast, 7,010,000 bushels; production last year (December estimate), 6,500,000 bushels.

**Wheat:** August 1 forecast, 38,400,000 bushels; production last year (December estimate), 33,320,000 bushels.

**Wheat:** August 1 forecast, 5,120,000 bushels; production last year (December estimate), 3,263,000 bushels.

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**Apple** shipments for the past week were slightly less than a week ago, totaling 206 cars. New Jersey, the heaviest shipper this past week, has moved only 97 cars to date as compared with 249 cars up to the corresponding time last year.

**Colorado** and **Iowa** were the principal shippers of cabbage this past week, although most markets of the country were abundantly supplied with nearby stock. Iowa cabbage is selling today, f. o. b. points in that state at \$15.00 per ton.

**New York** shipped 100 cars of lettuce this past week, with no other state shipping a large quantity. To date New York has shipped 639 cars as compared with 253 cars last year up to the corresponding time.

**Pear** shipments for the past week amounted to 598 cars, or about the same as a week ago, but about 175 cars less than last year for the corresponding time.

## Crop Report

#### All Hay

State: August 1 forecast, 4,900,000 tons; production last year (December estimate), 4,615,000 tons.

United States: August 1 forecast, 100,000,000 tons; production last year (December estimate), 109,786,000 tons.

#### Apples (Agricultural Crop)

State: August 1 forecast, 1,840,000 barrels of 3 bushels; production last year (December estimate), 1,918,000 barrels.

United States: August 1 forecast, 62,600,000 barrels of 3 bushels; production last year (December estimate), 67,415,000 barrels.

#### Peaches

State: August 1 forecast, 10,080,000 bushels; production last year (December estimate), 8,808,000 bushels.

United States: August 1 forecast, 426,900,000 bushels; production last year (December estimate), 36,939,000 bushels.

#### Cotton

State: July 25 forecast, 57,000 bales; production last year (Census), 43,620 bales.

United States: July 25 forecast, 11,900,000 bales; production last year (Census), 11,449,930 bales.

#### Beans

State: August 1 forecast, 6,480,000 bushels; production last year (December estimate), 4,175,000 bushels.

United States: August 1 forecast, 19,400,000 bushels; production last year (December estimate), 8,846,000 bushels.

#### Sugar Beets

State: August 1 condition 90, compared with the ten-year average of 90.

United States: August 1 condition 90.3, compared with the ten-year average of 89.3.

#### Oranges

State: August 1 condition 45, compared with the ten-year average of 87.

United States: August 1 condition 47.4, compared with the ten-year average of 84.3.

#### Lemons

State: August 1 condition 55, compared with the ten-year average of 87.

#### Apricots

State: Production, percentage of full crop, 70, compared with the six-year average of 72.

#### Prunes

State: August 1 condition 95, com-

pared with the six-year average of 76.

#### Almonds

State: August 1 condition 64 compared with the six-year average of 75.

#### Olives

State: August 1 condition 67, compared with the six year average of 83.

#### Walnuts

State: August 1 condition 80, compared with the six-year average of 83.

#### Hops

State: August 1 condition 95, compared with the ten-year average of 91.

United States: August 1 condition 95, compared with the ten-year average of 88.4.

#### Prices

The first price given below is the average on August 1 this year, and the second the average on August 1 last year.

State: Wheat, 205 and 96 cents per bushel. Corn, 173 and 92. Oats, 74 and 50. Potatoes, 128 and 140. Hay, \$15.50 and \$12.00 per ton. Cotton, 34 and 26 cents per pound. Eggs, 34 and 26 cents per dozen.

United States: Wheat, 228.9 and 107.1 cents per bushel. Corn, 196.6 and 79.4 cents. Oats, 73.7 and 40.1 cents. Potatoes, 170.8 and 95.4 cents. Hay, \$13.42 and \$10.68 per ton. Cotton, 34.3 and 12.6 cents per pound. Eggs, 29.8 and 20.7 cents per dozen.

#### PLANT YOUR WHITEFLY FUNGUS

The college of agriculture of Florida announces that: "Summer rains having begun, citrus growers should spray their trees with red whitefly fungus, or red Aschersonia, says E. W. Berger of the state plant board, with headquarters at the University of Florida.

"The board has 2000 pure cultures of the fungus available, enough to supply the growers throughout the state, and can fill orders as fast as they are received. A charge of 50 cents a culture is made to cover the production cost, the buyer paying transportation charges. One culture packed for shipment weighs about a pound, and is sufficient to spray an acre of grove."

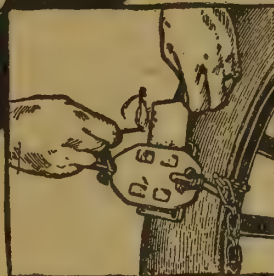
#### ALFALFA GROWERS' ASSOCIATION

The Alfalfa Growers' Association of Southern California is now selling No. 1 alfalfa hay at \$21.50 f.o.b. cars, Los Angeles. No. 2 alfalfa is selling around one dollar lower. There are 125 members of the association and the number is increasing. It is thought the association will soon represent about 8000 cars of alfalfa. The activities of the association cover San Jacinto, Perris, Arlington, Corona, Chino, Ontario, Wineville and Riverside.

There has been published a most useful and handy little volume of 48 pages, Booklet 272, "Roster of the 65th congress of the United States," published by the American Protective Tariff League, New York. It contains a full list of the senators and representatives of the 65th congress, and the congressional tariff committees.

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## Lye Peeling

By Claudia Murphy



**P**ARING peaches, pears and plums with a knife cuts off and wastes a considerable amount of fruit even with the most careful and skilled paring, and careful paring takes a lot of time. Experts say the fruit next

and plums by dipping in hot lye solution is approved by the United States government board of food and drug inspection which reports that lye peeling has no bad effect on the quality or flavor of the fruit and is not contrary to the requirements of the



Lye Peeling

Dipping fruit into the lye mixture is the easiest, most wholesome and economical method of peeling peaches, pears or plums—Note the method, please, and save your hands, fruit and labor.

to the skin has the finest flavor, and this part is cut off and thrown away with the skin when a paring knife, however sharp, is used. The use of the paring knife adds unnecessary labor and is far less cleanly than when lye is used. So peel these fruits with lye.

The process of peeling peaches, pears

and plums by dipping in hot lye solution is approved by the United States government board of food and drug inspection which reports that lye peeling has no bad effect on the quality or flavor of the fruit and is not contrary to the requirements of the

food and drugs act known as the pure food law. Lye peeling saves time, fruit and trouble, is wholesome, rapid, cleanly and economical.

All you need is a good iron kettle big enough to hold plenty of water, a wire basket with side handle preferably, to hold the fruit.

To nine gallons of cold water add

half a can of lye and a half ounce of alum. Bring to a boil. Have kettle large enough so that it is not over two-thirds filled with the water—this for safety to prevent splashing of the hot solution when the fruit is plunged into the kettle.

When the mixture is boiling, lower the fruit into the boiling solution in a wire basket container or in a thin but firm cloth such as a cheese cloth. For smaller quantities of fruit, use four tablespoons lye to one gallon of water with a pinch of alum added.

Let the fruit remain two minutes in the hot lye solution, then put it through two cold water baths to thoroughly remove the lye, and in the second bath of cold water rub off with the hands the small pieces of fruit skins that sometimes persist in clinging to the fruit.

### NURSERYMEN'S CHARGES FOR BOXING



**A**T the recent meeting of the Pacific Coast Association of Nurserymen held at Tacoma the matter of grading charges for boxing, baling and credit called forth a resolution:

That apple, pear, cherry, peach, apricot and almond trees be graded in grades No. 1, 4—6 ft. Calip., 1/2-in. No. 2, 3—4 ft. calip., 3/8-in. Plums and prunes: grade No. 1, 6—8 ft. Calip., 9-16-in. No. 2, 4—6 ft. Calip., 1/2-in; No. 3, 3—4 ft. Calip., 3/8-in.

That all 6—8 and 4—6 ft. 1 and 2 year stock be tied 10 in a bundle and all smaller grades in numbers of 25. Smalls, including strawberries, in bundles of 50 each, except in case of extra large stock which may be tied 25 in a bundle. Two year and 6-8-ft. stock should be tied with three strings. Other grades of trees with two strings. Each bundle should be plainly labelled with number, variety and grade.

Unless otherwise ordered, all boxes should be paper lined and charges made for same as per following schedule, with a discount of 10 per cent if unlined: 12-in by 12-in. by 8-ft. \$1.50, additional lengths 15 cents per foot. Larger sizes proportionately higher.

Terms of payment and credit are: 60 days net. Discount of three per cent for cash received with order and discount of two per cent for cash within 30 days. All bills become due and must be paid by June 1 or interest accrue from then or any prior date of maturity.

### WHERE FRUIT TREES ARE PROPAGATED

Continued from Page 147

Florida or along the bayous of the Gulf of Mexico. These are called the sour stock, or bitter orange. Time was when this seed was extracted by rotting down whole fruit. When the tissues were entirely softened under the process of decay it was mashed and thrown on a screen, when with strong pressure from the nozzle water was used to drive the pulp through the screen, leaving the seeds washed clean. Today the usual method is to run the fruit through a crushing machine, the pulp and seeds being all thrown on mesh or screen and the seed washed free of the pulp the same as with the other method. If for immediate planting drying is not necessary, but ordinarily they are partially dried, though some keep in water which is freshened daily. The seeds are very tender and must not be bruised or injured.

Formerly the seed were planted in lath houses, but now Mr. Teague's nurseries plant entirely in the open field. The trees are hardy and take

on more satisfactory growth after being transplanted to nursery. Planted in March or May they given plenty of water for one year and husky young plants result. They are taken the next year, put in a nursery row, one year's growth is given then they are budded and another year's growth makes them ready for the market. It requires one or two years longer to produce a citrus tree than it does a deciduous tree.

Calling for the most careful work is the last year of growth. After budding the two year old seedling the dormant bud is watched to see as to whether it has "stuck," and of course the waxed cloth or twine is moved before growth begins, or jury results. As soon as the dormant bud shows signs of starting some nurserymen cut the seedling top entirely off; some will break over or red the top growth so as not to shock the young tree.

As soon as the growth of the young bud starts a lath or stake is driven close, and almost inch by inch as the young bud grows, it is tied to the stake, for "As the twig is bent, the tree's inclined," and the careful orange grower who may be asked to pay 75 cents or a dollar or two dollars for a single tree wishes a perfect tree. We have walked along rows of Mr. Teague's nurseries where literally hundreds of thousands of trees were ready for market and perfect uniformity obtained as to size and form.

Just over the Los Angeles County line in San Bernardino County are the Armstrong Nurseries. The office and sales yard are almost in the center of Ontario on the world famous Euclid Avenue, 200 feet wide, 15 miles long from Chino hills to San Antonio canyon, with four rows of shade trees, roses and other shrubs making every mile of it a delight. Mr. Armstrong has chosen a beautiful setting for the headquarters of his nurseries which require some 300 acres farther out. The Armstrong Nurseries grow citrus trees, more of roses, ornamental and other trees. The economic importance of avocados is appreciated and many varieties are budded. The growing of olives is a specialty. The conditions of climate and soil existing are favorable to the growing of a good nursery tree, the loamy soil is ideal for producing a good root system. The advance of digging and shipping of trees are usually pruned back two or three feet which, with proper planning and immediate irrigation means "100 per cent stand."

At one time Mr. Armstrong made a large business of mailing roses—has 250 varieties—to Eastern purchasers. The mail order business is now secondary to the larger order which come from wholesale and local business.

All in all the nursery business in California is large and means much to the orchard and commercial interest. The men who have given freely their time, energy and capital, even their lives, are worthy of credit for adding to our prosperity.

### PLAN TO FUMIGATE

Fumigation has begun in many citrus orchards. "The heat has killed the scale" is realized to be only partially true. Investigation shows a limited hatch now coming off so the perpetuation of the species is assured. But sure it is the earlier hatched but got theirs and that creates a situation which makes possible a clean up, at least practically a clean up.

Cyanide is high; labor is high; and will fruit be high—that is high quality fruit will be. Every possible advantage must be taken to put orchards and fruit, the little we have, in best condition.

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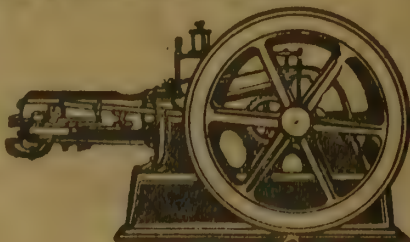


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# Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper, sign full name and address. Unreplied communications receive no attention.

## Evil in Beans

Can you give me any information regarding a pest called the bean evil? It is said to attack the blossoms of the growing plant, nipping the young bean off at its base, thus ruining the crop. I would like to know if there is such a pest and what the surest way to destroy it.—Subscriber, San Bernardino.

There is no treatment within economic bounds for the pest while the beans or peas are growing in the field, as soon as the crop is harvested should be placed in gas tight bags, bins or rooms and carbon bisulphide at the rate of a pint to every 100 cubic feet of space in the container should be placed on top of the beans in saucers or other vessels. The

large spiny fruits are often seen in rubbish heaps. At the first successful settlement in America—Jamestown, Virginia, 1607—it is said that the men ate these thorn-apples with curious results. Capt. John Smith's account of their mad antics is very entertaining. It has been conjectured that this same plant was used by the priests at Delphi to produce oracular ravings. The seeds of *D. sanguinea* are said to have been used by Peruvian priests that were believed to have prophetic power."

## Apricots Rotting

In regard to apricots rotting on the trees would say that I think people are cultivating around their trees too much instead of allowing humus to accumulate in nature's way. Other fruits and crops are also suffering from this clean cultivation.—Robert Stone, Santa Paula.

We may add that experts do not

secured of any lime company; often it may be secured from farmers who have located rock crushers for making available their lime rock. Lime-rock or air slacked lime may be applied before plowing. If turned under more immediate results are secured. The action of the limerock is slower than that of the air slacked, but is less liable to injure and is sure in time.

## FAIR DATES

After part of the pages for this issue were printed we have word from Cultivator Field Man Briggs: "Fair dates wrong, Kings County at Hanford should be September 17-22. Fresno, September 25-29."

## YOUNG PIGS MAKE QUICK GAINS

"By feeding the young porker through the mother and later directly from the trough he can be marketed a month earlier and return a greater profit. To this end the sow should be given all the good milk producing feed she will eat. When the pigs are a month old or younger they should be fed skim milk in a shallow pan.

Then a slop made of milk, shorts, bran and a little tankage should be given. The little pigs should be fed in a creep which shuts out the sows or other pigs. Corn can be added to the ration later. There will be no trouble from thumbs if the pigs are given plenty of exercise.

The use of a self feeder will help in the labor problem, but a self feeder needs replenishing just the same as the feed bin.

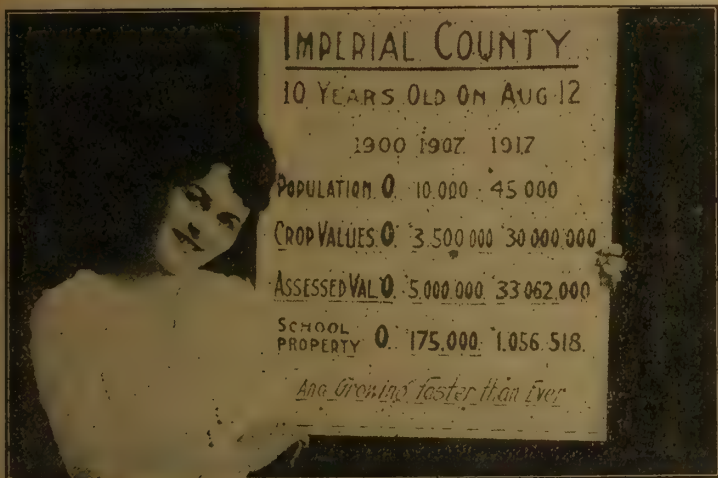
With the pigs on some legume pasture, little tankage or middlings is necessary.

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Imperial County's 10th Birthday

Note what the young lady says as to population in 1900, again in 1907, and again on the county's 10th birthday which was last Sunday.

being much heavier than air, as vaporizes, forces itself down through the beans, and if the treatment is thorough, the gas being condensed 24 hours or longer, every one of the weevil will be killed. Then of course beans should be stored in tight rooms or boxes so as to prevent reinfestation.

## Immune to Oak Root Fungus

I have recently lost a fine pepper from oak root fungus. Peppers are very susceptible to this disease. Are there any quick growing ornamental shade trees which are immune to it?—Subscriber, Vacaville.

This question was submitted to Theodore Payne and others and all have said it was probable the eucalyptus is immune to this pest. What other trees are immune we are not informed.

## Jimson Weed

Would like to ask regarding jimson weed. There is a weed which grows here, rather a bushy plant with large leaves and large white flowers, which I think must be it. When matured it has a pod full of seed. Think it could be easily grown if there were market for it.—Subscriber, Vallejo.

Your description is a very good one for jimson weed. Regarding this weed, the datura stramonium, Bailey's new Standard Cyclopaedia of Horticulture says: "D. stramonium is the thorn-apple or Jamestown weed, the latter name being corrupted into jimson weed. Its foul, rank herbage and

agree as to the cause of this splitting and rotting of apricots. It is generally thought, however, that the rotting is an incident to the splitting, exposing the tissue of the fruit to the attacks of fungus.

## Mallow

I send portion of a weed and would like to learn its name.—Subscriber, Selma.

This was submitted to a botanist who named it *Malvastrum Fendleri*, one of the common mallows of Arizona and probably an introduced plant in Fresno.

## Supplying Lime

Will you please let me know when would be the best time to put lime on the soil. I intend to have it plowed before the rains set in. My soil is gravelly 'dobe'. Would it be best to have lime put on before or after it's plowed?—Subscriber, Morgan Hill.

Air slacked lime may be had of large lime concerns at a nominal price, but care should be taken in applying to be sure it is air slacked; if there is much of the caustic stone lime, the burning out of the humus lessens the real value of the soil. A question like this calls for examination of the soil to be sure to make the proper recommendation. It is possible that gypsum might prove better than lime or limerock, but if this "gravelly 'dobe" contains no alkali we believe the best general recommendation that can be made is to apply lime-stone ground very fine. This may be

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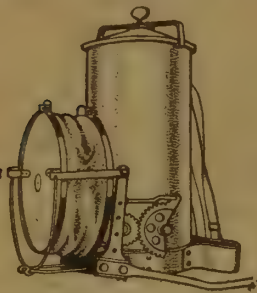
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## Potato Storage



THE primary purposes of storage are to protect the tubers from extremes of heat and cold and from light. Account also must be taken of conditions of humidity and ventilation and of the size of the storage pile.

The temperature should be the highest at which potatoes can be maintained firm and ungerminated, and which will at the same time hold fungous diseases in check. Experiments of the United States Department of Agriculture with artificially refrigerated storage indicate that 36 degrees Fahrenheit is sufficiently low for all practical purposes and that in the earlier portion of the storage season a temperature of 40 degrees Fahrenheit is just as satisfactory as a lower one except where powdery dry rot infection occurs.

All natural light should be excluded from potato storage houses, because when the tubers are exposed to even modified light they are soon injured for food purposes. A practical rule in regard to humidity is to maintain sufficient moisture in the air to prevent the wilting of the tubers and at the same time to keep the humidity content low enough to prevent the deposit of moisture on the surface of the tubers.

If potatoes are piled in too large piles they may become overheated and deteriorate. Six feet is a good maximum depth to which to pile tubers in bins, and the area covered by each pile also should be limited. A good plan is to insert ventilated division walls at intervals through the pile or bin. These may be made by nailing relatively narrow boards on both sides of 2 by 4 uprights, 1-inch spaces being left between the boards. General ventilation for the whole storage

house usually is accomplished through ventilating shafts in the roof.

### Methods of Storage

The possible ways to store potatoes are pits, or earth-covered piles, dug-out pits or potato storage cellars, insulated wooden structures, substantial masonry or concrete houses, and artificially refrigerated storage houses. The latter two methods are the most expensive. Pitting is the most primitive method of storage, but if properly done on well-drained locations is satisfactory in so far as the preservation of the potatoes is concerned.

### Storage Cellars

The dugout pit or potato storage cellar is probably more widely used than any other type of storage space. Fitted with water-tight roof it is especially popular in the central portions of the United States. In the arid and semiarid sections a type with sod or dirt roof is in most general use. As a rule, the excavation for the cheaper structures of the dugout pit or cellar type when erected on level or nearly level land does not exceed three feet. The soil removed from such an excavation, particularly if the dugout is of any considerable size, is ample for banking the side and end walls and also for the roof. The cost of construction may be greatly modified, according to the character of the location.

In the cheaper dugouts, where the soil is of such a nature as to remain intact it is allowed to form the side and end walls, the roof being supported on plates resting on the soil and held together by boards or joists. This form of construction involves a deeper excavation and a constant element of risk from a cave-in. In the more expensive and substantial structures the side and end walls are built of concrete.—Bulletin 847, U. S. D. A.

## Root-Knot

Nearly all Florida truck crops are susceptible to root-knot, known also under the names of root gall, big root, etc., this disease does immense damage every year. The presence of it is not always readily apparent. Badly infested plants are dwarfed, wilt readily in hot, dry weather, and are usually a paler green than healthy ones. With less severe attacks, these symptoms are not always noticeable and the reduced yield may be thought by the trucker to be the normal yield for the season.

When there is any reason to suspect the existence of root-knot, the roots of the plants should be examined. Irregular swellings of the roots will indicate the presence of the disease.

"These swellings are caused by minute worms which belong to the group commonly known as eel-worms or round worms, and technically called nematodes," says J. R. Watson of the University of Florida experiment station, in his bulletin 136 on the control of root-knot, recently published. These nematodes can be killed by the proper application of calcium cyanamide or "cyanamid" to the soil, at a moderate cost. The bulletin gives the results of several years of experiments conducted by Mr. Watson, and includes recommendations covering the treatment under varied conditions.

A good time to apply the remedy is just before the rainy season, and truckers who find it impossible to grow crops profitably on their soils

infested with the nematodes may find this treatment both profitable and practicable.

The swellings on the plant roots seriously interfere with the passage of water from the roots to the stem and leaves, which results in the stunted and inferior growth made by the plant. Also, the entrance of harmful fungi or bacteria into the plant is made easier. In the case of cotton, for example, the root-knot parasite may be present in such small numbers as not to cause much harm itself, but may prepare the way for wilt or black root, a fungus disease.

The bulletin is free and may be had by addressing the Experiment Station, Gainesville, Florida.

The above is the announcement of the Florida station and the last paragraph applies to citizens of Florida, but no doubt if California growers enclose postage with request the bulletin will be mailed here.

### MAKE GARDEN PRODUCE

To make a small area produce a large amount of food, not only every foot of available space must be utilized, but late crops must be planted as soon as the earlier plants have been removed. To carry on gardening in this intensive way requires careful planning in advance, and it is recommended that a detailed diagram of the garden be drawn up and the various uses that it is planned to put

each portion to, throughout the growing season, be clearly indicated. This plan the success or failure of various enterprises should be noted and the plan itself kept as a guide for the following year.

## Legal Queries

Louis B. Stanton, attorney, 243 Will Building, Los Angeles, will answer legal queries in this department.

Immediate mail replies cannot be given except where fee to Mr. Stanton is paid. When replies are wished in Cultivator address query to 115 1/2 N. Broadway, Angeles.

### Deer Destroying Crops

I have been troubled for seven years by deer destroying my crop. They are mostly does and fawns. They destroy the young trees, and it is impossible for me to raise melons, pumpkins, or sweet potatoes. I have chased them with dogs and shot scared them and written to the local game warden, all with no effect. They are becoming worse every year. What is my best means of procedure? Subscriber.

The deer laws are very strict and there is no exception which can be found applicable to your case. A fence laws would give you no protection even against trespassing cattle unless your fields were securely fenced, in which case you doubtless would have no trouble from deer. You might take the matter up with the state fish and game commission, Sacramento. Your best method would be to securely fence your property.

### Fixtures

In selling ranch where no personal property was included in sale does any of the following pass to the purchaser: Hay carrier, cable ropes, watering trough in corral not attached, globes on chandeliers in house, linoleum on kitchen floor?—Subscriber.

The rule with respect to what are and what are not fixtures differs in many respects with the relations between the parties who raise the question. Between vendor and vendee, the rule is construed strongly against the vendor, and whatever is essential for the purposes for which the building is used will be considered as a fixture, although the connection may be such that it may be severed without physical injury to either. Whatever the vendor has annexed to the property for its convenient use and improvement passes by his deed. The above rule applied to the case in question would include the hay carrier with appliances to enable it to be used; also would probably include the watering trough. It has been held that chandeliers themselves were fixtures. It has also been held that they were not. It is possible that the globes would not be fixtures unless attached by nails, bolts, or screws. The linoleum would be considered a fixture under no circumstances.

### Fixtures Again

Can improvements, such as barbed fences and pumping plants, placed on the property after the mortgage is made, be removed if the mortgage forecloses?—Subscriber.

Generally speaking, annexations to the realty become subject to the lien of the mortgage whether affixed before or after the execution of the mortgage. If the above mentioned improvements come under the definition of fixtures they are undoubtedly subject to the lien of the mortgage; they are fixtures if they are embedded in the land, as in case of walls or permanently resting upon it, as in case of buildings, or permanently attached to what is thus permanent, by means of cement, plaster, nails, bolts, or screws.



# Ornamental Garden Notes

Written for California Cultivator By E. Braunton

## Worms in Lawns

Many complaints have come to me respecting round spots in lawns where grass has died and no cause could be determined. These spots are sometimes caused by canine urine but are known where no such cause is possible. It is believed the trouble came from worms, possibly the grubs of the May beetle common in the East but much less so in California. It is believed that a half ounce of corrosive sublimate dissolved in 15 gallons of water and sprayed on the lawn will at once remove the cause of the trouble. It may also be done by a spray of lime water, ten pounds of fresh lime to 25 gallons of water. This may, or may not, be allowed to settle before application. In either case the worms will come to the surface. The lime water has good use for lawn or garden.

## Eucalypti in Scotland

We have it from a reliable English garden magazine that on the Scotch estate of Secretary Balfour there is a large eucalypt which when small was brought from Ballarat, South Aus-

tralia by the late Lord Salisbury. It was given the specific name of Whittinghami, after the estate, but of course this counts for nothing, and we do not know what eucalypt it is. But the fact that a large-growing species is hardy in East Lothian is worthy of record. These facts, of trees hardy in various parts of Europe, attaining considerable size, lead us to believe that we have not sufficiently determined the hardiness of all species for intelligent use in California.

## Timely Garden Work

Sow seeds of perennials now, such as columbines, larkspurs, and snapdragons and about September 1 put in the first crop of sweet peas or sow the latter any time in September or October. The results are always good as sweet peas thrive best when the soil is cool. If cool weather prevails or if near the coast the first planting of Dutch bulbs may be done, but if any doubt exists leave them for another month. Freesia and Calla bulbs should both be dry and out of the soil now. In another month they may be replanted.

# Sending Flowers by Mail

The following suggestions for preparing flowers to send through the mails are given by L. H. Cobb in the New Yorker:

Flowers should be cut in the morning before the sun has had a chance to disperse the dew. Place in a box of water in a cool place for at least 12 hours to soak up as much water as they will. Almost any kind of box that is large enough so the flowers will not be crowded will answer, but we need a supply of waxed paper. Line the box first with ordinary paper, then with the wax paper. If you want to finish it off nicely you will use a sheet or two of white waxed paper.

If the flowers are only to be on the way a day or two it is seldom necessary to wrap the stems in any damp substance. I usually place them carefully so the heads of the second row just under the first row, and the third row just below that, using the stemmed flowers first. If it is thought best to have some moisture in the box more than the stems carry, use a white cloth and saturate it in water, wringing out until it is dripping in the least, and raise the stems enough to slip it under them. Cover them loosely, and if the flowers and their stems are delicate it is best to sew a cord down through the bottom of the box to prevent the flowers from forcing the heads of the flowers against the end of the box should it be thrown so it struck on the end of the box with the flowers down and the stems up. Fold the coverings in neat order, first the tissue, then the wax and finally the heavier lining.

The only trouble is in getting a box that will not be crushed. Corrugated boxes are safest. Wrap the box in paper. Have the words "Fresh Flowers" very plainly marked so they can be seen.

In selecting the flowers that will keep shipping choose such as have substance. Carnations or any of the pink family ship well. Roses are hard to keep fresh for a long time, but if they were cut when but partially blown and have been placed

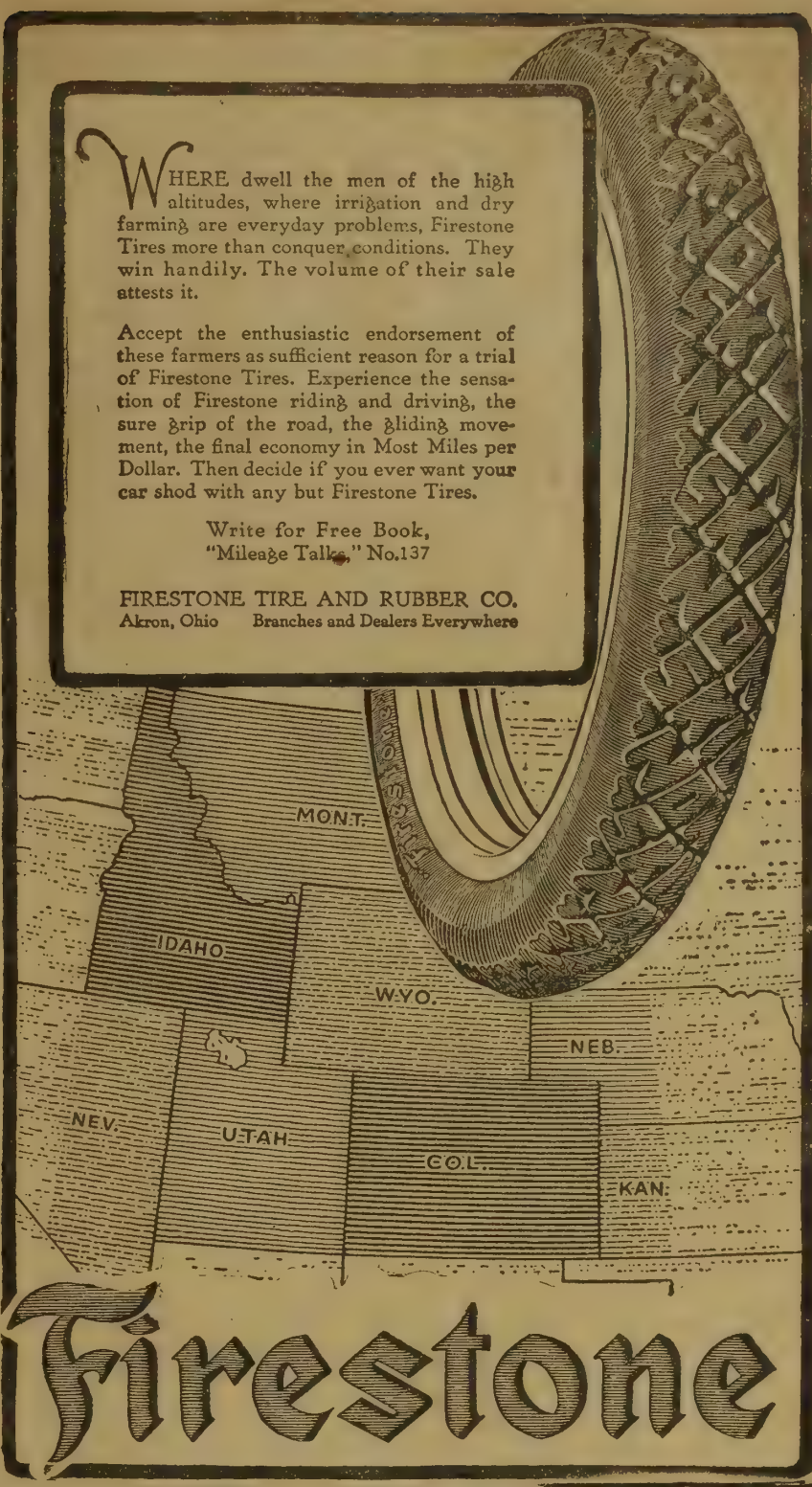
in water until the petals and stems are full they will not be so badly wilted but they will revive even when shipped considerable distance. Shasta daisies, pansies, sweet peas, violets, Gladioli, tuberoses, chrysanthemums can all be shipped reasonable distances. Flowers with silky texture that wilt easily at any time will not carry. There is little use in sending poppies, cannas, moon-flowers, or other flowers of like substance."

How to clean a car and keep it looking bright and cheerful is a problem that confronts every owner who prides himself on the looks of his machine. Cars will get dirty, gummy and scratched. The dirt and gum may readily be removed with turpentine, wood alcohol, soap and water and the like, and an application of wax polish will do much to give the newly cleaned car a new appearance. The owner must always be careful in polishing a car, however, to avoid anything that will tend to gum the surface.

A cooperative association must be democratic. Otherwise it will not continue to live. Many cooperative associations in the past have failed to recognize this. They have been so organized that one man or a small group has dominated their policies, controlled their business and even used the association for personal ends. They have been corporations and not true cooperative societies.

The early American colonies made several attempts to grow alfalfa, but without great success. George Washington grew trial plots of alfalfa on his Virginia farm, and Thomas Jefferson gave considerable attention and care to its cultivation. Their efforts, however, proved unsatisfactory, since they did not understand all of the requirements for the successful growth of the plant.

Community spirit is the nation's best asset when applied in the practical way, and like religion, it becomes better the more one works at it.



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#### OUR ADVERTISERS RELIABLE

We guarantee our subscribers against  
 loss through dishonesty of any adver-  
 tiser in the Cultivator. We do not at-  
 tempt, however, to adjust trifling differ-  
 ences between subscribers and honest,  
 responsible advertisers, nor will we pay  
 the debts of honest bankrupts. Notice  
 of complaint must be sent us within 30  
 days from date of the transaction, and  
 the subscriber must have mentioned the  
 Cultivator when writing the advertiser.

#### THIS WEEK'S COVER

Because of the need of the  
 farmer to move his crops with least  
 injury and greatest economy and be-  
 cause of the need of the tourist who is  
 no small factor in California's pros-  
 perity, there has been persistent ap-  
 peal for more and better roads in Cal-  
 ifornia. It is possible that the tour-  
 ists may not be so plentiful during  
 war times and that war may demand  
 conservation of gasoline, but there  
 are greater crops than ever to be  
 moved, and it has already been shown  
 that these good roads are a big factor  
 in military efficiency.

In any case California has worked  
 for and secured good roads and is  
 now enjoying them. May their length  
 increase.

#### MORE TRACTORS

In conversation with a breeder  
 of draft horses we were surprised to  
 learn that he contemplated retiring  
 from horse breeding. "Why?"  
 brought out the fact that present  
 prices of feed made present prices of  
 horses impossible. He believed that  
 the time would come when more  
 farmers would be exclusively tractor  
 farmers.

#### THE LABOR QUESTION

The Imperial Valley is taking  
 a sensible step in its effort to secure  
 some competent labor. A committee  
 has been appointed and has canvased  
 the valley to learn as to the needs  
 of farmers. It is proposed to raise  
 a fund through cotton gins and hay  
 balers which will collect 35 cents per  
 bale on cotton and ten cents a ton on  
 baled hay which will be used to bring  
 laborers into the valley.

The selective draft is taking some  
 of the most efficient workers from the

valley, which, in addition to the gen-  
 eral labor shortage, is making a most  
 serious situation.

#### HOT WEATHER

Some farmers have complained  
 because of the excessively hot weath-  
 er which has been given to us this  
 season, but as we have seen it ex-  
 pressed; "American farmers working  
 under American conditions should  
 think of the farmers of eastern  
 France who are cultivating their  
 lands under shell fire." American con-  
 ditions are not as bad as they will be  
 if we do not win this war and that  
 pronto.

#### JOSEPH SEXTON

One of California's best known  
 plant propagators and growers died at  
 his home in Santa Barbara County  
 last week. Joseph Sexton was one of  
 California's pioneers. He has grown  
 flowers and rare fruits in an experi-  
 mental way for many years. He was  
 greatly interested in avocado culture  
 and had an orchard with possibly the  
 greatest number of varieties of any  
 grower in California. He travelled in  
 other lands to learn of rare fruits  
 that might be introduced to Califor-  
 nia and has brought to this country  
 many of our best. He propagated and  
 introduced the soft shell walnut  
 which for many years was one of our  
 finest nuts.

Mr. Sexton's work is well known to  
 Cultivator readers through the arti-  
 cles which he has written for its  
 columns.

#### Nobody Home

Our state council of defense  
 has done some remarkably fine work  
 in urging greater production and  
 greater conservation, but apparently  
 the censor was off duty last week  
 when the council sent out the "copy"  
 in which it was recommended that we  
 should all keep a war goat which  
 would save on butter fat, etc. As to  
 cost of keeping:

"A goat will thrive and grow fat  
 and will produce from one to six  
 quarts of rich milk a day on a diet of  
 weeds, table scraps and such forage  
 as it can glean from being staked out  
 on a vacant lot; grain feed for goats  
 is unnecessary."

Six quarts a day is going some, but  
 when it's done on weeds, garbage and  
 vacant lots, even with baling wire and  
 can labels thrown in, we feel that  
 Mrs. Goat would get thin. It takes  
 feed to produce food.

Keep a war goat but bear in mind  
 nature abhors a vacuum.

#### HOGS HIGH

California swine breeders have  
 little interest in telegrams announcing  
 spectacular prices in Eastern mar-  
 kets. In the Imperial Valley the hog  
 raiser shrugs his shoulders and with  
 palms up simply remarks; "It means  
 nothing to me. Eastern prices affect  
 coast prices but little, and in any case  
 with feeders and feed at the present  
 prices what's the use?"

Here are a couple of clippings from  
 a recent paper:

CLEVELAND, Ohio, Aug. 10. — Hog  
 prices quoted at the Cleveland stock  
 yards today broke all records. They are  
 higher even than during the Civil war.  
 Hog prices throughout the list were \$7.50  
 higher than a year ago. Heavies and  
 mediums were quoted at \$17.50 today.

CHICAGO, Aug. 10.—Hogs brought a  
 new record price of \$17.00 today on the  
 Chicago market. Miller and Hart bought  
 some 220-pound specimens at that figure,  
 with the market price from \$16.00 to  
 \$16.75 per 100 pounds. There were 20,000  
 less hogs in the western market today  
 than there were a year ago.

In Portland where there are stock-  
 yards prices are only slightly under  
 Eastern quotations.

#### EXEMPTION

The daily press is openly charg-  
 ing favoritism on the part of the ex-  
 emption boards. In some cases, as  
 noted in Los Angeles, there are sec-  
 tions where homes of wealthy people  
 show far greater proportion of exemp-  
 tions because of dependents than oth-  
 er sections where there is less  
 wealth. In any case there seems to  
 be lack of uniformity in granting ex-  
 emptions. It was understood when  
 the law was passed that the selective  
 draft would exempt those who had de-  
 pendents and probably all agricultural  
 workers. Of course the prime object  
 of the selective draft is to secure an  
 army and permit proper support of  
 the army by the men behind, but  
 there certainly should be no oppor-  
 tunity for even the shadow of a politi-  
 cal pull or influence aiding in secur-  
 ing exemption.

As to agricultural exemption of-  
 ficials of eight national agricultural  
 organizations unite in the following  
 resolution addressed to exemption  
 boards: "Under the law, you are  
 given authority to exempt certain  
 classes of men who may be engaged  
 in labor which is just as important as  
 service in the army. We trust, there-  
 fore, and respectfully ask, as repre-  
 sentatives of the great agricultural  
 industries of the United States, that  
 experienced men, engaged in farm  
 work shall be the first to be set aside.  
 If the war should last several years it  
 may be necessary to organize farm  
 work to release many of our farmer  
 boys for army service, but in the first  
 call for one million men, practical  
 men engaged in agriculture should be  
 exempted."

#### TRESPASSERS

A Los Angeles County man, ex-  
 asperated by seeing his crops de-  
 stroyed by deer, proceeded to protect  
 his property by shooting the tres-  
 passers. He was arrested and, being  
 somewhat of a fighter, proposes to  
 test the case in the courts. Presum-  
 ably he will be fined and at least rep-  
 rimanded.

On page 152 of this issue note that  
 subscriber is asking what may be  
 done to protect young trees, beans,  
 melons, pumpkins and sweet pota-  
 toes from deer. Shooting with blank  
 cartridges, chasing with dogs and oth-  
 er means have been tried, but with-  
 out permanent protection. Attorney  
 Stanton answers that the deer laws  
 are very strict and that as they now  
 stand the only protection is a fence  
 sufficiently high to keep the deer out.  
 This means that the lands in question  
 must be devoted to the pasture of  
 wild game, for plainly a fence that  
 will keep out deer is beyond the  
 means of most farmers.

Mr. Stanton suggests that the mat-  
 ter might be taken up with the state  
 fish and game commission, but the  
 Los Angeles case indicates there  
 would be no protection afforded the  
 farmers.

A charge that our legislators and  
 fish and game commission in enacting  
 and rigidly enforcing such a law are  
 engaged in unpatriotic service may  
 not be strictly just, but when the  
 world is appealing for food and bean  
 fields are laid waste by game pro-  
 tected largely in the interests of  
 sporting people it is time for the  
 farmers to ask pointedly and serious-  
 ly who is responsible for these game  
 laws.

We believe that some of our game  
 birds when they are trespassing may  
 be shot by the farmer, but he must  
 neither market them nor eat them  
 from his own table. With deer it  
 seems the case is different, and no  
 matter how serious the loss they  
 cause to farmers they are compelled  
 to let the trespassers go uninjured or  
 suffer arrest.

#### Agricultural News Notes

The federal trade commission  
 begun its investigation of flour mak-  
 ing costs.

Naval training stations in Cali-  
 fornia are located at San Francisco  
 and San Diego.

All flour and grist mills in Great  
 Britain have been taken over by  
 government.

Western New York will ship 6  
 cars of peaches. The main crop  
 not be ready to move till September.

Iowa expects to produce near-  
 ly \$700,000,000 worth of crops this year.  
 Its largest increase is in corn, and  
 potatoes and garden stuff.

On the proposal of the food admin-  
 istration bureau the federal reserve  
 board has agreed to classify potato  
 among the non-perishable staples  
 that the reserve banks may loan  
 money to growers on warehouse  
 receipts.

The New York state legislature  
 struggling with food control bills. One  
 sponsored by Governor Whitman  
 provides for fixing minimum prices  
 for farmers, seizure of goods in ware-  
 houses where necessary, and other  
 radical measures.

Field tests in Missouri and Kansas  
 covering several years, show that  
 early plowing of wheat land produces  
 from four and a half to 13 bushels  
 more wheat than September plowing.  
 At present high prices of wheat this  
 would mean much money.

Alaska's trade with the United  
 States in the fiscal year just closed  
 set a new record, with a total of \$1,  
 000,000. Shipments from Alaska to  
 the United States were valued at \$  
 1,000,000, including \$15,500,000 in goods  
 and those from the states to Alaska  
 \$39,000,000.

In the big farm power demon-  
 stration held at Fremont, Nebraska, Au-  
 gust 6-19, it is stated that over \$1,000,  
 000 worth of tractors and other re-  
 lated appliances was exhibited. The  
 demonstration was held under the  
 auspices of the National Tractor  
 and Thresher's Association.

The high prices of foodstuffs have  
 tempted thieves to come into the  
 country with wagons and load up with  
 and other valuable produce to such an  
 extent that communities in many  
 parts of the country have organized  
 Farmers' Protective Associations to  
 deal with the law breakers.

A serious pest of the chrysanthemum,  
 the chrysanthemum midge, has been  
 spreading rapidly throughout the  
 United States the last two or three  
 years. Many florists report loss of  
 their entire chrysanthemum crop  
 from this cause. No satisfactory  
 method of control has yet been found.

A mass meeting of the dairy indus-  
 try has been called for Monday, Oc-  
 tober 22, at Columbus, Ohio, during the  
 National Dairy Show. The problems  
 and opportunities of the industry  
 arising from the peculiar world con-  
 ditions, will be discussed. The  
 national dairy cattle clubs and national  
 state dairy organizations join the  
 National Dairy Council in making the  
 call.

The use of railroad cars for pack-  
 ing fruit and other commodities  
 during the free unloading period  
 held by the interstate commerce  
 commission not a right of the shipper  
 but only a toleration by the railroad.  
 A test case was filed by the Nebraska  
 state grange and other growers' or-  
 ganizations to force the railroads to  
 allow use of their cars for this pur-  
 pose.



# Agricultural News Notes of the Pacific Coast

## Northern California

Hop picking began at Wheatland August 15.

Mendocino County reports some sales of hops at 17½ cents.

Fairoaks, Sacramento County, reports heavy planting of the fall crop potatoes.

Officers were elected at the last meeting of the Mt. George farm center, Napa County.

Hop growers are standing pat and most of them refusing 12½ cent offer on the 1917 crop.

Farm Adviser Lee of Alameda County is urging more efficient use of tractors available.

Pear blight has been prevalent this season, and the careful grower has done some very heavy pruning.

Anderson Valley, Shasta County, is peeling for 1000 pickers to aid in harvesting her 5000 tons of prunes.

Prof. Essig of the university department of entomology has been doing investigation work in Nevada County.

Serious fires have been burning in Colusa County, 1000 acres of wooded land having been destroyed near Sonoma.

J. P. Dargitz, one of the inspectors of the federal farm loan bank at Berkeley, has made appraisements at Paradise in Butte County.

Experiments being conducted by the Ukiah Irrigation District have demonstrated that excessive irrigation is being given to alfalfa lands.

Placerville Clings began filling the canneries at Gridley to capacity about the 1st of August. The force is now running full handed on peaches.

A public bean cleaner is to be installed at Sacramento. It will have capacity sufficient to handle the beans of the entire Delta district.

Ground has been broken for a new curing plant at Oroville, Butte County. It will be under the auspices of the California Olive Growers, Inc.

Placer County's fair will open on Monday and will be held for four days. Many exhibits are already scheduled. It will be held at Auburn.

The Placer County farm bureau has begun wire purchasing and marketing association which has saved money for its members. J. A. Teagarden is president.

The alfalfa meal mill at Orland, Glenn County, is shipping ground alfalfa to Eastern points. The mill is operating night and day and turning out 70 tons per day.

The state housing commission has made tour of hop picking yards and is insisting on clean, comfortable sleeping quarters, pure drinking water and general sanitary conditions.

The Central California Poultry Processors Inc., an organization which covers practically the northern end of the state, is organizing locals in Alameda and Santa Clara Counties.

Farm Adviser Baade of Napa County, who has also been manager of the county fair, has tendered his resignation in the latter capacity because of pressure of his duties as farm adviser.

Assistant Farm Adviser Martin has been working with Farm Adviser Lee of Alameda County, in establishing high school boys' camps and also in dealing in the labor situation of that county.

## Central California

Barley growers at Merced are selling at \$2.25.

A 400 acre vineyard at Dinuba recently sold for \$123,000.

California will ship in excess of 11,000 cars of grapes this year.

Tulare County paid out over \$4000 in squirrel bounties for June.

The Stanislaus county fair is to be held at Modesto, September 17-22.

The sugar factory at Visalia, Tulare County, has arranged its labor troubles.

Opening school date in Tulare County has been fixed at September 17.

Serious forest fire raged in the big tree forests of eastern Tulare County last week.

Red spider is causing serious damage in some peach orchards of the San Joaquin Valley.

The Lindsay Ripe Olive Company has leased its processing plant for a period of three years.

Poultry Expert Hauser of the university farm at Davis is holding a series of meetings in Stanislaus County.

Fresno gardeners and truck farmers are incensed at petty thievery, and the shotgun policy has been adopted.

Eradication of squirrels and jack-rabbits is being planned for by the horticultural commission of Kings County.

An El Centro creamery has installed a milk sugar plant. The sugar is made from the whey which formerly was dumped.

Farm Adviser Conner of Stanislaus County is urging spraying of almond trees for red spider, especially where beans are interplanted.

One San Benito County cattle raiser recently disposed of his herd of pure bred Shorthorns because "There are too many rustlers at work in that section."

The California Peach Growers are investigating the sulphur question and endeavoring to secure reduction of amount of sulphur used so far as possible.

Dates of coming meetings are; Wood Colony, August 20; Ceres, 21; Claus, 22; Mitchell School House, 23; Patterson, 24; Keyes, 27; Tegner and Mountain View, 28; Jennings, 29.

Awards have been made to contestants of the Selma pig club. Clarence L. Neilson took first prize, Clyde Browning second. The judging was done by C. W. Rubel of the state university.

Cantaloupe cars are iced at Modesto before being sent to Turlock for loading and receive the second icing on their way to market. It is estimated that between 40 and 50 cars will be iced daily.

The contract has been awarded for the new packing house of the Strathmore Fruit Growers' Association, to be built along the Santa Fe railroad. This new association is affiliated with the California Fruit Growers' Exchange. W. S. Shippey is manager.

The Valley Fruit Growers' Association has been organized at Fresno as a non-profit cooperative organization. Members elected directors are: Wylie M. Giffen, S. P. Frisselle, Frank Malcolm, P. H. McGarry, George C. Roeding, W. Flanders Setchel and M. F. Tarpey.

## Southern California

Packing houses are busy with dried apricots.

Brawley reports alfalfa worms doing considerable damage this year.

One hundred fifty acres have been planted to canning tomatoes in Hemet Valley.

Hemet had a thunder shower last week which did some damage to drying fruit.

Sugar beets are reported late in maturing this year and running to small sizes.

Heavy winds did some damage to peach orchards near Banning, Riverside County.

More than 1000 tons of apricots have been handled by the Gregory cannery at Colton.

Hemet, Riverside County, has been compelled to build additional fruit storage for its big crop.

Beekeeping and honey exhibits will be made an especial feature at the Riverside fair, October 9-13.

One packing house at Santa Paula, Ventura County, will pay a \$20,000 labor bill because of packing apricots.

The effort to discontinue the office of tree warden of Riverside County is being met by still stronger effort to continue it.

The county council of defense for Imperial devoted last Tuesday, August 14, to visiting day, calling at many of the farms.

The California Prune and Apricot Growers' Association fixed opening prices for apricots at a 15 cent basis, prunes at six cents.

The heat wave of June cut down the navel crop of the Hemet Valley severely. Valencias, Sweets and Bloods show better condition.

Joseph Sexton, pioneer fruit grower and introducer of new varieties of fruits, died at his home in Santa Barbara County last week.

Twenty-nine dollars and fifty cents per ton has been the contract price received for apricot pits this year, as against \$50 and \$60 in former years.

The Banning cannery closed its apricot run, having handled over 1000 tons. It is now at work on peaches from outside sections, the Banning crop being later than usual.

The olive cannery and oil mill at Lakeland will be moved to Riverside.

A number of negroes were brought into the Huntington Beach fields to replace striking Mexicans. Many of the strikers returned to work.

A recent field survey of beans in Hemet Valley by Deputy Horticultural Commissioner Ellis disclosed the fact that many beans have been planted in orchards where the trees were too large to allow the plants a chance to mature.

It is estimated that the Pomona-Ontario district will be richer by \$600,000 at least because of the apricot harvest. Two canneries at Pomona handled nearly 2000 tons of apricots, while three plants at Ontario handled over 2500 tons.

The Hemet packing house of the Prune & Apricot Growers' Association is ready for business in the packing house of the Orange Growers' Association. It will handle 300 tons of dried apricots, 100 tons being brought in from Elsinore.

## The Coast

Idaho farmers are refusing \$15 per ton for hay.

A grain elevator is being erected at Winona, Washington.

Yakima, Washington, is building a large fruit drying plant.

Pocatello Valley, Idaho, is making a 30-day campaign on hoppers.

The entire Northwest reports keen demand for hogs, especially feeders.

A 75,000 bushel grain elevator is being constructed at Hartline, Washington.

Two hundred fifty Belgian families have been settled on farms in Oregon.

One cannery at Lewiston, Idaho, handled 100 carloads of cherries this season.

Three hundred head of cattle have been poisoned near Klamath Falls, Oregon.

President Carranza of Mexico has appointed C. Dominguez, secretary of agriculture.

Arizona cattlemen and sheepmen report at least a 20 per cent increase over last year's output.

The Oregon state fair offers \$4,000 in premiums at the fair to be held at Salem, September 24-28.

A potato processing plant is being erected at Idaho Falls, Idaho, which will be ready for the fall crop.

Arizona has formed the Loyalty League, the avowed purpose of which is "to exterminate the I. W. W."

Idaho, Washington, Oregon and California have practically doubled their potato output in the last year.

Lewiston, Idaho, reports hottest and driest weather for 17 years, but that most of her bean crop is still growing.

A pool of 17,500 pounds of wool was recently formed near Boise, Idaho, and the wool sold at 63 cents per pound.

The Land Products Show is to be held at Portland this fall, at which \$4500 for premiums in land products are offered.

Farmers of Arizona are securing bean threshers and all labor saving machinery possible to handle an exceptionally large output.

Wenatchee Valley, Washington, is investigating as to apple storage and planning for holding the coming crop until satisfactory prices may be secured.

State Agricultural Commissioner Greenfield of Montana, has stated that it will be necessary to supply money to wheat farmers to buy winter seed because of the failure of this year's crops.

At a recent meeting of the California Cattlemen's Protective Association it was voted to contribute \$2600 to the expenses of the market committee of the American National Livestock Association.

Fires thought to be incendiary have destroyed a flour mill valued at \$150,000 at Klamath Falls, and dairy barns at Klamath Falls worth \$17,000. These have been charged by many to I. W. W. agitators.

The Northwestern branch of the federal farm loan bank at Spokane is rushing the chartering of associations and making of loans. The Northwestern District comprises Washington, Oregon, Idaho and Montana.





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# Bean Growers Organization

Written for California Cultivator

**W**E have referred to the success of the California Lima Bean Growers' Association, composed largely of Ventura and Orange County producers. Growers of all kinds of beans in other sections felt the need this season of getting together to secure fair returns from the market and the matter was taken up by some of these growers of the San Fernando Valley with officers of the Lima Bean Growers' Association, and with Market Director Weinstock. A meeting was called in Los Angeles for last Friday, and a number of bean growers, almost exclusively from San Fernando, met with the market director and Manager Churchill and others of the Lima Bean Growers' Association. Mr. Jerome acted as chairman. Director Weinstock referred to the advisability—the necessity—of producers organizing in order to receive just returns. He stated that he had found the most difficult step in any cooperative movement was that of getting the farmers to sacrifice their own individuality and become members of a strong and powerful organization. He explained: "There is no use of raising stuff if you have no market, and you have no satisfactory market under ordinary conditions unless you are organized so you can seek the right market."

Manager Churchill of the Lima Bean Growers' Association outlined the working plan of his association. It is composed of a central organization which deals with subsidiary organizations. Of these there are eight in Ventura County and two in Orange County. The plan of organization is very similar to that of the walnut growers' association and it is that of a non-capital, non-profit corporation. Every member has equal power with every other in the matter of voting, whether he owns one or 1000 acres of beans.

No plan of advancing cash to members has been perfected by the association, but the plan of organization permits of arrangement with bankers who advance money at six per cent to members who wish advance on stored crops. As a rule warehouse receipts are not given but the grower practically places the institution advancing the money in the same position in the association as that held by the borrowing member. Thus far the association has been exclusively a lima bean association, but members who are growing blackeyes, pinks or small whites wish the association to market for them, and it is probable that the scope of the organization will be enlarged.

Under the present plan of work

each member contracts with his local association to take all of his coming crop. If he does not he agrees to pay a penalty of two cents per pound for every pound sold outside of the association. The local association in turn contracts with the central organization, which disposes of the crop as soon as marketing conditions are right. A general pool is maintained so that if one association is compelled to hold until the end of the season and another has sold early, returns and costs are averaged and the net to each is equalized. The cost of operation, brokerage, office expense, etc., has been reduced to minimum.

Mr. Stowe, also an officer of the Lima Bean Association, joined the manager in assurance to bean growers that the object of the association was to aid in marketing beans and if it was desired he felt sure the lima bean growers would be glad to unite in the marketing of other varieties.

He said the local associations had from five to nine directors, seven being the most common number. He felt that every producer should unite with others in organizing and stabilizing the market for every one of our products, simply as a war measure if not for selfish reasons.

One of the benefits of the association is the saving in the purchase of bags and twine. The association has united in ordering bags which were secured at nine and a half cents, and in buying twine which was purchased for 56 cents per pound. Today nearly everything is practically doubled in price. The saving on these two items alone to the growers has been between \$40,000 and \$50,000.

The association has already made sales of the coming crop at nine cents per pound. The average secured last year was only about five cents, but many obstacles were faced, the most serious one of which was the refusal of some members to abide by their contracts. The contracts have now been proved to hold in the courts and it is presumed the coming year will see the association entirely successful in its plan. It was deemed wise by the growers present that a permanent committee be appointed to organize bean growers in their sections. The committee appointed is made up entirely of San Fernando people.

We doubt not that if growers in other sections wish an organization the lines will be still further extended. The committee members are W. E. Beckstead, R. L. Owen, Wm. Kelly, N. W. Robertson, H. J. Whitley, Art Cravens, Alex Jeffrey, H. Carlson. This committee is to meet in the producing sections and consult with bean growers as to the advisability of completing the organization.

## Home Ground Limestone

**M**ANY farms which need lime are located so far from a commercial supply of ground limestone that the cost, after freight and hauling charges have been paid, is prohibitive. In many communities are found ledges of good limestone which would make excellent material. The small portable grinders now on the market make it possible for the farmers in such communities to grind their own limestone. These can be bought for \$500 to \$1500 and have a capacity of

from one to five tons per hour. A good sized machine for community work is one with a capacity of about two tons per hour, which will cost about \$750. A 16 horse power steam engine, or a 20 horse power gasoline engine will furnish sufficient power to do the grinding.

Quarrying is estimated to cost from 25 to 50 cents per ton, and grinding from 75 cents to \$1.25 per ton, making the final cost \$1.00 to \$1.75 per ton. A fair estimate of the separate items under favorable conditions according

## Fair Dates

Santa Rosa Fair, Santa Rosa, August 20-27.  
 Humboldt County Fair, Ferndale, August 22-25.  
 Yolo County, Woodland, August 29-September 1.  
 Dixon Fair, Dixon, August 27-September 2.  
 Vintage Festival, St. Helena, August 31-September 3.  
 Yuba County, Marysville, September 4-7.  
 State Fair, Sacramento, September 8-15.  
 Almond Festival, Arbuckle, September 13-14.  
 Stanislaus Fair and Livestock Show, Modesto, September 17-22.  
 Pleasanton Fair, Pleasanton, September 17-22.  
 Napa County Fair, September 22-26.  
 Ventura County, Ventura, September 24-29.  
 Modesto Fair, Modesto, September 24-29.  
 Glenn County, Orland, September 26-29.  
 Fresno County, Fresno, Oct. 1-6.  
 Kern County, Bakersfield, October 1-6.  
 Kings County, Hanford, October 8-12.  
 Riverside Fair, Riverside, October 9-13.  
 Hemet-San Jacinto Fair, Hemet, October 16-19.  
 Visalia Fair, Visalia, October 22-27.

### OTHER STATES

Spokane Interstate Fair, Spokane, Washington, September 3-8.  
 Kings County Fair, Renton, Washington, September 14-16.  
 North Yakima Fair, North Yakima, Washington, September 17-22.  
 Pendleton Round-up, Pendleton, Oregon, September 20-22.  
 Idaho State Fair, Boise, Idaho, September 22-29.  
 Oregon State Fair, Salem, Oregon, September 24-29.  
 Montana Fair, Helena, Montana, September 24-29.  
 Arizona State Fair, Phoenix, November 12-17.  
 Pacific National Dairy Show, Portland, Oregon, November 12-17.  
 Pacific International Live Stock, Portland, Oregon, November 19-24.

to R. A. Kinnaird of the University of Missouri college of agriculture would be as follows: Engineer and 18 horse power engine per day, \$7.50; fuel about one ton coal, \$3.00; labor, three men at \$1.75, \$5.25; depreciation and repairs, \$3.00; cost of grinding 25 tons \$18.75; cost of grinding per ton, 75 cents; cost of quarrying, 50 cents; total cost per ton, \$1.25.

Ground limestone, fine enough to be satisfactory to use for sweetening soil, can rarely be delivered in car lot for less than \$1.25 per ton. On the average, therefore, there is not much difference between the cost of grinding at home and shipping it in. Distance from the railroad is probably the most important factor to be considered. If five miles or more from railroad it is probable that a crusher would be a profitable investment. The usefulness of a crusher is not confined to grinding limestone for the soil a most of them are constructed to crush coarse material for making concrete and building roads which they can do at much less cost per ton than grinding limestone fine enough for the soil. A portable crusher can be taken from farm to farm to do crushing of those farms where limestone can be quarried. This makes it possible for a man owning an outfit to do custom work, charging by the ton, which is generally the most satisfactory way for the work to be done.



# How About Your Machine Shed?

Farmers are fast stopping the "holes" in their pocketbooks. They are using modern methods, modern machinery and modern buildings. The home is comfortable and convenient, the barn is warm and large, the silo saves the feed, the granary holds the grain until the market is right, and the garage houses the automobile. Everything seems to be well taken care of. Then where is the "hole in the farmer's pocketbook?"

Farming in America is extensive rather than intensive. Extensive farming requires much farm machinery and the farmers of the United States spend \$200,000,000 for farm implements every year. Much of this vast sum goes to replace worn and discarded implements. In other words, the farmers are losing millions of dollars every year because they do not properly care for their machinery! The lack of a well built implement shed is the "hole in the farmer's pocketbook."

The farmer who leaves his expen-

sive implements under a tree or out in the open is truly "burning the candle at both ends." The importance of properly housing all farm machinery was never more apparent than just at this time. The cost of steel has advanced over 65 per cent during the last five years and consequently the cost of all machinery has risen by leaps and bounds. It is admitted that ordinary farm implements will last about five years if they are cared for, but with proper protection they are good for two or three times that long. The weather takes a terrible toll of waste and the farmer foots the bill. Besides, weather beaten, rust covered machinery is constantly in need of repair and needs much more power to operate it. Your machinery is bound to wear out in time, of course, but why not wear it out in service instead of letting it go to ruin for want of a little care and shelter? Wear cannot be avoided; rust and decay can. It is to the best interest of your pocketbook to build an implement shed.—Better Farming.

## The State Fair

Amongst the attractions at the state fair are:

Complete exhibits of dairy products, showing especially improved methods of handling.

The American Poland-China Record Association and the Standard Poland-China Association announce nominations for the 1917 futurities, totaling 25. Entries closed August 8.

Exhibits from representative schools in every section of the state, with special emphasis placed on food conservation, including home garden-

ing, dairying, cattle, sheep, poultry and swine raising. The prizes range from diplomas and medals to valuable cash and merchandise awards and scholarships at the university farm. Girls will have their share of attention in the food conservation movement through contests in bread-making, canning and other branches of cookery. Special prizes will be awarded to contestants demonstrating new or improved methods of utilizing the cheaper food staples, also prizes for best and most comprehensive menus which can be prepared at trifling cost.

## Farm Notes

Sweet clover is adapted to a wider range of climatic conditions than any of the true clovers, and possibly alfalfa.

Lime is a very important constituent of a productive soil, it acting not only as a plant food but as a soil tonic and corrective agent. It is the only thing that will sweeten a sour soil.

All the farm implements should be well housed and protected from rust. The loss to the farmer through neglecting to care for his machinery is greater than that sustained through wear.

A good many dairy investigators are now coming to the conclusion that more bacteria get into milk from poorly washed and uncared-for utensils than from all other sources put together.

Quite often in a new country it costs so much to improve the land and put it in condition for cultivation that land in a well-developed section is just as cheap, even at a higher purchase price per acre.

In ordinary farm practice, bulls are usually disposed of before their true value can be known. The cooperative bull association makes it possible to obtain several years' service from bulls that transmit desired qualities, and to eliminate all others.

Leguminous plants are of special value in feeding animals as well as for improving the fertility of the soil. The hay of leguminous crops is rich in protein and also carbohydrates,

hence is more economical for animals than hay made from non-legumes.

Good stable manure is one of the most satisfactory top-dressings for alfalfa. It should be applied in the late fall or early winter and distributed evenly. Where manure is not available, 300 to 400 pounds per acre of acid phosphate will nearly always give good results.

Lime is not a fertilizer, but a stimulant or an amendment. It has a very beneficial effect upon soil, as it neutralizes acids, causes the soil to flocculate and pulverize and become mellow. Clovers, alfalfa and other legumes require considerable lime for satisfactory growth.

It pays to plant good seed. Every farmer knows this even though he does not always take the time and trouble to secure the best. Too frequently the matter is given small thought and seed of a poor quality is accepted and planted with the result that there is a weak uneven stand and a very indifferent yield.

Encouraged by the experimental planting of sugar beets in Antelope Valley during 1916, the American Beet Sugar Company has placed a representative in the field and plans to materially increase the acreage this year. All of the land planted will be within a five-mile radius of Lancaster. Much interest is being displayed by the farmers, and success seems assured.

Educational moving picture films, illustrated posters and instruction sheets will be added as features to the

corn club work of the Ohio state university. In addition, visits by university representatives will be made to local club meetings of the boys. The clubs which are to be formed will consist of from eight to twelve boys who will meet regularly to study corn problems and talk over their experiences.

Remember the principle of breeding from selection. Like begets like, and this immutable law of nature is the foundation stone of successful agriculture. Whether you are growing a grain, root, vegetable, or fruit crop, or breeding horses, cattle sheep, swine, or poultry, the same principle holds good—breed from selection. Away with inferior seed and scrub sires. The continued use of them will prove your undoing.—Wm. Scott of British Columbia department of agriculture.

Cooperation among farmers is more difficult to effect than the consolida-

tion of capital in any other business enterprise. The farmer is the most individualistic of American citizens. It is not easy for him to transact his business with his neighbors. Independence in handling his affairs is a tradition that has been his business for generations. He prefers to conduct his business man to man as his fathers have done before him, unless necessity compels him to do otherwise.

Feeds are divided by the chemist, into three large divisions, known as protein, carbohydrates and fats. Protein, which is made up of about one-sixth nitrogen, produces casein in the milk, hair, skin, muscle and blood in the cow, and goes to nourish the foetal calf. Carbohydrates furnish heat to keep the cow warm and energy to keep up the functions which keep her alive. They also furnish the fat in the milk, and all extra carbohydrates are used in laying on fat. Fats perform the same function as carbohydrates except they are two and one-fourth times as strong.



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With their indestructible MICA-insulation and protective jacket of brass—SOOTLESS PLUGS are outlasting every type of plug on tractors of every kind and size.

For 15 years—SOOTLESS PLUGS have given splendid service under the low-speed, heavy-duty conditions of tractor work.

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## Who's Who

Written for California Cultivator By C. A. Briggs

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photographs and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Other sketches and portraits will appear in the next and following weeks.



**W**HEN it comes to red hogs of the Duroc-Jersey kind he knows 'em. He's a good farmer, a good stock man and a good fellow. His fellow breeders speak well of him every time.

Good old Butler County, Nebraska,



Clayton N. Slocum

that state whose sole resources are soil, sunshine and good farmers, is the birthplace of the subject of this sketch, Clayton N. Slocum. In this

and Washington County he got his schooling and his early training as a farmer and stockman. After finishing his preparatory studies he went to the Nebraska state university where he specialized on his chosen lifework, agriculture and stock raising. During the summer vacation months he put in his time at work for some of the best stock breeders in Nebraska and Iowa, getting practical experience and training from masters of the business.

## Wormy Hogs

By L. A. Weaver, Missouri College of Agriculture



**H**OGS become infested with worms by picking up the eggs with the food or in the drinking water. Therefore to lessen the opportunities for the hogs to become infested they should be kept in clean, well-drained lots and should be supplied with fresh, clean drinking water and not allowed to drink from ponds and mud wallows. Fresh slacked lime sprinkled freely over the lots occasionally will help to destroy the worm eggs.

Hogs badly infested with worms should be given four grains calomel, six grains santolin for each 100-pound hog; or two and a half grains santolin, one drachm areca nut, two grains calomel, two drachms sodium bicarbonate for each 100-pound shoat.

These remedies should be fed in a thin slop. The slop should be made out of ship stuff or bran.

The hogs should be dieted for at least 24 hours, then given the slop containing the proper amount of medicine. Make sure that there is plenty of trough room so all hogs can get to the trough without crowding, so each hog will get his share of the slop. If necessary repeat in ten days or two weeks.

A good remedy for preventing worms is: three pounds glauber's salts, three pounds common salt, four pounds charcoal, one pound sulphur, three pounds copperas and three pounds sodium bicarbonate. Mix and keep in a self feeder or trough in a dry place where the hogs can have access to it at all times.

## House for Milch Goats

In California a good type of goat house is a simple shed inclosed on three sides and partly open towards the south, on which side wire fencing keeps the goats within bounds, and a canvas curtain is ready to be lowered in case of heavy wind or rain. Light and ventilation should be provided by windows and slides, so arranged that proper circulation can be had when required. Goats need plenty of fresh air, but must be guarded against wet and draughts.

It is best to have a small boxstall for each mature doe, as in this way there is little danger of pregnant does being injured by butting one another, and the does may also be fed more easily. Our goat house has boxstalls on the three inclosed sides, each stall measuring 4 feet by 5 feet and the partitions 4½ feet high. The stalls are made of 3-inch-wide slats spaced 2 inches apart for a distance of 3 feet from the ground and 3 inches apart the remaining height. It is necessary to space the slats close together to avoid the kids catching their heads between and being injured. The stalls should be 5 feet deep and the gate 4 feet wide. In each stall hung upon the wall is a feed rack, and in the rectangular space outside the stalls are large feed racks, each capable of feeding 12 does at a time, and having tie-ups so that each doe may be fastened to the rack to prevent her from fighting the others. We first feed the does at the

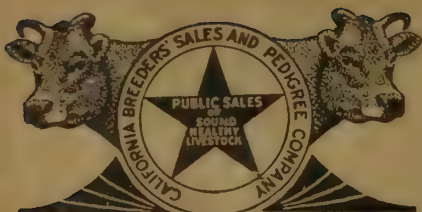
big rack and then they are put into their stalls for the night with the individual racks filled with hay. We grain the milking does on the milking stand and the others in their stalls. Young or dry does not pregnant are permitted to run in the inclosure with the big feed racks, from which they feed at will at night and during stormy days. This arrangement of box stalls partly surrounding a good sized open space is most convenient in handling a large herd of does. The bucks should be kept at a distance from the goat house on account of their strong odor.—Winthrop Howland in Angora Journal.

### COMBINING SHOWS AND SALES

By Frank D. Tomson

A feature that has contributed to the interest in pure bred cattle association sales is that of a show contest limited to the animals entered in the sale. This plan was originated by the American Shorthorn Breeders' Association and has been widely adopted in the various states and districts where Shorthorn breeders' associations put on sales.

Secretary Harding, acting for the American Shorthorn Society, has offered material encouragement to such shows by offering two trophies for the best bull and the best female in the show, and in addition cash prizes varying in amount with the extent and importance of the show and sale.



## JERSEYS AT AUCTION

The Jersey breeders of Stanislaus County, California, will sell at public auction, on a day yet to be named late in September.

### 70 REGISTERED FEMALES 16 REGISTERED BULLS!

There will be 12 Register of Merit cows, many daughters of Register of Merit dams, and the whole offering will contain a very large percentage of fresh or heavy springing cows and heifers.

All animals over six months tuberculin tested and sold subject to retest by purchaser.

#### CONTRIBUTORS:

Guy H. Miller, Modesto.  
M. W. Brady, Modesto.  
Riverina Farms, Modesto.  
Fred B. Wulff, Modesto.  
W. J. Hackett, Ceres.  
Jno. A. Orr, Ceres.  
O. J. Ames, Oakdale.

This sale will offer some of the best families of females ever sold in the west. Write for catalog, now in preparation.

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An Opportunity to Secure a Choice Lot of Young Holstein Heifers Sired by Registered Bulls from Full Blood Unregistered Dams.

- 30 Head of 15 to 18 months old Holstein heifers now being bred to Registered Holstein Bull.
- 4 Head of Grade heifers.
- 7 Head grade four and five year old cows.
- 1 Registered two year old Holstein Bull, Segis Paul Pontiac de Kol Burke.
- 1 Two year old Guernsey Bull, sired by May King of Fern Ridge, a bull that took third at the San Francisco Exhibition in 1915, Dam Imported Lady of the Forgettes.

Wish to sell in single lot and will make special price, on the above stock. ALSO a choice lot of brood mares, Jacks and Jennets at a bargain price.

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GIVES GREATEST VALUE FOR LEAST MONEY.  
IT MAKES THEM FAT.

Hauser Packing Co.

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## Breed Leaders

Every breed of live stock has its outstanding character the same as the human kind. A great dairy cow has proved her ability to produce anywhere up to 15 tons of milk annually; the trotting horse has secured his record around two minutes; the beefmaker has shown his ability to make the least amount of feed into the greatest amount of food; swine, sheep and others of the live stock family have shown themselves great characters. In addition—and here is where their worth is proven—these animals can transmit their productive power to their offspring.

Beginning with the issue of August 4 the Cultivator gave an account of Pietertje Bloom of the university farm dairy herd. Some things she has done and more that her daughters have done were chronicled. She was a most worthy leader in this series of articles. Others of her kind follow. More of the "handsome is as handsome does" type of animals will be given in the columns of the Cultivator during the next few months.

### PRINCE LAD 11TH

Written for California Cultivator  
By Gordon H. True

**T**HE subject of this sketch, Prince Lad 11th, is the Hereford herd bull at the university farm, Davis. He is a son of the famous show bull, Prime Lad 9th, 213963, by Prime Lad, 108911. Shown as a yearling at the International Livestock Exposition at Chicago before coming to California, this bull was placed third in a strong class of 14 in which Fairfax 16, later grand champion at this show, stood in sixth place. Both the sire and the grandsire named above were cham-

steers at the Panama-Pacific International Exposition in 1915. A cross bred son was reserve champion at Portland in 1915, and the now famous cross bred Hereford-Shorthorn calf, California Favorite, generally considered to have been the most popular grand champion steer in the history of the International Livestock Exposition at Chicago, was sired by Prince Lad 11th.

Few bulls with the limited opportunities of this one have sired so many outstandingly good ones. That the blood of the Prime Lads transmitted through the channel of this son and grandson carries on is indicated



Prince Lad 11th

A winner at the International at Chicago, at the P. P. I. E. and, better, a winner at producing great offspring.

pions in their day both at the American Royal at Kansas City and at the Chicago International. Prime Lad, shown six years in succession at the International shows, never stood below second place. The dam of Prince Lad 11th, Suzette 2d, 213976, was a show cow in the herd of W. S. Van Natta. In her veins the blood of the illustrious sires, Beau Donald, Lamp-lighter, Lead On, and Anxiety 4th, is comingled. In the herd of C. A. Tow, from whom Prince Lad 11th was brought, he sired three calves, one of which, Fairview Prince, was undefeated on the Western Fair Circuit until he reached the International where he stood second. He sold at auction for \$1225 as a calf. The other two, a heifer and a steer, got into third and fourth places respectively in strong competition at Chicago the same year.

In the university herd Prince Lad 11th has sired some outstanding individuals. Two sons out of the show cow, Bright Hope, have achieved high show-yard recognition. One was junior champion at Sacramento and at Portland as a calf, and the other was reserve champion at the Panama-Pacific as a yearling, and senior champion at Sacramento the year following, where he was defeated for grand championship by a younger son of the same sire, California Prime Lad 506858, that the university sold to go to the Hawaiian Islands.

Steers sired by this bull won all the class and group awards both for pure bred Herefords and for cross bred

by the fact that a son of Prince Lad 11th, Hopeful Prince 2d, 461454, is the sire of the calf that attracted so much attention at the recent Hereford Breeders' meeting at the university farm, and sold to be delivered at weaning time to J. A. Bunting, Centerville, for \$1000.

When in the future the history of Herefords in California shall have been written, Prince Lad 11th will stand out as one whose blood has contributed strongly to the upbuilding of the foundation of the breed.

### SWINE AT THE FAIR

A letter from Prof. J. I. Thompson, secretary of the California Swine Breeders' Association, calls attention to the need for all California swine breeders to make a bigger and better showing of hogs at the coming state fair. He refers to the advantage of publicity and of learning by exhibiting and advertising, adding: "Also please keep in mind that this association will probably hold a donation sale during the fair and it is sincerely hoped that each member will be able to contribute one individual."

### THE PROOF IS IN RECORD MADE

W. B. Weed, a subscriber of the Cultivator in Oklahoma, and one who has hopes of soon being again in California and having a paying dairy, refers to the necessity for having producers whether he has pedigrees or not. "I long ago found that only best bred record stock can be depended on for profits."

## Silo Prices Must Advance Sept. 1<sup>st</sup>.

By placing your order with us NOW for future delivery you can get the benefit of the present low prices and insure delivery when you need the silo.



### IDEAL GREEN FEED SILOS

Embody the Best There Is in Silo Construction

We Know What a Good Silo Should Be.  
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Anoakia Breeding Farm



**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by imported Stallion Ibn Mahruus, head of our Arabian stud. Dams are the choicest thoroughbred mares of Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahruus, world renowned imported "desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle Stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the very best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted Prince Gelsche Walker, and bulls from one World Record cow and two California State Record Cows. Write for details.

Correspondence Invited

**Anita M. Baldwin**

**W. H. TAYLOR, Superintendent**

**Santa Anita, Cal.**

## Shorthorn Bulls and Heifers

We have twenty bulls and ten heifers for sale at present. This is the best lot that we have ever had for sale. Mostly two year olds, registered, tuberculin tested and all reds in excellent condition and splendid individuals. Write for prices or better come and see them.

**H. L. & E. H. Murphy**

**Six miles from Sacramento**

**Perkins, Cal.**

## Tulare Guernsey and Holstein Farm

Guernsey herd of A. R. cows headed by DAIRYMAID'S PRINCE 26352, whose sire is a son of Dairymaid of Pinehurst, A. R. record 17,285 pounds milk and 910 pounds butterfat in one year. His dam is POLLY'S BEAUTY, A. R. record 16,629 pounds milk and 774 pounds butterfat in one year as a 4-year-old.

CHOICE BULL CALVES OF

Holstein herd of choicely bred females, many with good A. R. O. records, headed by PRINCE RIVERSIDE WALKER, whose sire is Prince Gelsche Walker, and whose dam is Aaggie Acme of Riverside, 808.82 pounds butter in one year, and she has a 3-year-old daughter that made 1095.1 pounds butter in one year.

BOTH BREEDS FOR SALE

W. J. HIGDON

TULARE, CAL

## Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count Glory 426982, grand champion at the California State Fair, 1916. Berkshire herd won Premier Exhibitor's banner at P. P. I. E.

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ery both registered and unregis-  
tered weanling bull and heifer  
calves.

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a big knee like this, but your horse  
may have a bunch or bruise on his  
ankle, hock, stifle, knee or throat.

### ABSORBINE

will clean it off without laying up  
the horse. No blister, no hair gone.  
Concentrated—only a few drops  
required at an application. \$2 per bottle  
delivered. Describe your case for special  
instructions and Book 8M free.

W. F. Young, P.D.F., 244 Temple St., Springfield, Mass.

## El Dorado Holsteins

Headed by  
SEGIS PONTIAC DE KOL BURKE  
LUIT.

Out of a 32.76-pound 4-year-old. His  
sire is a son of Riverside Sadie De  
Kol Burke, 32.29 pounds butter in 7  
days.  
Herd officially tested for 7 and 30  
days.

**Alex Whaley, Tulare, Cal.**

## Field Notes from the Live Stock Men

C. S. Rasmussen, who has the only  
herd of registered Guernseys in Hum-  
boldt County, runs over 100 of fine  
grade Guernseys in addition to the  
pure breds. He has always used the  
best bulls obtainable and his remark-  
able yearly average of over 300  
pounds of butter to the cow, with  
over 100 head milked daily, shows the  
quality of his breeding. These cows  
get a light grain ration about five  
weeks during the winter, and the re-  
mainder of the year they get nothing  
but pasture. His stock is strong in  
the Glenwood blood and he is now  
using the son of Dupee's Itchen May  
King.

Jesse Bennet, Butte County Short-  
horn breeder, will not be able to show  
his cattle at the fair this year due to  
inability to secure a herdsman. Mr.  
Bennett has been selling service bulls  
to the rangemen for many years and  
has a broad trade established.

Ralph W. Bull of Eureka, and Ar-  
thur Hebron, Salinas cattlemen, to-  
gether with Dr. Keane, were appoint-  
ed to serve on the Cattle Protection  
Board August 1 by Gov. Stephens.  
The object of the board is to protect  
the cattle industry against theft, pro-  
vide for registration of cattle brands  
and licensing of dealers. The crea-  
tion of this board is an important step  
to the cattle industry which has long  
needed some recognition by the state.

W. H. Hammond's Cumberland type  
bull which Harry Murphy brought to  
California last year is in splendid  
shape and his owners are better  
pleased with him every day. He is a  
solid color, carries good flesh and is a  
show animal as well as a good indi-  
vidual. Sixty head of registered stock  
on this Butte County ranch places it  
among the largest in the state.

E. A. Noyes and Son, Butte County  
Hereford breeders, have one of the  
typiest foundation herds to be found in  
the West. Mr. Noyes, Senior, is an  
old cattleman who is an admirer of  
the White Face cattle as range rust-  
lers. The senior herd sire is New-  
man's Crest, bred by the Simon New-  
man Company, and he has gotten  
some fine calves. Lady Show U,  
462666, a two year old Anxiety bred  
heifer, is one of the best females in  
the herd. She is by a Lamplighter  
bull and won several prizes in the  
Eastern show yards before coming to  
the coast. There are a number of  
fine individuals in this herd, and it is  
to be regretted that Mr. Noyes will  
not be able to show at Sacramento  
this year because he could not secure  
a herdsman in time.

Bishop Brothers recently sold a  
bunch of registered Shropshire ewes  
to A. W. Foster and another lot to E.  
A. Noyes and Son.

Herbert Hoover, national food dicta-  
tor, in his first bulletin touching on  
the policy of the commission, stated  
that the matter of meat animals and  
products would receive attention im-  
mediately after the cereal question.  
Effort will be made to keep feed stuff  
prices at a level which will permit  
the profitable production of farm ani-  
mals. Speculators for private and ex-  
orbitant gain will be severely dealt  
with so that the stock men of this  
country will have every encourage-  
ment to increase output.

Chicago experts are predicting a 20  
cent hog market before next spring.  
If this proves true it means at least  
an 18 cent market on the Pacific  
Coast. Breeders who foolishly sell fe-  
males at this time just because they

see immediate profit should look  
ahead a little and see the unsatisfied  
demand which will surely rule after  
war requirements are filled. The  
world's breeding stock has been great-  
ly depleted and it will be years be-  
fore it will return to normal.

J. R. N. Boyd, Napa County, is just-  
ly proud of Lake Park Lady and Lake  
Park Longfellow, his two Yorkshire  
prize winners. The sow is from a  
litter of nine and was sired by the  
great boar, Bacon Frost, a grand  
champion in the East. The boar is  
also sired by Bacon Frost. Both ani-  
mals have enormous size, are about  
18 months of age, and are the highest  
type of breed excellence. Mr. Boyd  
has recently purchased a large fertile  
river bottom farm where he will pro-  
duce feed for Yorkshire hogs and beef  
cattle. His home is one of the show  
places on the Coast and in time his  
livestock will be heard from at the  
shows.

California stockmen will regret to  
hear that Prof. J. I. Thompson will  
exchange positions with a man from  
Kansas experiment station for a one  
year period, but will welcome the  
newcomer all the same. Prof.  
Thompson is one of the most popular  
college men who has yet honored our  
state institution in the capacity of in-  
structor in animal husbandry, particu-  
larly in swine. He was a keen judge,  
a fair one, and withal a successful  
one during his term of office. In ad-  
dition he took an active part in every  
movement which was for the better-  
ment of the livestock industry. At  
the time of his departure for the East  
some weeks ago he was secretary of  
the California Swine Breeders' Asso-  
ciation, and his place will be difficult  
to fill. The Cultivator together with  
his host of friends in California  
wishes him God-speed, and good luck.

Basset's 1916 champion senior year-  
ling boar, Surprise, will be exhibited  
again at the state fair, and from his  
appearance at this writing will be  
very hard to beat. He has size, plen-  
ty of bone, is as smooth as an apple,  
and carries the Basset stamp all over.  
Mr. Basset will have his usual high  
class show herd on the circuit.

San Joaquin Valley Farm Lands  
Company has just purchased two  
young boars from M. Basset to be  
used later on in their big herd in  
Fresno County. This concern has  
over 250 brood sows and is a market  
proposition exclusively. Los Angeles  
capital is heavily interested in the de-  
velopment of some 70,000 acres. A  
purebred herd of Hereford cattle im-  
ported from Texas will be used to pro-  
duce bulls for the large beef herd  
owned by the corporation. Possibly  
\$50,000 worth of pork will be turned  
off this year.

Wm. Bernstein, after missing one  
year on the show circuit, will be on  
hand again this year with his big type  
Poland-Chinas. The great sow,  
Candy Kid, will make the trip al-  
though her heavy duties on the Bern-  
stein ranch since the world's fair  
have interfered with her show ap-  
pearance to some extent. But the  
sow which beats her will have to  
travel because a matron like her is  
not produced very often in any herd.  
She has given Mr. Bernstein some  
wonderful pigs and is a striking ex-  
ample of the value of a single animal  
which combines show quality with  
utility performance. He will have a  
fine pen of two year old sows and in  
addition some classy young stuff and  
the herd boar, "The Great Westerner."



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tained by the use of the

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Holstein bulls of good type for sale.  
Steady sales have moved all our  
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## Bemmerly HEREFORDS

Perfection and Beau Donald breeding.  
Noted for their size, bone and quality.  
Now booking orders for service bulls  
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## Berkshire Hogs—Milking Shorthorns

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**G. A. Murphy - Perkins, Cal.**

When writing advertisers, mention the Cultivator.



Sierra Vista Vineyard Company, Madera County Hereford breeders, now have one of the largest herds of registered cattle in the state. The Fairfax calf which was purchased from Warren McCray last year has developed into a wonderful young sire. He has exceptional bone, a straight top line, is well marked and colored, and is Fairfax all over. Breeding up from a foundation of ten cows in 1908, and using the best bulls obtainable has placed the Madera County herd on a high plane of ex-

cellence. Judging from the demand for bulls from cattlemen, which depletes the supply every year, the investment has paid handsomely.

A. A. Jenkins of Tulare reports the following sales of registered Jersey bulls recently: To J. T. Brown, Wasco; Mr. Clark, Tipton; L. E. Danley, Merced; Ned Thompson, Tulare. These are all fine animals; all are sons of Gertie's Lad and will do their share toward making better dairy cows in California. Also a young grandson of Gertie's Lad to Mrs. Cora Townsend, Bakersfield.

## Fitting Livestock for Exhibition

**M**ANY breeders of livestock are now vigorously preparing their animals for exhibition at the coming fall and mid-winter livestock shows. The following points on fitting are given by Wm. Hislop, animal husbandman of the Washington experiment station at Pullman. The first and most important step is to select the right kind of individuals. They must have desirable conformation, quality and breed type.

In all show animals the feet and legs must be well set under the body and perfectly straight. The bone must be strong, clean cut and the joints well defined. The shoulders should be smooth and well knitted, so as to leave no depression behind them which would indicate coarseness or lack of heart girth. The ribs should be long and well arched so as to insure width of back and depth of body. The loin must be broad and the flanks well let down, while the hind quarters should be strong, broad and well carried down to the hock. The skin and hair must indicate quality and be pliable to the touch, while the carriage must be graceful and easy. Feeding

In fitting show animals the object should be to present them before the judge in the highest possible bloom on the day of the show. In these times of high priced concentrates and roughness, one cannot afford to feed so heavily, and so bring them out in such high condition as formerly. One should attempt at the present moment to show breeding stock in breeding condition. Stock which is overloaded with fat is likely to be discriminated against by judges at the coming fall shows. Always use a variety in the rations. Variety stimulates the appetite and eliminates the monotony of the diet. The ration should be such, too, that it does not consume too much time in mastication, because the time saved in eating is time added to the rest, a most important consideration in fattening all livestock. The feed boxes must be kept scrupulously clean, especially in warm weather, otherwise they will sour. If any sluggishness or dullness of the appetite is noticed, the feed must be cut down at once and the individual brought back gradually to full feed. Irregularity and over-feeding are usually the causes of animals getting "off feed." In such cases a dose of linseed oil for horses and cattle, epsom salts for hogs, and castor oil for sheep is a most effective method of combating such trouble.

Some people cook the feed of show cattle. This is sometimes necessary and practical, but it seldom pays for any other class of livestock.

### Exercise and Fitting

Exercise is a most important factor in conditioning show stock. If not properly exercised, the animals get

stale, their appetites pall and they soon begin to fall off in flesh instead of thriving. Horses should be exercised regularly. Cattle should be turned out over night, and hogs should be exercised by being compelled to walk from a quarter to a half a mile daily. Sheep require exercise to make their flesh firm to the touch. Horses and cattle, too, should be thoroughly groomed, especially during the last two months of feeding. Sheepmen begin to trim the fleece for three or four months beforehand. Hog men usually begin to wash their animals about a month before show time. Show cattle are best not to be washed too often before show time, because their hide and hair get harsh. Likewise the legs of horses suffer (lose their freshness) by too frequent washing. The horns of beef cattle should always be polished when the animals are shown, so as to present a neat and attractive appearance. In the scraping and polishing of horns, care must be taken so as not to expose the core and thereby cause bleeding. The shell should never be scraped and polished until a red appearance shines through it. If the horn is too long, it should be shortened by cutting a piece off with a fine tooth saw. Then file the horns at the points to their natural shape. Later use a piece of emery paper and apply some oil. The hoofs should also be cleaned before entering the show ring. A piece of oily flannel is perhaps the best for that purpose.


In exhibiting livestock one should always aim to make an animal stand naturally. If the animal makes a good showing, it is due to its having been trained for months ahead of time at home. One must study the idiosyncracies of each animal. Some animals show better with their heads high. Some animals show better with their heads low. The best showmen are those who keep their eyes on their animals and on the judge at the same time. It is not well to try to deceive the judge by hiding some fault. As a rule when one hides one fault, one exposes two or three others.

### TOP NOTCH JERSEY SALE AT MODESTO

Leading breeders of Stanislaus County have consigned 75 head of choice registered Jerseys to be sold at public auction late in September, under management of California Breeders' Sales and Pedigree Company, Sacramento. The consignors are Guy H. Miller, Fred B. Wulff, W. M. Brady, and Riverina Farms, Modesto; Jno. O. Orr and W. J. Hackett, Ceres; and O. J. Ames, Oakdale.

The offering is an especially high class one, containing a large percentage of heavy springers and fresh cows and heifers, about a dozen excellent Register of Merit cows, a limited number of bred and unbred heifers and only about six bulls.

Col. Ben A. Rhoades of Los Angeles and Col. Cy N. Clark of Modesto will be the auctioneers.



## Elliott-Brant Rancho Guernseys Are Persistent Producers

The results of our first two years of official testing show our herd to average 10,172.28 Pounds of Milk and 507.97 Pounds of Fat. One half of these cows were heifers with first calf who averaged 8,670.24 Pounds of Milk and 436.01 Pounds of Fat (only 7 pounds under the average of all A.R. records). Our mature cows averaged 12,710.5 Pounds of Milk and 621.52 Pounds of Fat (120 pounds over the average of the mature cows of the breed). A bull from these cows will increase the production of almost any herd.

**Elliott-Brant Rancho, - Owensmouth, Cal.**

## ABORTION IN CATTLE

PREVENTED AND CURED PERMANENTLY  
YOUR COWS MADE PROMPT, REGULAR BREEDERS BY  
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## MONTELENA HERD Large Yorkshires

Have large litters. Service boars of exceptional quality, in best breeding condition. They are strong, active, long, deep fellows, with big bone and splendid heart girth. Come and see them, or write to

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## Poland Chinas, Medium Type

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain. 12 firsts, Junior Champion and Reserve Grand Champion Boar, Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

**M. Bassett**  
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## KINGS COUNTY JACK RANCH

Breeders and dealers in American Jacks and Jennets.

Jacks and Jennets for sale at all times. Come and see them.

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California Wonder

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on beef breeds of cattle in amounts from \$5000 up, and invite you to correspond with us.

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JNO. L. KNORPP, Pres. and Gen. Mgr.  
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When writing advertisers, mention The Cultivator.



# Raising Chickens for Meat

Written for California Cultivator By Jean A. Koethen

**P**RODUCING the extra hundred million pounds of poultry meat the government has asked for in the next six months or so is going to require some planning right now by all kinds of poultry people. Too much cannot be left to the commercial poultryman. He has about all he can do to break even or a little better on his eggs, and besides he keeps White Leghorns, which means that he must market his surplus cockerels when they weigh a pound and a half each and his old hens when they are no longer profitable layers and weigh at the most four pounds each. To produce 150 pounds extra he would have to raise 200 extra chickens, for he cannot afford to sacrifice the pullets, and the old hens do not count.

This same 150 pounds of poultry meat can be produced by raising from 10 to 50 chickens of the right sort, that is, of the meat-type varieties, and in about the same time. Buff Orpingtons that have been bred for meat reach two pounds at nine or ten weeks of age—sometimes in less time than that—are excellent soft roasters at four months and by the time that they are six months old are as large and delicious a roast as the average family cares for. The same is true of the other varieties of Orpingtons. Some strains of Whites have been widely advertised as reaching

the two-pound size at eight weeks, and I have no doubt they do it, for I have seen some Buffs do the same thing.

The Light Brahma cockerel makes the finest of roasters, but is rather too slow a grower for frying. At five months old he should weigh from five to six pounds, which is about the weight of an Orpington the same age, but as he grows more slowly he is still a soft roaster when the Orpington is classed as a full-grown "rooster." A cross of White Rock cockerel on Light Brahma hens has been found particularly efficient in the production of large, rapidly growing roasters.

The American breeds, Rock, Wyandotte and Rhode Island Red, are usually classed together in regard to both egg and meat production, but they differ considerably. The Wyandotte is one of the most rapidly growing broilers and has a round, plump body with good breast. The Rocks, all colors of them, but especially the Barred variety, have always had a most enviable reputation as table birds. Being yellow-legged they are supposed to be more pleasing to the American eye and taste than the white or pink legged English Orpington, but it is difficult to understand why a portion of the bird which is not eaten should influence popularity. The Rhode Island Red has been a disappointment to me as a table bird. Cockerels reach frying size about a month later than do Orpington cockerels and lack the delicate flavor of the Orpington. But we are working now for quantity of meat and rapidity of growth rather than for flavor, so this difference need not count.

It is difficult to generalize as to comparative qualities of different breeds, for much depends upon breeding. In selecting stock for meat, look first to size, especially in the male, and next to rapidity of growth, as far as it can be ascertained. If your male bird is of standard size and weight, and a good blocky bird, you may expect good size and pretty rapid growth in his progeny. If he is undersized and scrawny do not look for anything worth while in the next generation. In buying a breeder it is usually difficult to learn just how fast he grew. You must take him for what he is now. When your own cockerels are growing, mark those which make the most rapid growth the first two months, and unless there is some setback later you will find they are the cockerels which are largest at matur-

ity. The use of a larger bird as father to your future broilers and roasters is a matter of vital importance in the production of poultry for meat.

The back lotter or farmer who is going to do his "bit" and raise a little extra meat should use the stock he has, if possible. If he knows from past experience that his cockerels will not reach two pounds before they are three months old, he will save feed, which is money this year, by purchasing a new male. If his stock is not of a meat or even of a dual purpose variety, he will probably do better to purchase a trio or a few settings of eggs of a breed that pleases him. Changing breeds is apt to be poor policy when one is after eggs, but if meat is desired it is well to remember that you cannot make a silk purse out of a sow's ear. Many birds of the beef-type breeds are fine layers, but one ought not to expect high egg production and a large amount of good, juicy meat from the same bird.

A good deal of what has been written in regard to extra meat production has assumed that the extra birds would be hatched in June or July. This may do in the East, but in California it is far better to end spring hatching in April or May, and then begin hatching market poultry in September. Set the hens or the incubators in August so that all or nearly all the chicks hatch in September. Poultrymen who have warm brooder houses can hatch right through the fall if they wish, but the farmer who must raise his chicks in an outdoor coop with a hen mother will be wise to get all his chicks out before the first of October. Even then a sudden cold spell in November may work mischief unless he has good shelter, but as a rule September hatched chicks

are so well along before rains or cold weather that they manage very well in a rain-tight coop or house.

For some reason the cold weather of November is harder on chicks than that of March, and everyone who hatches fall chicks should see to it that he has a comfortable house to which they may be hurried when the unexpected rain or cold norther comes. Here again the heavier, more thickly feathered breeds are at an advantage. One October, several years ago, a sudden bitter cold wind caught me with two large broods, one of Buttercups, the other Orpingtons, in small coops with open runs. Knowing how little Orpingtons mind these sudden changes I was slow about protecting the Buttercups. The result was that a large part of my Buttercups succumbed to the cold while the Orpingtons hardly noticed it.

Chicks of any good meat breed hatched in September will be ready for frying at Christmas or earlier. The better market for them is later—say about the first of February. The birds have then reached soft roaster size, weighing, according to breed and strain, from four to five pounds, and the market, which was glutted at Christmas, has reached its normal condition and is demanding roasters. Indications are that prices next February will be higher than we have ever known them. Anyone who is so forehanded and so patriotic as to have a nice bunch of roasters ready then may be sure of his reward. It is pleasant to feel that you are falling in line with the urgent request of the government and producing food for the hungry; pleasanter still to get your money back with a good profit. Let us speed up the fall hatching, see that our stock is of the right sort, and have our share of that hundred million pounds ready on time.



## The Best Feed on the Market

Has the highest protein at the lowest price, \$2.90 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or

The Globe Mills, Los Angeles



## How to Get Rid of Mites

Lice by day and mites by night furnish the unhappy condition of poultry kept under unsanitary surroundings. Treatments for lice are not effective for mites because the latter work only at night, making raids on the fowls from their hiding places in crevices of the roosts and cracks of the building. To destroy mites and keep the flock free of their depredations, insecticide sprays and a sanitary building are necessary.

The presence of mites is indicated by small black and white specks on the roosts—the excrement of these insects. The first step is to get rid of the hiding places so far as possible. The roosts should be taken down and all unnecessary boards and boxes removed. In heavily infested houses the mites are to be found in all parts of the building, including the roof. Where they are less numerous, the infestations usually are confined to the roosts and nests and the walls immediately adjacent. For small coops a hand atomizer will suffice for applying insecticides as sprays, but for larger houses a bucket pump, knapsack sprayer, or barrel pump is desirable. A rather coarse spray should be applied from all angles and thoroughly driven into the cracks. The floor also should be treated, as many mites fall to the floor when the roosts are being removed.

Of the several materials that have proved effective, one of the so-called wood preservers, consisting of certain coal tar products, known as anthracene oil, with zinc chlorid added, has given particularly good results. Its repelling power lasts for months. The

cost is about one dollar a gallon, but twice the quantity may be obtained by reducing with equal parts of kerosene.

Crude petroleum is almost as effective, retains its killing power for several weeks, and in most localities is very cheap. It will spray better if thinned with one part of kerosene to four parts of crude oil.

Both of these materials often contain foreign particles which should be strained out before spraying is begun. It has been found that one thorough application of either of these materials will completely eradicate the mites from an infested chicken house, but ordinarily it is advisable to make a second application a month after the first, and in some cases a third treatment is required. These subsequent applications may be made with a brush, using the materials pure and covering only the roosts, their supports, the walls adjoining, and the nests if they are infested. This method of application is effective for the first treatment also if the houses are not heavily infested. Poultry should be kept out of the treated buildings until the material is well dried into the wood.

Used as a dip, crude petroleum will also destroy the small mite which causes scaly leg. In dipping for this mite the solutions should not be allowed to reach the flesh above the infestation, or to get on the feathers.

## GENERAL MANAGEMENT

As soon as the cockerels are of broiler size those not intended to be kept as breeders the following year should be marketed. When the cockerels begin to annoy the pullets the sexes should be separated.

## Science Says Buttermilk



Is the only preventative for White Diarrhoea. It further states that many birds that are apparently in perfect health have the germs in their system and that these germs are transmittable from both male and female to their progeny. Reference Bulletin No. 162—issued by the Department of Agriculture, Berkeley, Calif. Write Berkeley for this bulletin.

Don't take any chances, use Globe "A-1" Buttermilk Mash. It prevents White Diarrhoea, it increases the appetite, it aids digestion, it produces more eggs for market and better eggs for hatching and it costs No More than other good mash.

It's the Lactic Acid in Buttermilk that does the good work. The dry buttermilk we use, chemically shows 10,000 Live Active Lactic Acid Bacilli to the cubic centimeter. Write us for Free Literature and sample of this wonderful feed. Not an ounce of filler used. Satisfaction guaranteed or money refunded.

GLOBE MILLS, Los Angeles





# LEGHORNS PRODUCE EGGS AT LESS COST

**L**EGHORNS produce eggs cheaper than hens of the general purpose breeds — Plymouth Rocks, Wyandottes, Rhode Island Reds, and Orpingtons. This fact, which confirms the belief and experience of commercial poultry farmers, was one of the results obtained in a rather extensive feeding test recently reported by poultrymen of the United States department of agriculture. Because they lay as many or more eggs, eat only about 55 pounds of feed per head as compared with 70 to 85 pounds eaten by the general purpose breeds, and because their egg yield very materially exceeds that of general purpose breeds during their second and third laying years, Leghorns, the specialists say, undoubtedly are more profitable to keep for the production of eggs only.

In this test the feed cost of a dozen eggs for one of the Leghorn pens was 7.34 cents in 1913 while the average cost of all the pens of the general purpose breeds was 10.6 cents. In 1914 the feed cost of a dozen eggs for the same pen of Leghorns was 8.7 cents as against an average cost of 15.1 cents for the second laying year of the general purpose pens. During their third laying year the cost of a dozen eggs was 8.8 cents compared to 18.6 cents for the general purpose fowls. The total value of eggs per hen over feed cost in the Leghorn pen for three years was \$6.84 against \$4.30 for the general purpose hens. The highest egg production obtained in any of the feeding experiments up to 1915 was by a pen of Leghorns which laid 157.6 eggs per hen, at a feed cost of 6.7 cents a dozen.

The Leghorns produce smaller eggs than the general purpose breeds. The average weight of the eggs of a pen of Leghorns during the first laying year was 1.42 pounds per dozen as against 1.53 to 1.58 pounds for the other pens. However, Leghorns laying eggs weighing 1.50 pounds per dozen or even more, the specialists say, have been selected and bred by many poultrymen. An examination in May, 1915, of 500 eggs from three Leghorn pens showed that 31 per cent weighed more than 2 ounces apiece, or 1.50 pounds to the dozen.

The value per dozen of the eggs produced by the Leghorns was from one to three cents less each year than the eggs of general purpose hens. This difference is due to the fact that the general purpose breeds are better winter layers than the Leghorns, while the latter give a higher production in the spring and summer. Very few Leghorns become broody, which probably materially affects their egg yield as compared with the general purpose breeds. Better fertility in the eggs, especially with stock confined to the yards, is more often secured with Leghorns than with the general purpose or any of the heavier breeds.

## CALIFORNIA LAND SHOW

Announcements are out for the California Land Show which will be given under the auspices of the San Francisco Real Estate Board. The show will be held at Eighth and Market Streets, October 13-28. The promoters announce that the show will be largely an effort to advance the "back-to-the-soil" movement.

It never pays to be so insistent for your "rights" that you rob yourself of your privileges.

# Classified Liners

The direct selling method from producer to consumer, and a clearing house for over 31,000 readers, weekly.  
Liner rates: Single insertions 3c per word;  
yearly contracts 2½¢ per word. 35c per issue minimum charge.

## TREES

Here is Your Opportunity to Secure All citrus trees. We offer several thousand 2-year-old lemons; Eureka and Villa Franca, also Washington navel; also several hundred Valencia on sweet root. We call these good trees and we know whereof we speak. **ALBERT JACKSON, Upland, Cal.**

By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator. The cost is only 3 cents per word per issue, with a minimum of 35 cents.

Four Thousand Eureka Lemons, six thousand Valencia, five hundred seedless Grapefruit, two years old; good stock. For sale or trade. What have you? **Smith & Lane, Glendora, Cal.**

For Sale—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. **Randall Bros. Nursery Co., Whittier, Calif.**

Citrus Trees—All kinds, any quantity. Butler's Morning Side Nursery, Laramanda Park, Cal.

Sour Orange Seedlings.—About 10,000 fine plants about 2½ years old. Ready now for immediate planting; \$20 per thousand, fine root. **McMillan Citrus Nurseries, Puente, Cal.**

Avocado Seedlings in flats \$14.00 hundred. **Geo. Michels, R. No. 2, Box 462, Pasadena.**

Citrus Nurseries, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

## WANTED

Wanted—Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' work to right parties. Address **J. H. Yetter, Sales Department, 810 Santa Marina Building, 112 Market St. San Francisco, Cal.**

Wanted—Position as dairy foreman or herdsman by experienced man. Understand compounding rations and productive feeding. Will get results for employer through modern efficient methods. **Box O, Cultivator.**

Position Wanted as first class American or California cheese maker and factory manager. Best references. **E., Cultivator.**

We Buy Weed Seeds—Mustard, rape, anise, bitter clover, etc. Send samples. Write us, stating quantity and price. **Globe Mills, Los Angeles.**

One of the Most perplexing problems to farmers and ranchers is that of help. A small liner ad in California Cultivator is the quickest and easiest means of securing farm help.

Wanted to hear from owner of farm or unimproved land for sale. **O. K. Hawley, Baldwin, Wisconsin.**

Wanted—Experienced operator for Sharples milking machine. **C. H. Stiles, McFarland, Calif.**

## FARM LANDS FOR SALE

For Sale—Come to Kern County, buy a ranch near Bakersfield, the county seat, the coming city of the San Joaquin Valley, an up-to-date city of 20,000 population. Take this little five-acre ranch, near paved road, 1¼ miles from city limits, five-room house, stable, chicken house, a few fruit trees, grapes, garden, alfalfa. Water right in ditch for irrigating. Good well, horse and tools to work the place goes in for only \$2500. For this, and other Kern County bargains, write **R. A. MOORE & SON, Hopkins Bldg., Bakersfield, Cal.**

For Sale—Fruit ranch 21A Santa Clara Valley. 16a. prunes, 3a. apricots. Trees 13 years old very thrifty. Excellent soil. Good irrigation and pumping plant. House and buildings. Complete fruit drying equipment. Farm machinery and horses. Owner **John Silbersack, San Martin.**

Oregon, California Government Lands. Latest Green Booklet Free. Tells "How, Why, Where." Write **Joseph Clark, Sacramento.**

## POULTRY

Day Old Chix—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. **Enoch Crews, Seabright, Calif.**

Poultry Wanted — We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We commit immediately. **National Poultry Co., 607 E. Third St., Los Angeles, Cal.**

Half Price Sale Pullets, Cockerels, Hens, 200-250 egg Leghorns, Wyandottes, Rocks, Reds, Orpingtons, Anconas, Minorcas. \$3-\$10 profit per hen this year. **C. Beeson, Pasadena, Calif.**

"Eastman's Bred-to-Lay" Barred Plymouth Rocks, August chicks and eggs. **Fairmead Poultry Farm, Fairmead, Cal.**

## AGRICULTURAL IMPLEMENTS

Large Assortment slightly used and agents' sample plows, barrows, cultivators, wagons. Call and see them before buying. Save 50 per cent on some. Four floors. Largest stock. **Arnott & Company, Ranchers' Supply House, 112 to 118 South Los Angeles St., Los Angeles.**

Bean Threshers Attention—The best and cheapest source of power for small threshing outfit is a Little Bull Tractor. Will haul your outfit anywhere and give ample power at the belt at very low cost. Several of these tractors have been used for this purpose two seasons with great success. Terms if desired. Low prices. See **P. J. Weisel & Co., Anaheim, Cal.**

## HOGS

Chester Whites, the Billiken Brand.—Your duty is to raise more hogs and increase the meat supply. The demand for pork exceeds the production. Get started with some of these Chesters: 3 bred sows farrowed in April, 1916, due to farrow in September, and October; 18 October gilts bred to farrow in October; 3 October boars ready for service. All first class in every respect and good enough to fit and show at the different fairs this fall. All are cholera immune and will be registered free. Write for price list and booklet. **C. B. Cunningham, Box C, Mills, California.**

Grape-Wild Farm Berkshires — World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. **A. B. Humphrey, Escalon, San Joaquin Co., Cal.**

Large Yorkshires — Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. **Riverina Farms, Paradise Road, Modesto, Cal.**

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. **Rough's Greenfields, Arlington Sta., Riverside, Cal.**

Wanted—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

Rancho Rubio Durocs.—Nothing to sell at present. A fine bunch of gilts and a few extra good service boars for this fall. **Elmer Lamb, Ceres, Cal.**

Big Type Durocs. Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. **F. M. Johnson, Napa, Cal.**

Cholera Immune Duroc-Jerseys. Big type. Weaned boars and gilts from 500 to 700-pound sows. Price winning stock. **Derryfield Farm, I.O.O.F. Temple, Sacramento.**

Duroc-Jerseys—For extreme size, perfect feet, legs and backs, try the GOLDEN MODELS. **Peters, Lamson & Walker, Devore, San Bernardino County.**

Choice Boar Pigs for Sale — Sired by Superba 220620, champion Poland boar at San Francisco. Prices right. **C. R. Hanna, Riverside, Cal.**

Poland-China Swine Recorded. Stock for sale at all times. We please you or refund your money. **W. A. Young, Lodi, Cal.**

Most Money in Duroc-Jerseys. Bred sows and weanlings, either sex all the time. **Delta Farm and Live Stock Co., Colton, Cal.**

One Large and two medium type boars extra choice, 9 and 10 months old. **W. Bernstein Ranch, L. C. Trewhitt, Mgr., Hanford, Cal.**

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. **A. L. Tubbs Co., Calistoga, Cal.**

Duroc-Jerseys—Few choice March males from best eastern stock. Reasonable prices. **W. M. Taylor, R. D. No. 1, San Bernardino.**

Large Type Poland Chinas are prolific and profitable. Can furnish boars any age at reasonable price. **J. A. Crawshaw, Hanford, Calif.**

Model Herd Berkshires bred for size and quality. Weanlings and gilts. **J. L. Gish, Laws, Calif.**

Carruthers' Farm Berkshire Hogs. Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

Poland-Chinas — A few good breeding boars. **S. F. Williams, Orland, Cal.**

## MISCELLANEOUS

To Fruit Growers—New simple process for crystallizing figs and all other fruits. Instructions, terms, on application. Correspondence with fruit growers solicited. **Monteith & Co., Santa Rosa, California.**

Slacked Lime—Send for sample and information. Price right. Let me help you. **H. B. Matthews, 350 Woodberry Road Pasadena.**

Bird Alarms Protect Everything from birds, rabbits, rats, etc. Neat, durable, effective. Six for 50 cents. **California Sales Co., Watsonville, Cal.**

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. **Smith's Cash Store, 112 Clay St., San Francisco.**

## PATENT ATTORNEYS

Patents that protect are secured through The PACIFIC COAST PATENT AGENCY, INC., Savings & Loan Building, Stockton, California; send for our little booklet on "PATENTS."

## LUMBER

Lumber—Sash — Doors — Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A.R.W. Shingles 50c per bundle. Send list for estimate. **Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.**

## LIVE STOCK

Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. **Butte City Ranch, Box C, Butte City, Glenn Co., Cal.**

At Last the Perfect Silo—the Stay Round. No hoops, no bolts. No experiments. Any one can erect. Close price. Address **D. O. Lively, 215 Hobart Bldg., San Francisco.**

Registered Shires — Blackhawk Stock Ranch. Importers and Breeders. **Easton & Ward, Burlingame, Cal.**

## CATTLE

D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. **Farm at Mayfield, Cal.**

Registered Holsteins out of ARO Dams. Grandsons of Pieterje Maid Ormsby, 35.55 pounds average 5.31. **Geo. Kounias, Modesto Farms, Modesto, Cal.**

Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. **Guy H. Miller, Route 1, Modesto, Cal.**

Veramont Stock Farm Pure Bred Herefords. Location Plumas County. Ideal for stamina and vigor. Bulls for sale. Address **H. M. Barngrover, San Jose, Cal.**

Thirty high-grade Holstein Cows and one registered Holstein bull. **Chas. Hubbard, Riverdale, Calif.**

Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. **M. Holdridge, Modesto, Calif.**

N. H. Locke Co., Lockeford, Cal.—Choice young Jersey bulls for sale

Holstein Bulls from record cows. Prices right. **A. M. Bibens, Modesto, Calif.**

## MACHINERY

WHY BUY NEW? SAVE HALF Material guaranteed. It's second hand after used few times, but not worn out. Few engine snaps new 1½ h. Olds, cost \$75, for \$39; 6 Stearns, \$89; 8 Stover, \$150; 12 Fairbanks, \$165.

NEW, USED WOOD, GALV. TANKS All sizes, used heavy 1500 gal. galv. with metal covers, cost new \$75, for \$38; 10,000 redwood, \$75. Fine, heavy 10,000 galvanized, \$135, 16,000 corrugated galv., \$250. Galv. 4x4x4 tank, \$15. SWELL-EST, LARGEST tank in city, 100,000 gal. 3-inch redwood with round lug hoops, cost \$1200, our price \$400. Why build cement reservoir when you can get one like this, use it 10 years, then sell it for as much as it cost you?

WINDMILLS, SPECIALLY PRICED 8, 10, 12, 16-ft. sizes. Pumps as much water as new ones, a half price; costs nothing for fuel. 12-ft. aeromotor and swell steel tower, \$88.

PUMPS, CYLINDERS, PIPE 2½-in. two-runner hor. centrifugal pump, \$50; 2-in. rotary, \$2250; 5-in. two-stage Byron Jackson hor. cent. pump, \$150; 3-in. hor. cent. \$150, pumps 200 in. water. 7 vert. cent. Krough, deep well double-acting. Addison 24-inch stroke pump, good for 50 inches, complete with 35 ft. 10-in. casing, double acting rods and 9-in. brass double-acting cylinder, all for \$475; cylinder alone worth the money. Large Bulldozer jacks, \$68. Plunger pumps, \$2 up. 5x6 air compressor, \$29. 90 ft. 7-in. irrigating pipe, 32c. All kinds brass pump cylinder, rods, big pipe fittings of every description.

RANCH MACHINERY Walking plows, \$2.75 up; spike harrows and cultivators, \$2.50 up; 4 and 5-ft. Fresno, \$9 to \$12; wheel barrows, \$2.50 up; 350 ft. ¼-in. cable, 6c; water troughs, \$4; bone grinder, \$6.50; feed mill; sprayer; mowers, rakes, buck rake, \$20; belting, all sizes; sundries too numerous to advertise. Material guaranteed as represented or money refunded. Down town office **DEMMITT CO., UP-STAIRS 120 N. Main. Yards, 816 Yale, Los Angeles. Phones 15191; Bdwy. 1984.**

Gasoline Engines, the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles.

Several new and slightly used engines at a bargain. Best makes, 1 to 35 h.p. **Arnott & Company, Wholesale Machinery and Implements, 112 South Los Angeles St., Los Angeles, Cal.**

For Sale—New Model J 10-20, 28 h. p. Sandusky Tractor used only three weeks, bargain. Write Machinery Exchange, 733 North Spring St., Los Angeles.

## SEEDS AND PLANTS

\*\* ORDER YOUR SEEDS NOW \*\* If you are going to need any seeds for next season now is the time to render your orders. It may be impossible for you to buy what you need later. **V. A. Peterson Alfalfa Seed Co., Arbutuck, Cal.**

\*\* ALFALFA SEED OUR SPECIALTY \*\* Seed Potatoes—A limited supply of Burbank, American Wonder and British Queen for August planting. **H. A. Hyde, Watsonville.**

New Crop Alfalfa Seed now ready. Not the lowest in price, but high in quality. **Leo Turner, Yuma, Arizona.**

## RABBITS

Raise Rabbits For Us—We sell you foundation stock and buy back what you raise, paying \$1.75 and \$2.00 each for them. Send 25c for our proposition, our book on rabbit culture and our supply catalog. **Gilmore's Rabbit Farm, Dept. C, Santa Barbara, Cal. (The rabbit farm of international reputation.)**

## HORTICULTURAL PRINTING

Catalogues — Good Printing. Specialists in preparing nursery, seed, poultry and live stock catalogues and all kinds of commercial printing. For prices and information address **WOLFER PRINTING Co., 424 Wall St., Los Angeles.**

## QUITE LUCKY

Mistress — They say there are 10,000,000 germs on the cap of a milk bottle.

Maid—Sure, ain't it lucky it don't wear a coat and pants?—Town Topics.



## The Cultivator Patterns



8046—Ladies' Dressing Sacque. Cut in sizes 36 to 42 inches bust measure. Any of the pretty crepe materials can be used for this sacque.

8449—Girls' Dress. Cut in sizes 6 to 14 years. The dress has a one-piece, straight gathered skirt.

7816—Ladies' Dress. Cut in sizes 34 to 44 inches bust measure. The dress has a plain waist and a seven-gored skirt.

7919—Ladies' Shirt-Waist. Cut in sizes 34 to 42 inches bust measure. Linen, or crepe de Chine can be used for this waist.

7686—Girls' Dress. Cut in sizes 6 to 12 years. The dress has a separate guimpe.

8476—Ladies' Apron. Cut in sizes 36, 40 and 44 inches bust measure. The apron is to be slipped on over the head.

8448—Ladies' Skirt. Cut in sizes 24 to 30 inches waist measure. The skirt is cut in two pieces.

Price of each of the above patterns ten cents.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

### HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send ten cents in coin or (1 or 2c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department  
California Cultivator  
Los Angeles

## Household Department

### THIS, TOO, SHALL PASS AWAY

A mighty monarch in the days of old  
Made offer of high honor, wealth and gold

To one who should produce in form  
concise  
A motto for his guidance, terse and wise—

A precept, soothing in his hours forlorn,  
Yet one that in his prosperous days  
would warn.

Many the maxims sent the king men say,  
The one he chose: This, too, shall  
pass away."

Oh, jewel sentence from the mine of truth,  
What riches it contains for age and youth;

No stately epic, measured and sublime,  
So comforts or so counsels for all time,

As these few words. Go write them  
on your heart,  
And make them of your daily life a part.

Has some misfortune fallen to your lot?  
"This, too, shall pass away." Absorb  
the thought,

And wait; your waiting will not be in vain;  
Time gilds with gold the iron links  
of pain.

The dark today leads into light to-morrow;  
There is no endless joy nor endless sorrow.

Are you upon earth's heights? No cloud in view?  
Go read your motto once again: "This  
too, .

Shall pass away;" fame, glory, place,  
and power—  
They are but little baubles of the hour,

Flung by the ruthless years down in the dust.  
Take warning, and be worthy of God's trust.

Use well your prowess while it lasts;  
leave bloom,  
Not blight, to mark your footsteps to the tomb.

The truest greatness lies in being kind,  
The truest wisdom is a happy mind.

He who desponds his Maker's judgment mocks;  
The gloomy Christian is a paradox.

Only the sunny soul respects its God,  
Since life is short we need to make  
it broad;

Since life is brief, we need to make  
it bright,  
Then keep the old king's motto well  
in sight,

And let its meaning permeate each day,  
Whatever comes, "This, too, shall  
pass away."

—Ella Wheeler Wilcox in Examiner.

### WHAT IT IS THAT WINS

A countrywoman remarked to her neighbor during a conversation on their return from market, "How is it, Mary, that you have been married four times and I've never been married at all and I'm much handsomer than you?"

"Aye, to be sure," returned Mary, "but it ain't handsomeness that does it, Sarah. It's the 'come hither' in your eye."

Now that new potatoes are in try washing them clean and steaming until tender, instead of the old tedious method of scraping. The skins will peel off easily and they may then be creamed or used as desired.

### ENROUTE TO A MAN'S HEART

Written for California Cultivator  
By Mrs. A. Stainton



THE ordinary country market is the despair of most housekeepers and during the hot weather they frequently become embarrassed over the

arrangement of seasonable dishes, yet it is quite possible to use even the few and poor meats and other produce in such ways that their lack of tenderness and variety is not discoverable.

"It really is too hot to eat!" is a frequent remark one hears, but when we sit down at a midday meal served in a shady dining room and see dainty cold food our appetite revives and we find after all we are hungry.

A suggestion for a hot day's luncheon is jellied chicken bouillon, lamb mousse and strawberry jelly salad.

The jellied bouillon is simply a good chicken bouillon clarified, and enough gelatine added to make it a quivery shaky jelly. Serve in cups.

Lamb mousse is cold meat cookery and one way of utilizing "left overs." Put cold roast lamb twice through the meat chopper till you have two cups, add seasoning to taste; dissolve a teaspoon gelatine in a cup of strong meat stock, mix well with the lamb and let it get cold, beat in slowly half a cup of whipped cream, put into a mold and let it get very firm before slicing. Serve in slices arranged overlapping each other on a chilled platter inside a border of crisp lettuce or watercress. Just before serving put French dressing on the lettuce. Cut some good sized lemons in halves, scoop out the inside, cut a slice from the bottom till they stand easily and fill with peas topped with aspic mayonnaise. Place the filled lemon halves around the outer edge of meat platter and between slices of lemon place a tiny mold of mint jelly.

Mint jelly is easily made by preparing the usual lemon jelly, omitting the sugar and adding while it is warm a bunch of bruised mint, then putting in the gelatine, straining it and setting in egg cups. When cold these sparkling green shapes look attractive and taste good. The aspic mayonnaise is thick mayonnaise with a little aspic gelatine added to enable you to handle it easily when forcing it through the tube for decorations.

The strawberry jelly salad is made with orange jelly, using orange juice entirely instead of the usual percentage of water. The mold is lined with the orange jelly and filled with strawberry cream. Serve in flat dish, cut glass is prettiest, and around the outer circle of the jelly place tiny balls of cream cheese rolled in chopped nuts and placed inside hearts of lettuce.

It was gelatine of course, that made such an appetizing luncheon so easily and quickly prepared. The foods can be prepared in the cool hours of morning or evening when most convenient and taste all the better when one is not overheated cooking a hot meal at noon, and the use of jellies makes it also possible to make a most attractive meal out of almost nothing from materials at hand.

I buy this commercial gelatin by the dozen packages. It is put up in small packages, each package sufficient for two quarts of jelly, and always have a supply on hand. There is some difference in size of packages, due to different methods of packing by different firms. Granulated gelatin occupies a smaller space than shredded gelatin; it also dissolves quickly.

It is clarified before packing which removes the necessity of a second clarifying unless the materials used for flavoring cloud the mixture. Then it is necessary to clarify it to have the jelly brilliant and sparkling. Gelatin must be soaked with a small amount of cold water before adding the flavoring and boiling water. I strain it through two thicknesses of cheese cloth. Sometimes the pulp of lemon or orange will make the mixture decidedly cloudy and I clarify it by adding to the mixture after the gelatin has been dissolved, flavored and sweetened, the beaten whites and shells of two eggs. I beat the whole for a moment and stand the saucepan over the fire, bring to boiling point, boil rapidly a couple of minutes, then slowly a few minutes longer. I place a piece of cheesecloth, folded to have two thicknesses, in a sieve and gradually pour the jelly through. If not clear enough I strain a second time, allowing it to drip very slowly and being very careful not to jar or press the bag. When ready to mold I dip the molds in cold water, shake them and turn in the jelly. Stand aside where they will cool quickly. When ready to serve I loosen the edge of the gelatin from the mold with a knife, dip it in hot water a fraction of a second, lift, turn sidewise until I can see to the very bottom of the mold. Then place the lower edge of the mold in the proper position of serving dish, turn it over and lift carefully from the jelly.

A cover of gelatin improves the appearance of cream desserts and is easily managed by using two molds of the same shape, one smaller than the other. Put a layer of liquid gelatin in the bottom of larger mold, pack in ice to harden quickly. When hard dip the smaller mold in cold water and stand it on top and in middle of gelatin in larger mold and fill space between two molds with cold liquid gelatin. Fill inner mold with cracked ice and allow jelly to harden. When ready to fill, remove small mold and fill space with the cream. Any combination may be used. Dark jellies like prunes look better with cream.

I have used tumblers when I wanted something smaller for a church sale or tea, but it gave me more trouble than molds, the glass being more difficult to remove. I have also molded flowers and fruits in the jelly to give added finish to the appearance. This makes a sale doubly sure but does not in any way contribute to flavor of jelly.



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**Raspberry Jujubes** are made by soaking four ounces gelatin in a cup cold water. Boil one-fourth pound sugar one pound raspberry jam and half a pint water together for five minutes, rub through a fine strainer, add the gelatin, bring the syrup slowly to the boil, add a little flavoring if desired and a few drops of carmine to make deeper pink; let it cool a little and then pour into square mould which has been rinsed in cold water, and cut the jujubes into squares just before the mixture is set. Other fruits can be used instead of raspberries. Turkish paste is made by soaking three level tablespoons granulated gelatin in three-quarters cup cold water. Dissolve two cups granulated sugar in two-thirds cup orange juice and two tablespoons of lemon juice. Add thin yellow rind of two oranges to the two mixtures and bring to a boil, then let boil 20 minutes. Turn into un buttered bread pan to cool. To unmold, loosen the paste at the edges, sift confectioner's sugar over the paste and the tips of the fingers and pull from the tin onto a board dredged with confectioner's sugar. Cut into cubes and roll in sugar.

**Rhubarb jelly** made with pink gelatin and served with strawberries around it makes a pretty dessert.

**Prune and fig jelly** is worth a trial. Cook soft some prunes and take out the stones without breaking the fruit. Add half the quantity of cooked figs or dates. Put fruit into a mold and pour over barely enough warm lemon jelly to cover. Set aside to chill and serve with cocoanut cream.

#### Jellied Fish

Boil any kind of fish in barely enough water to cover it, add a tablespoon vinegar, two bay leaves, two cloves, pepper and salt. When fish is sufficiently cooked, take it up and divide into small pieces. Boil down the stock to a cup, pour it over a level tablespoon of gelatine, dissolve and strain. Put fish into fish shaped mold, pour over the jelly (stock) and chill. Serve with cucumber salad. White fish of any sort mixed with plain unsweetened lemon jelly molded in fish shaped mold and served with mayonnaise or salmon can be used and then a cold cream sauce is delicious. This is another way of utilizing left overs and robbing the garbage pail.

**Tongue** is one of the things that cannot be spoiled by country markets and the left overs offer makings for a salad. Cut into dice, sprinkle with lemon juice and pepper, mix with chopped celery and mayonnaise, garnish with heavy rope of tomato aspic and halves of hard boiled eggs with bits of parsley.

**Jellied Spaghetti** is cooked in salted water till tender. While warm twine around tube of mold (cake tin will do), put a little on sides of mold, but none on the bottom, and fill center with squab jelly, or rabbit meat may be used. Serve whole garnished with sliced white of egg and yolk pressed through a sieve.

Gelatin dishes are capable of great diversity and can be plain and simple or served with many frills and ruffles. They may include whole chicken, turkey or young pig to veal, ham pie, salads, plain and fancy, creams and desserts. Even a little added to ice cream or sherbet is a vast help if wanted quickly or for an Alaskan bake. If the children look askance at cereal try a lemon or orange jelly thickened with grape nuts, puffed wheat or puffed rice.

Oatmeal does not require gelatin to make it jelly, but cold oatmeal served

with blackberries is good. Peaches are delicious, but try a small cup of the jellied oatmeal with ripe red raspberries with powdered sugar and thick cream. It is nutritious and makes a dish for an epicure. Stoned dates or chopped figs stirred in two or three minutes before serving are also an immense improvement.

#### HELPS IN THE KITCHEN

Written for California Cultivator  
By Martha

**T**O make good baking powder at home, take six ounces of soda and eight ounces of cream of tartar. Place on a tin dish in the oven for a short time for it to dry out thoroughly, but there must not be enough heat for it to brown, and when dry sift through a fine sieve three or four times. Put in a tin can, keep closely covered and follow directions for ordinary baking powder. When making a cake, stir the baking powder into the milk and beat until it foams, and the cake will be lighter and of finer grain.

A very little soda put in stewed cranberries, rhubarb or gooseberries before the sugar is added will counteract the acid so that it will take less sugar to sweeten, and a bit of soda cooked with green vegetables will make them more tender and keep them a fresh color, and they will cook much more quickly.

Instead of laboriously scraping carrots wash them clean and boil with skins on. Then they can be skinned by letting cold water run into the pot until you can slip the skins off by hand. Young and tender carrots are delicious with a cream sauce, and they are also among the most wholesome of vegetables.

The dish towels last twice as long if they are never allowed to become dingy before washing. They may be kept white and clean as long as they last by rubbing out after each meal in a little warm suds with a bit of soda added and then boiling twice a week in borax soap chip suds.

I find it a great help to keep a soap solution ready for use. This is prepared by dissolving a handful of the soap chips in a little boiling water. This is stirred until well mixed and then kept in a closely covered pint glass fruit jar. A very little of this solution stirred in hot water makes a strong lather, and there is nothing better than this suds for cleaning out the refrigerator, then rinsing with hot and then with cold water. Glass and china dishes come out shiningly clean by washing through this suds and then rinsing through hot water.

When baking cookies, pin clean white muslin on bread board and rolling pin, stretching it tight and flouring well and you can roll dough soft and thin. If you haven't a good molding board get some large piece of heavy brown wrapping paper with a gloss finish and you can use one piece a long time by scraping off after each using, and when this begins to wear, you can throw it aside and take a fresh piece.

#### APPLE RECIPES

Written for California Cultivator

**N**OW that the apple season is beginning again a few recipes may serve as reminders.

#### Fried Apples

How well I remember the first green apples that were ready to fry. Mother washed the apples, sliced them, skin and all into a skillet sizzling with plenty of lard, sprinkled

with a little salt, and browned, turning carefully as one does fried potatoes to keep from burning. Then when they were cooked soft, sugar was added, according to taste, the skillet covered and set on the back of the stove to cook slowly for a few minutes. Served for breakfast with toast or hot biscuits.

#### Baked Apples

Pare and core tart apples, place in pan, put butter and sugar in cavity, and sprinkle cinnamon over them, serve warm with cream or milk. An extra fine dish.

#### Apple Salad

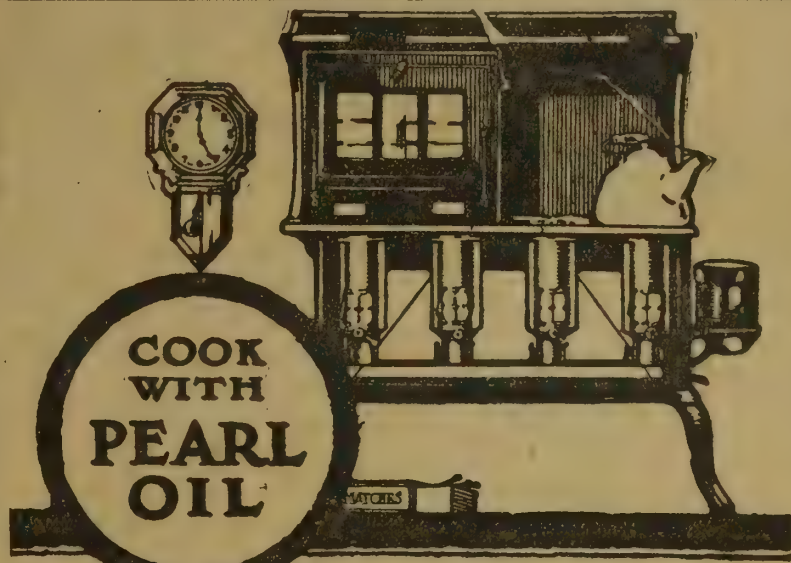
Two cups tart apples, two of celery, one cup walnuts, chop all fine, add a little salt. Serve with mayonnaise dressing.

#### Apple Sauce Cake

Stir well together one cup sugar, one of apple sauce, one-half cup butter, one teaspoon soda, one of cinnamon, one tablespoon warm water, one cup chopped raisins, and when all are well mixed, add two cups sifted flour. Bake 30 minutes. This is delicious.

#### Baked Apple Dumplings

Make a rich dough of one-half cup butter, a little lard, one teaspoon salt, two cups sour milk, one teaspoon soda, and flour to make soft paste. Peel and core apples, roll out crust, place apples on dough, fill centers with sugar, roll each apple in the dough, press together very tightly, place in a shallow pan, bake in a hot oven, and serve with cream and sugar.



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# Tractor Demonstration

Written for California Cultivator



REAT interest is shown by producers all over the state in the Second Annual Demonstration, September 18-22, by the Traction Engine and Implement Dealers' Association. The demonstration will be on the 650 acre Vail property on Telegraph Road, two miles east of the end of the Stephenson Avenue car line, Los Angeles. All exhibitors will have plenty of space for a thorough demonstration of their tractors and implements.

Time wasted means money lost, and all implements that are priced cheap-

ly but are poorly built, eventually mean the expenditure of more money and time than would have been spent on a better grade instrument in the beginning. At this demonstration in September the visitor will find good reliable tools and implements being demonstrated, and, like the tractor, there will be one for every man's need and purse.

The demonstration and accompanying exhibit will be of unquestionable interest and value to purchasing agents and master mechanics, because it will give them, as well as the rancher, a splendid opportunity to

observe the latest improved models of tractors and farm implements, and all other time and labor saving devices that go to equip the modern farm.

There is no doubt but that many a rancher would gladly purchase a tractor, but all the high grade farm implements required on his farm, were it not for the initial outlay. To such a man we say: "Has it ever occurred to you, Mr. Rancher, that with the tractor method of farming you will spend less than the time ordinarily required to put in and gather your crops? Hence you will have an opportunity of doing contract work for your neighbor whose ranch is not so modernly equipped, thus making a source of income you never had before. Besides this your present cost of production will be cut at least 40 per cent. So by adding these two factors together, you will see that the first cost does not seem so large. Think it over.

The Association is extremely grati-

fied by the interest shown by prospective exhibitors, and takes pleasure in announcing that the following products and articles will be on display. A full line of electric motors and appliances, furniture and ranch house equipment such as churns, washing machines, etc., food products which will be demonstrated daily, and a showing of the most representative of the many automobiles, motor trucks and accessories on the market today.

The visitor must not forget that aside from the daily public demonstrations between 2 and 4 o'clock, that all firms will give extensive private demonstrations at any time to those who are interested. Another thing—Don't fail to bring with you a note book in which you can jot down the various points of the different machines that interest you.

Summer rate of a fare and one-third for round trip tickets are effective on all railroads from all points in California, Nevada and Arizona.

## Second Annual Tractor Demonstration

The Greatest Exhibit of Tractors and  
Farm Implements Ever Held on the  
Pacific Coast

-- A T --

## Vail Ranch

September 18, 19, 20, 21, 22

Every make of Tractor and Tractor drawn Implement represented in the Southwest, will be shown at this Demonstration. Over 40 Tractors will be shown under all working conditions.

There will be exhibits by the majority of well known Oil Companies, Automobile, Auto Trucks and Accessories, Carburetor manufacturers, Ford attachments, etc.

### Reduced Rates on All Railroads

Have been allowed of one and one-third fare for the round trip. Auto Busses will operate from the end of Stephenson Avenue car line to the Demonstration Field on the Vail Ranch seven miles east of Los Angeles on the Telegraph Road

### Traction Engine and Implement Dealers Association of Southern California

115 So. Los Angeles St. Los Angeles, Cal.

### New Record Book for California Producers

The California Cultivator has just published a new and most useful Record and Account Book for California. Fruit Growers, Farmers, Live Stock Men, Dairymen, Beet Growers, Poultrymen, and all other California Producers,—something that has long been needed but never before attempted, to suit the peculiar diversity of products of this state.

Among the special pages provided are the following:

"Fruit Crop Record," "Live Stock Record," "Poultry Record," "Daily Record of Labor," "Individual Tree Record," "Dairy Record," "Farm Crop Account," "Live Stock Account," "Household Expenses," "Field Expenses," "Cash Receipts," "Inventory," and others that form a complete, easy-to-keep record system.

There is nothing complicated about this Account Book but it is complete and will be of great value to anyone wishing to know "where the money goes," which crops pay and which do not, who owes you and how much, and many other things to which you may quickly refer.

A copy of the California Cultivator Farm Record and Account Book will be sent to any address prepaid and a year's subscription to California Cultivator, new or renewal will be credited upon receipt of \$1.25. Send all orders to

California Cultivator

115-117 No. Broadway

Los Angeles

## How to Dry Corn



LD timers remember with keen relish the dried corn of earlier days, and housekeepers of today will find corn dried by artificial heat delicious in flavor and superior to canned corn.

Select young, tender corn of an excellent variety. If field corn is used, select as you would for cooking. Boil or steam on cob eight to ten minutes, using one teaspoon of salt to a gallon of water. Drain and with sharp flexible knife cut from the cob, cutting off first the top of the grain, then half way down to the cob, then scrape or press out the remainder, being careful not to get the chaff. Spread in a thin layer on the tray of the dryer and lay thermometer in tray. Begin drying at 110 degrees and raise temperature gradually to 145 degrees Fahrenheit. Dry three to four hours, stirring occasionally to get uniform result.

A little experience will enable you to determine when the corn is prop-

erly dried. It should feel tough without being moist, but not too rattly hard. Place in boxes when cool, and once each day, for three or four days, pour from one box to another to insure a uniform degree of moisture. This process is called "conditioning." If the corn seems too moist, return to drying trays for a short while.

Dried vegetables and fruits should be stored so as to protect from moisture. A cheap solution is to place small quantities in paper bags—say enough for a meal or two—and store in tightly covered lard tins. Examine next day and if "sweating," dry a little more. To prepare dried corn for cooking, soak two to four hours, allowing two cups of water to one cup of corn and use as fresh corn.

This dried corn without any further cooking makes a delicious breakfast food when served with fruit or eaten with milk. If desired for this purpose, however, it should be cooked 15 minutes instead of ten before drying.—Food Conservation Bureau.

## A Glimpse at the World's Markets

A feeling on the part of consumers caused San Francisco Exchange prices to hold level on butter and eggs and finally to start a sharp decline, though some have charged this decline to the taking of storage off the ice and throwing on the market. Prices have dropped, so it is asserted new eggs will go into storage.

A car of live Eastern poultry is on the way to San Francisco. It is not thought this will affect present prices. Receipts of local produced stock have been heavy and stock is looking exceptionally fine.

Cheese is now commanding the best price for some years in the San Francisco market.

Calgary reports sale of 150,000 pounds of wool at an average of 60 cents. Some fine quality stuff brought 74. Last year's average for that section was less than half the average on this sale.

With the feeling that wheat will be under federal control market remains easy and speculation has been reduced to the minimum.

Government crop report places the California olive crop at 67 per cent of normal. This means a short crop when needs are great. Normal crop of the state is 8000 tons, and the more pessimistic predict this season's output will not be over 2500 tons.

Los Angeles has had a serious decline in cantaloupes the past week, and on some days the crop was practically given away.

An inspector from the state of Washington is in Stockton inspecting an 80 carload lot of potatoes which, if they pass inspection, will be shipped to Se-

attle. He reports the infestation of tuber moth light.

The logan and raspberry crops are practically marketed, the season having been much later than ordinary because of the cold, late spring. Strawberries will continue to fill the market during the rest of the year.

New rice will not be on the market before October, or possibly November. This is later than Southern rice, which will begin marketing in September. Hawaiian rice is already being harvested.

All beet sugar sections are pleased at the new prices, \$6.00 per ton for 15 per cent beets. California's production of beet sugar will be nearly 5,000,000 bags, which will be about a quarter of a million bags higher than last year. Harvesting in other states than California does not begin before the middle of October. One citrus products company at Upland, San Bernardino County, has handled over 200,000 pounds of cull oranges and lemons this season which have been made into high priced products.

The continued dry weather has greatly lessened the raspberry crop of Bellingham, Washington. Raspberries are a great product of this district and the loss on the growers will be heavy.

Last year's shipment of rice from Hong Kong to the United States nearly doubled those of the previous year. United States Commerce Reports states: "Most of the rice sent to the United States was for transshipment and resale to Central and South America and the West Indies. Prospects are that trade during 1917 will depend entirely upon the amount of cargo space available. Crops in all producing countries in the Far East are unusually large, and a great deal of rice harvested in both 1916 and 1917 will move if freight space can be had at a fair rate."



# Los Angeles Market

LOS ANGELES, Aug. 15, 1917.

## BUTTER

Rets. wk. ending August 14, 388,200 lbs.  
Produce Exc. Quotations.  
Price to trade 4c higher.  
California extra creamery.....41  
Extr. Cry. Exch. past wk.  
Aug. 8 9 10 11 13 14  
'17 ... 44 44 44 44 41 41

## CHEESE

Brokers' prices:  
California fresh, lb.....24½@25  
Oregon Longhorn.....27@27½  
Tillamook Trip.....26  
Domestic Swiss.....32

## EGGS

Rets. wk. ending Aug. 14, 1917, 1040 cs.  
Exchange quotations.  
Prices include cases and fillers valued at 35c.

Fresh extras.....39½  
Case count.....38½  
Pullet.....36½  
Fresh Ranch Exch. past wk.  
Aug. 8 9 10 11 13 14  
'17 ... 42 41 39½ 39½ 39 39½

## POULTRY

We quote to producers:  
Broilers, 1½ lbs. and up, 21; small.....18  
Fryers, 2½ lbs. and up.....24  
Hens—Leghorns 15@17, Heavy Col'd.....21  
Roasters, 3 lbs. and up.....24  
Ducks, lb.....10½  
Squabs, doz.....3.00@4.00  
Roosters, old.....11  
Turkeys.....21@24  
Geese.....10

## LIVE STOCK

We quote cwt. f.o.b. L. A.  
Corrected Wednesday morning, August 15 by the Cudahy Company.

Cattle—  
Beef steers, av. 1000 to 1100 lbs.8.50@9.00  
Helfers, good.....6.50@7.00  
Cows, good.....5.50@6.50  
Fair.....5.00@5.50

HOGS—  
Av. 125 lbs.....12.00  
Av. 150 lbs.....13.00  
Av. 175-200 lbs.....13.50  
Rough, docked 20 lbs.; piggy sows, 40 lbs., stage, 40 per cent.....9.50@10.00  
Ewes.....9.00@9.50  
Lambs.....13.50  
Yearlings.....10.00@10.50

## POTATOES

Wholesale selling price:  
New cwt. 3.25@3.50; lug.....1.30  
Sweets, lb......6

## ONIONS

Wholesale selling price:  
Brown, cwt., 1.75; white.....1.50  
Garlic......8

## VEGETABLES

Wholesale prices:  
Artichokes, doz......50@90  
Beets, sk.....1.00  
Beans—Wax.....4½@5  
Limas, lb......5@6  
Ky. Wonder.....4½@5  
Beets, sk.....1.50  
Cabbage, lb......14  
Carrots, sk......50@55  
Cauliflower, doz.....1.25  
Celery, doz......60@1.35  
Corn, lug......55@60  
Cucumbers, lug......30@40  
Egg Plant, lb......4@5  
Horse radish, rt. lb......15  
Lettuce, doz......85  
Leeks, doz......80  
Mint......40  
Onions, green, doz......25  
Okra, lb......10@12  
Peas, lb., Telephone.....8@8½  
Peppers, Chili, lb., 5@6; Bell.....4@5  
Parsnips, doz......20  
Parsley, doz......20  
Radishes, doz......20  
Rhubarb—Strawberry.....1.10  
Romaine, doz......40  
Spinach, doz......17½@20  
Squash, Summer, cr......35  
Crockneck......35  
Hubbard, lb......3  
Tomatoes, cr., 75; lug......50@75  
Turnips, doz......30

## FRUITS

Wholesale prices:  
Apples—Crabapples, lug.....1.00@1.10  
White Astrachan, box.....1.50  
Gravensteins.....2.00  
Alexanders.....1.50  
Crab Apples, lug......90@1.00  
Avocados, doz......7.00@8.50  
Apricots, lb......3¼@4  
Bananas, lb......5  
Cantaloupes—Standard.....1.75  
Standard.....1.55  
Tip Top......65@1.65  
Pony.....1.75  
Casabas, lb......2½  
Figs, box......90@1.00  
Grapes, Seedless and Malagas, cr.....1.65  
Concordes, cr.....1.75  
Nectarines, lug.....1.25  
Peaches, lug......50@1.35  
Pears, Bartlett, lug.....1.35  
Pineapples.....1.50  
Plums, lug......65@1.35  
Blackberries, basket.....5@6  
Loganberries, basket.....5@6  
Raspberries, basket.....7@8  
Strawberries, basket.....5@6  
Watermelon, lb......2

## CITRUS

Lemons.....6.00@7.50  
Juice.....2.50  
Grapefruit.....3.00@3.50  
Limes, basket.....1.00  
Valencias.....3.25@3.50

## HONEY

Wholesale prices:  
Extr. White, lb.....11½@12½  
W. W., lb.....12@14  
Comb., case, W.....3.75  
W. W. case.....4.25@4.50

## NUTS

Peanuts, raw.....12  
Pine Nuts.....20  
Pecans.....19

## RICE

Wholesale quotations:  
Cal.....6.25  
Broken.....4.75@5.00

## BEANS

Wholesale Prices:  
Lady Washington.....13.50  
Limas.....13.50  
Pinks.....10.00  
Manchurian Reds.....11.00  
Baby Mex.....9.00  
Garbanzos.....9.00@10.00  
Small White.....13.50  
Blackeyes.....8.00  
Tepary.....7.00  
Lentils.....13.00

## HAY

Quotations by Nichols-Loomis Company. Wholesale prices to grower f.o.b. L. A. carlots.  
Tame Oat.....13.00@20.00  
Volunteer Oat.....13.00@15.00  
Wheat.....14.00@17.00  
Barley.....15.00@18.00  
Alfalfa.....11.00@17.00  
Straw.....7.00

## GRAIN AND FEEDSTUFFS

Wholesale cwt. f.o.b. L. A.  
Alfalfa Meal.....1.75  
Alfalfa Molasses.....1.80  
Barley, Rolled.....2.95  
Barley, Recleaned, Whole.....3.00  
Barley, Hulled.....3.55  
Beet Pulp.....1.80  
Bran, Heavy.....2.50  
Cocoanut Meal.....2.30  
Cottonseed Meal.....2.60  
Corn, Yellow.....4.90  
Corn, White.....5.00  
Corn, Cracked.....4.95  
Corn, Feed Meal.....5.00  
Corn, Egyptian.....4.65  
Middlings.....3.10  
Milo.....4.65  
Oat Chop.....1.90  
Oats, White.....3.30  
Oats, Rolled White.....3.35  
Oats, Hulled.....5.20  
Oats, Rolled Chicken Groats.....5.30  
Oatcake Meal.....3.40  
Wheat, No. 1.....4.30@4.35  
Wheat, Cracked, No. 1.....4.70  
Rye.....4.10  
Blood Meal.....5.10@5.20  
Bone, Green.....2.85@2.95  
Bone, Dry.....8.05@8.15  
Charcoal, 50-lb. sk.....2.70@2.80  
Clam Shell......70@80  
Grit, Granite......65@75  
Oyster Shell.....1.25@1.35  
Sunflower Seed.....4.10@4.20  
Soya Bean Meal.....3.20@3.30  
Scratch Feed.....4.20@4.30  
Gritless.....4.40@4.50  
Rice Bran, ton.....40.00  
Middlings, ton.....40.00  
Rice Polish, ton.....49.00

# San Francisco Markets

SAN FRANCISCO, August 14, 1917.

## BUTTER

Rets. wk. ending Aug. 14, 348,000 lbs.  
Dairy Exchange quotations, lb.:  
Prime firsts.....40  
Extr. Cry. Exch. past wk.  
Aug. 7 8 9 10 11 13  
'17 ... 42 43 43½ 42½ 42½ 40  
'16 ... 26 26½ 26½ 26½ 26½ ..

## EGGS

Dairy Exchange quotations:  
Cal. Flats.....18@22 Y. Am. ....22@24½  
Fresh Ranch Exc. past wk.:  
Rets. wk. ending Aug. 13, 12,067 cs.  
Aug. 7 8 9 10 11 13  
'17 ... 43½ 43½ 42 41½ 40 40½  
'16 ... 32½ 33 33½ 33 33 ..

## POULTRY

We quote from producers, lb.  
Hens, large, 23@24; Leghorns.....16@18  
Small Colored.....19@20  
Fryers, lb......26@28  
Broilers.....27@28  
Roasters.....28@30  
Roosters.....26@28  
Squabs, doz.....2.00@3.50  
Ducks.....15@17  
Geese.....19@20  
Belgian Hares, live 11@13; dr.....15@16

## LIVE STOCK

Prices gross weight:  
Cattle: The following prices are for grass fed stock. Hay fed bring ½ to ¾c more.  
Steers, lb., 6½@9; cows and heifers, 4@6¼; calves, 7¼@9½.  
Sheep: Wethers, 10@10½; ewes, 8@8½; lambs, lb., 11½@12.  
Wethers, 10@10½; shorn, 1½@2c less; ewes, 8@8½; lamb, lb., 11½@12.  
Hogs: Hard grain fed, wt. 100 to 150 lbs., 13@13½; 150 to 300 lbs., 14¼@14½; 300 to 400 lbs., 13¼@14.

## POTATOES

Wholesale selling prices at wharf:  
New, cwt.....2.50@2.75  
Sweets......5@6

## ONIONS

Wholesale selling price on wharf:  
Australian Brown.....90@1.00  
New Red, sk......50@75  
Yellow, cwt......75@90  
Green, bx......50@60  
Garlic, lb., New......3@4

## VEGETABLES

Wholesale selling price:  
Beans, String, lb......5@7  
Fy. Garden, 4@6; Lima.....4@5  
Celery, San Pedro, cr.....3.00@4.00  
Corn, Green, sk.....1.75@2.00  
Cucumbers, box......35@40  
Egg Plant, lug......65@75  
Okra, 10-lb. box......75@1.00  
Peas, Halfmoon, sk.....2.50@3.00  
No. 2, lb......5  
Peppers, Bell, lug......50@75  
Chili, lug......40@60  
Squash, Summer, lug.....40@50  
Italian, lug......50@65  
Tomatoes, lug, Delta.....50@1.00  
Merced, box.....20@30  
San Pedro, cr.....20@30

## FRESH FRUIT

Wholesale selling price:  
Apples—  
Red Astrachan......50@1.00  
White Astrachan......75@1.25  
Gravenstein, box.....1.00@1.75  
Alexander......75@1.00  
Crabapples, box.....2.00@2.25  
Apricots, cr.....1.00@1.25  
Bananas, lb......5  
Cantaloupes, Delta, lug......75@1.00  
Turlock, cr., Standard.....1.50@2.00  
Pony, 1.00@1.50; Flats......75  
Casabas, cr.....1.50@1.75  
Persian Melons, cr.....1.25@1.50  
Cherries, dr., 1.00@1.25; lb......8@10  
Figs, Blk., box double layer.....1.50@1.75  
Grapes, Sweetwater, cr.....1.00@1.25  
Seedless, sm. lug......75@1.00  
Muscat, cr.....1.25@1.50  
Blk, cr......75@1.00  
Malaga, cr.....1.00@1.25  
Nectarines, cr. 75@1.25; sm. lug.....1.00@1.25  
Peaches, cr., 50@75; sm. lug......60@85  
Pears—  
Bartlett, No. 1 box......50@1.25  
Ton, 35; cull, ton.....15.00@20.00  
Plums, Tragedy, cr......75@1.00  
Burbank......75@1.00  
Santa Rosa.....1.25@1.50  
Damson, ton.....50.00@55.00  
Green Gage, ton.....40.00@50.00  
Wickson.....1.00@1.25  
Satsuma......60@85  
Blackberries, chest.....4.00@6.00  
Strawberries, chest.....6.00@8.00  
Loganberries, chest.....6.00@7.00  
Pineapples, doz.....4.00@5.00  
Raspberries, chest.....10.00@14.00  
Watermelons, lb......¾@1

## DRIED FRUITS

RAISINS—The California Associated Raisin Company last quoted new 1917 crop cluster raisins for October, November and December shipment in 20-lb boxes as follows: Sun Maid layers, 1.50; 3-crown London layers, 1.50; 4-crown clusters, 1.75; 6-crown Imperial clusters, 2.60; 10-lb boxes, 25c and 5-lb boxes, 50c additional. Bulk, vineyard run layers 50-lb. box 3.25; do, 100-lb. box, 6.25. Sun Maid brand clusters—Per case: Fancy 1-lb. carton, 20 to cs, 1.85; do, 24 to cs, 3.20 2-lb cartons, 12 to cs, 3.20; 5-lb. cartons, 4 to cs, 2.80, all f. o. b. California common shipping points. Regular California dried fruit terms.  
PRUNES-APRICOTS—Opening prices on dried fruits of the new 1917 crop are as follows:  
Per lb., Bulk basis: Apricots, quoted by Apricot and Prune Growers' Association, Standard, 13½c; choice, 14½c; extra choice, 15c; fancy, 16c; extra fancy, 17c; fancy Moorpark, 17c; extra fancy Moorpark, 18c. Prunes, 6¼-cent basis with 1½c premiums on the 40s.  
PEACHES—Under date of August 7 Cal. Peach Growers, Inc., withdraw all quotations.

## BEANS

Jobbers' prices, cwt. recleaned:  
Limas.....12.00@12.75  
Bayous.....8.50@9.00  
Garbanzos.....6.00@6.50  
Small Whites.....14.50  
Mexican Red.....9.00@9.50  
Large White.....14.00@15.00  
Pinks.....9.00@9.25  
Black Eyes.....8.00@8.50  
Cranberry.....10.00@11.00

## RICE

Price to growers:  
Cal. Rough, cwt.....3.00@3.25  
Lower Grades.....2.00@2.75

## HAY

Under date of August 11, Scott, Magner & Miller say:  
Receipts of hay for the past week 3152 tons. Last week 2085 tons, and the week before 1785 tons. From the present outlook more or less of this year's crop is very likely to be damaged unless the car prospect is improved. Trade has become better as receipts have increased and the market has been well maintained at current prices. New straw has made its appearance and is now quoted.

We quote today wholesale prices in carload lots as appear from dealers' transfers upon the market. For prices to consumers charges of cartage, commission and handling expenses must be added.  
Wheat, Fy., lt. bales.....21.00@22.00  
Wheat or Wh. and Oat, No. 1.....17.00@19.00  
Wheat or Wh. and Oat, No. 2.....15.00@17.00  
Oats, Choice Tame.....18.00@19.00  
Other Tame.....15.00@16.50  
Wild Oat.....13.00@17.00  
Barley.....13.00@17.00  
Alfalfa.....13.00@17.00  
Stock Hay, new.....12.00@14.00  
Barley Straw, No. 1 bale.....50@80

## GRAIN EXCHANGE PRICES, ETC.

Wheat, Northern Bluestem.....4.35@4.50  
Corn, California Yellow.....4.25@4.40  
Oats, Red Feed, 2.75@3.00; seed 3.00@3.25  
Barley, Feed.....2.50@2.55

## FEEDSTUFF

Wholesale prices per ton:  
Bran.....38.00@40.00  
Cornmeal.....86.00@88.00  
Cracked Corn.....86.00@88.00  
Middlings.....49.00@50.00  
Alfalfa Meal.....24.00@25.00  
Cocoanut Meal.....38.00@40.00  
Shorts.....40.00@42.00  
Rolled Barley.....51.00@52.00

## SEEDS

Prices in round lots, lb.:  
Millet, recleaned.....4¼@5  
Alfalfa.....20@21  
Flax.....6@6½

# Citrus Fruit Market

LOS ANGELES, August 15, 1917.

The orange market is somewhat easier. Shipments have been fairly heavy with large quantities of Eastern fruits filling the markets. Many sales have been made, however, above the \$4.00 price. The lemon market is not so spectacular as a couple of weeks ago but long prices are still being received.

## Shipments

Shipments of oranges from Southern California to date since November 1, 1916, 35,826 cars, lemons 7156, total 42,982. To same date last season; oranges 28,253, lemons 6174, total 34,427. From Central California to date this season; oranges 5042 cars, lemons 164, total 5206. To same date last season; oranges 5398, lemons 146, total 5544. From Northern California to date this season; oranges 845. To same date last season, oranges 610, lemons 1.

## FROM THE AUCTION

August 8  
New York: 21 oranges, 1 grapefruit, Val. \$2.65 to \$4.55.  
Pittsburg: 9 cars. Val. \$2.00 to \$3.65, lem. \$1.70 to \$6.55.  
St. Louis: 4 cars Val. \$2.40 to \$3.20. Lem. \$4.65 to \$5.60.  
Boston 10 cars. Val. \$2.80 to \$4.35. Lem. \$4.90 to \$7.70.  
August 9  
New York: 20 oranges, 1 lem., 1 grapefruit; Val. \$2.10 to \$4.90.  
Boston: 9 cars. Val. \$2.65 to \$5.85. Lem. \$4.95 to \$6.80.  
August 10  
New York: 13 oranges. Val. \$2.60 to \$4.45.  
Cleveland: 5 cars. Val. \$1.90 to \$3.95. Lem. \$4.25 to \$5.55.  
St. Louis: 6 cars. Val. \$2.55 to \$3.70. Lem. \$3.15 to \$7.35.  
Boston: 8 cars. Val. \$2.65 to \$4.25. Lem. \$6.95 to \$8.90.  
August 13  
New York: Val. \$2.60 to \$4.05. Lem. \$7.15 to \$9.10.  
Cincinnati: 4 cars. Val. \$2.55 to \$2.90. Lem. \$5.95 to \$6.25.  
Philadelphia: 8 cars. Val. \$2.30 to \$3.80. Lem. \$4.70 to \$7.20.  
St. Louis: 6 cars. Val. \$2.65 to \$3.30. Lem. \$3.80 to \$6.00.  
August 14  
New York: 18 Val., 4 mixed. Val. \$2.25 to \$4.95. Lem. \$7.45. Grapefruit \$1.95 to \$2.70.  
Boston: 6 cars oranges, 1 lem. Val. \$3.25 to \$4.45. Lem. \$6.05 to \$7.00.  
Philadelphia: 4 oranges, 2 lem. Val. \$2.00 to \$4.35. Lem. \$4.00 to \$7.75.

# WASHING EXHIBITION SHEEP

Washing exhibition sheep, when properly done, is not only a benefit so far as looks go, but it is very beneficial in freeing the pores of the skin of gummy and other foreign matter. It promotes the proper flow of yolk, which is the natural lubricant of the wool, and thereby stimulates a healthy growth of that important feature of the animal. Many of the leading English exhibitors wash their show sheep as soon after shearing as the weather gets warm and pleasant. Warm water should be used; that is, water with the chill taken off. Castile is a splendid soap for use in washing sheep. Washing should be done in the dipping vat. It is important that after the animal has been washed every trace of the soap be removed by thorough rinsing. Soap makes the wool dry and brittle. Some dip their sheep a month or so before show time and shape them with the shears while they are still wet; the wool cuts much easier when wet than when dry. Moreover, if shaped when dipped the fleece appears more uniform in color, especially where coloring is not used in the preparation of the animals for show. A well known and highly successful exhibitor of Longwool sheep once informed us that he always washed his sheep just after shearing and again some little time previous to the opening of the show season. He allowed time enough to allow the natural oil to flow in profusion so that the wool would assume a natural, oily appearance. He remarked that while many did not wash their show sheep he always considered that it was time well spent to do so.—Shepherd's Journal.

## WEATHER CONDITION

San Francisco, Cal., August 11, 1917.

	Rainfall		Temp.	Min.
	Wk.	Season.		
Eureka	.00	.02	12	60
Red Bluff	.00	.00	.00	48
Sacramento	.00	.00	.00	84
San Francisco	.00	.00	.01	67
San Jose	.00	.00	.01	86
Fresno	.00	.00	.00	104
San Luis Obispo	.00	.01	.03	84
Los Angeles	.00	.00	.00	88
San Diego	.00	.00	.00	78

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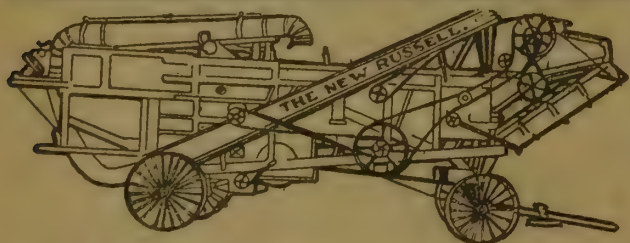
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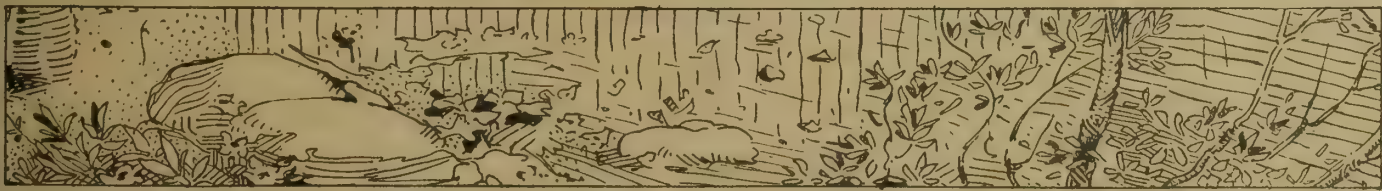
**THE LIVESTOCK** *Combined* **CALIFORNIA**  
*and DAIRY JOURNAL* *with* **CULTIVATOR**

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

August 25, 1917

SAN FRANCISCO



Workers in the Cotton Fields of Arizona



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3. How long will the pipe last after you have purchased and installed it?

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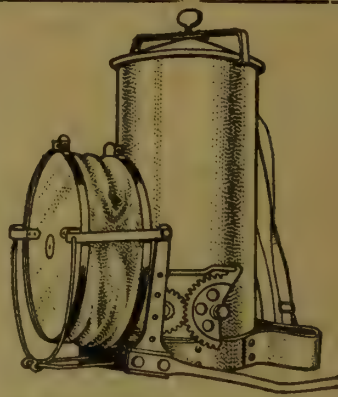
have been manufacturing redwood pipe for nearly thirty years; the company has on its staff the very highest skilled engineers that can be secured and they are men who have made the study of pipe construction a specialty. Only CLEAR, AIR-DRIED REDWOOD is used for the staves and the very highest grade TRIPLE PROCESS PIPE WINDING WIRE for winding. There are installations of redwood pipe in use today that were installed by this company in 1889 and in fact the company has never experienced a pipe failure. This is the kind of pipe you should insist on having for IRRIGATION or any use where a good, long life pipe is desired.

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Among the special pages provided are the following:

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There is nothing complicated about this Account Book but it is complete and will be of great value to anyone wishing to know "where the money goes," which crops pay and which do not, who owes you and how much, and many other things to which you may quickly refer.

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"Fertilizer Dept."



# California Cultivator

Vol. XLIX No. 8

LOS ANGELES: August 25, 1917

One Dollar Yearly

## Boys Clubs a Factor in Arizona Production

M. E. Bemis Writes for Cultivator of Educational Labor Movement in Arizona, Which Really Led to an Economic Advantage of Some Magnitude in Crop Harvesting. A Great Asset for Another Season. See Cover Illustration

**S**HORTLY after the present unpleasantness with Germany had become a certainty and we were having the seriousness of the situation, and particularly the food shortage, brought home to us, a meeting of those who were supposed to be influential in agricultural matters was called by the president of the Arizona State University, the dean of the college of agriculture and the superintendent of agricultural extension, to be held at Tucson.

We met "pursuant to call" as the reports read. All phases of the food problem were discussed—that is all except one. We were advised to grow onions on our front lawns and chickens, rabbits and pigeons in our back yards. We were almost persuaded to plow up the city parks to plant potatoes. We were advised to make every available acre produce its maximum and we were to make other acres available by one means or another.

Experts on water supply told us of the water conditions and proved that we had ample water to cultivate many thousands of acres not now under cultivation.

Canning experts told us that we must preserve all surplus fruits and vegetables and raise more so that there would be more surplus to can.

Insect specialists told us we must make war on the bugs if we would have food to feed our soldiers who were to fight the Kaiser.

Seed experts told us of the shortage of seed and warned us against waste of seeds.

Market experts told us that we should and that we could prevent waste of food by giving more careful attention to preparing foodstuff for market.

So it went through all the different lines of agricultural activities, each one telling how by a little extra work we could add a tremendous amount to the food supply. It was all truly inspiring, and some of us could already in fancy see the end of the war. Curiously enough almost everything suggested meant more work, but those who had been asked to tell how more food could be produced, and more of that which was to be produced saved, were not supposed to consider such a minor detail as a little extra labor.

By and by the experts, and the teachers, and the specialists were all through and Dean Forbes called upon the representatives of farmers' organizations present to state their views and experiences and offer suggestions. Finally when everyone seemed to have had his say a big man with a bald head and a kindly smile came forward and was introduced as Mr. Orme of Maricopa County, and Mr. Orme of Maricopa County proceeded to drop a bomb in the meeting. He said: "Gentlemen, our

most serious trouble is a shortage of farm labor and a lack of some system of standardizing the labor that we have. Each farmer pays his help according to his own scale and regulates the hours of labor as best he can. Too often it happens that the same wage is paid to all laborers alike without regard to experience or ability. This lack of system is demoralizing to labor conditions. We were short of farm laborers last year. Many hundreds of acres of alfalfa might have been made into hay which for lack of labor was fed off by steers.

We could have planted more of the grain sorghums and more corn had we not felt that it was useless to plant crops that we could not find help to harvest.

"Today we are talking of increasing our crop production to meet needs such as the world has never faced before, and we are ignoring entirely, or almost entirely, the fact that we are facing a labor shortage that is to become more and more serious as men by the millions are drawn for our army and navy, for building ships and the manufacture of munitions. We cannot hope to increase our crop production to any considerable extent unless we can increase or make more efficient our present supply of farm labor."

This was the bomb. Previous speakers had referred in a casual way to the necessity of increasing labor by possibly encouraging women to drive mowers, rakes and cultivators. We had been advised that Sunday work would be looked upon with less disfavor, and we had been told that farmers in Europe were making longer days and forgetting holidays, but we had not had the matter of the

importance of farm labor brought home to us in so forcible a manner before and in a way which made it clear to us that, important as all the suggestions had been, the one big thing necessary to increase food production was to increase farm labor.

Continuing, Mr. Orme said: "As one means of helping out the situation we should mobilize the school boys of the country, those between the ages of 14 and 18 possibly. These boys should be organized under some sort of a military system, with camps and complete supervision. In this way we can utilize a great deal of labor which will otherwise be idle or inefficient, and at the same time the boys will be the better for the experience."

There was more said regarding the regulation of the hours of farm labor and standardizing wages, but with his talk on the organization of the school boys, was born the big idea of the "Boy's Work Reserve," the first, so it is said, that was organized in the United States and which has been patterned after in hundreds and possibly thousands of camps throughout the country.

A few days later this plan was discussed at a meeting of the Phoenix Rotary Club and the organization and supervision of the Boy's Work Reserve outlined and enrollment immediately begun. Four of the high school instructors, including the head of the agricultural department, were appointed to look after the welfare of the boys and carry out the plan. One of the instructors was made commissary commander. A local lady physician who had given a good deal of thought to the study of dietetics prepared a menu. The sanitary conditions were looked after

most closely. Each boy was expected to keep his cot and personal belongings in first class shape.

The amusement features were looked after by the local Y. M. C. A. Regular hours were set for rising, breakfast, military drill, inspection of cots, work, the mid-day meal, afternoon work, supper, recreation, "lights out" and sleep.

There were those who prophesied that the whole thing would prove a failure, that most of the boys being unused to work would find the regular hours and the routine irksome and would quit. There were some of course who expected that the boys would get sick or be unable to stand the work, but all of these doubting Thomases were doomed to be disappointed.

One hundred and twenty-nine boys were enrolled and went into camps May 28. Fifty-seven of these boys worked every day for two months. Seventy-three boys won honors and an outing in the hills, for good conduct and steady work.

Some of the younger boys were allowed to work only seven hours daily. In fact the hours were regulated according to the age and the physical strength of the boys, from seven to eleven hours.

Twenty-seven different farmers or firms were worked for during the season. A total of 2220 acres of cotton was hoed by the boys. Twenty-five acres of potatoes were dug and 85 acres of cantaloupes were picked 20 times. Different kinds of work brought different prices, and the boys were paid according to what they could actually earn. This varied from 15 cents to 40 cents per hour. The total amount earned during the two months was \$7,670.45.

July 28 the camps were disbanded that the boys might rest up for school. During the two months two separate camps were maintained. The conduct of the boys was very commendable at all times and the work done was in all cases highly satisfactory to all employers.

At the end of the two months period it was felt that it would be better to disband and give the boys a little rest before school. There were no accidents of any consequence and the health of the boys was excellent at all times. That this most excellent record be not broken was in part the inducement which decided those in charge to disband temporarily.

If labor conditions should be such as to warrant, it is likely that the Boy's Work Reserve will be called out this fall for a period to help save the crops, but whether they are called out again this season or not they have aided very materially in making this season's crops and in setting an example to other school boys as well as to older men in doing their "bit" for the country.

## What is a Ripe Washington Navel?

No Standard Entirely Satisfactory. Extended Experiments by the U. S. D. A. Citrus By-Products Laboratory Form the Data From Which Prof. E. M. Chace Makes Deductions

**S**INCE the publication of the standard of maturity for Washington Navel oranges by the bureau of chemistry in 1915 much interesting comment upon it has been made both by individuals and the press. This standard, popularly known as the 8 to 1 test, was first made public in the fall of 1914 as a tentative standard and was finally adopted after another year's investigations.

The standard depends upon the ratio between the soluble solids and the citric acid contained in the juice of the orange. The soluble solids of the orange consist of from 65 per cent to 80 per cent sugar, the remainder being chiefly citric acid, soluble forms of nitrogen, pectin, and other non-sugar material.

During the first season after the test had been published and given to the California growers many interesting phenomena were discovered by various operators who were constantly testing fruit throughout the citrus regions. It soon became apparent that very green fruit would in many cases pass the test, owing to the fact that the acid had not yet reached the maximum. In the growth of an orange there is a period when the ratio between sugar and acid is comparatively high, and as the fruit matures the acid increases together with the sugar until the former reaches its maximum, after which it will decrease while the sugar continues to increase. This often results in an abnormally

Continued on Page 174



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"50-50" means that I stand ready to meet you half way on engine prices—sell direct from factory—Make Immediate Shipment—save you \$15 to \$200 according to size. I make nothing but engines—Kerosene and Gasoline—2 to 22 H.P.—give you the benefit of 31 years continuous, practical, engine-building experience. Write for latest price list—all styles—Stationary, Portable and Saw-Rig.

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Extra parts are always available without delay for standard advertised machinery. This class always found in the California Cultivator.

## The Persimmon

By T. Kiyono before Alabama Horticultural Society



HE popularity of the Japanese persimmon is not confined entirely to California. We note in the "American Nurseryman" that T. Kiyono discussed the subject with reference to its adaptation to the Southern states. Because of California's priority in testing this fruit results of experiments there are referred to. Many have believed for years that California was not giving as much attention to this "food fruit" as it should. There are many ways in which it may be processed, and it is one of our best shipping fruits. Mr. Kiyono says:

There are many reasons why the Japanese persimmon has been neglected by Southern fruit growers who have the monopoly, at present time, of growing this delicious fruit. The most important of all drawbacks is that the general public is almost totally ignorant of the value of this fruit or lack knowledge of when it is the proper stage of ripeness to be served. Not only this, the name of persimmon reminded many people of small, seedy and inferior wild persimmons and the desire to taste this new and entirely different fruit had not been aroused; thus majority of people, even in this district, where Japanese persimmons is perfectly at home, have never tasted any Japanese persimmons.

Those who used to despise the Japanese persimmon are now great admirers of this fruit after the trial of right kind, and I know several Americans of high taste who prefer Japanese persimmon to any other fruits. The rich taste of Japanese persimmon does not agree with few persons, but majority of people like it very much at their first trial, although the taste for this fruit has to be cultivated, and as the rule, they like this fruit better and better as they get well acquainted with it. It is a very unfortunate thing that some people have tried Japanese persimmon at wrong stage of ripeness, who will never want to try any more again, and those are the people who will say almost anything against this fruit.

### Dark and Light Fleshed Sorts

When we say "Japanese persimmons" that includes more than two dozen varieties of fruit belonging to two very distinct groups: one group which includes several varieties of dark fleshed sorts with seeds but edible while still hard. Most persimmons we find on present market have to be soft before being eaten unless artificially treated, and while some people who do not like custard-like consistency of this sort are very fond of dark-fleshed sorts which can be eaten out of hand while still hard, just like an apple. Most dark-fleshed sorts are smaller than others and the presence of seeds is objectionable but the quality of flesh is excellent and more attention should be paid to educate the general public with this sort which do not have to be certain degree of ripeness when eaten. Light-fleshed sorts have to be soft when served but with such varieties as Tane-nashi, Hachiya, Tamopan, etc., they must not be too soft. They are ready to be served as soon as the bottom part of fruit close to calyx gets softened. This is the part of fruit which is the slowest to lose astringency. 'Tsu, Yemon and several oth-

ers do not lose astringency till they are so soft that one can hardly handle them properly unless artificially treated, and from this reason they are not very desirable varieties to plant for fresh fruit. Well ripe cold persimmon, cut in halves and served with cream and sugar is really a fruit from the Garden of Eden.

### Good Qualities Not Known

Fruit consuming public is not to be blamed for the lack of interest in Japanese persimmon because growers and fruit dealers have failed to educate the public with a new fruit of this nature. The fact that persimmon is one of the richest flesh-building foods for men and animals, equaled only by date but far superior to figs or grapes, must not be overlooked. Introduction of Japanese persimmon as the staple food affords almost unlimited possibility to enterprising growers or dealers. Not only growers failed in marketing end of persimmon but they also failed to make more study as to the best varieties to plant, care of trees, fertilization, thinning of fruits, pollination, etc., The very reason that Japanese persimmon can often endure great deal of abuse and yet bear profusely, leads most growers to neglect their orchards. Often times, neglected trees over-bear themselves to death. Another mystery of Japanese persimmon with the exception of Tane-nashi was that some trees bear heavy crop of fruit in some year, and again dropped pretty near all fruit in other years, in spite of good care and fertilization. The reason is that most of Japanese persimmon cultivated in this country do not bear any staminate flowers every year, but they produce them once in a while. A few staminate flowering sorts have been introduced in the last few years, which have to be planted among other persimmon trees for pollination to insure regular crop of fruit. Thinning of fruit is almost as important as the pollination because most Japanese persimmons have the tendency to over-bear themselves whenever fruit is set, to such an extent as to break trees down or stunt the trees almost permanently. If the thinning of fruit is persistently followed in connection with good cultivation, proper fertilization and pollination, one can expect regular crops of excellent fruit. Most of those varieties which are considered best in this country belong to those of lesser importance in Japan and our best sorts have not been tried out in this country long nor wide enough to say anything of their value at present, but much can be expected from newer and better sorts which are not known to the trade of this country.

### Artificial Ripening

To market the fruit to the best advantage, growers should familiarize themselves with several methods of artificial ripening. The method most commonly used in Japan is to place well-colored but firm fruit in the keg which was used for "sake," an alcoholic liquor, and keep them air tight from one to two weeks, when the astringency will disappear, while the fruit remains firm. About seven years ago, the bureau of chemistry discovered that if persimmons were placed in carbon dioxide for two to seven days astringency of fruit disappears without making fruit soft nor injuring quality. Those who wish to learn the

detailed account of this process should get Bulletin 141 and 155 from the department of agriculture. There are several other methods of artificial ripening, which I shall not enumerate at this time.

### Dried Persimmons

A large quantity of persimmons dried commercially in Japan, following same fashion as date and fig. Both sun and artificial heat are used for the process, and the product is just like a great, big date without any seed in it. Dried product of average varieties is about 20 per cent of fresh fruit in weight, having very high food value and keeps well without any preservatives, on account of its high sugar content. Dried persimmon is very palatable, and many people prefer them to date or dried fig and any foreigners who travel through Japan will hardly forget its taste. We make many other by-products from persimmon, such as a very valuable preservative for cloth and paper from unripe fruit, and most delicious jelly-like candy is made of ripe fruit. Those who want to know different dishes which can be prepared of persimmons do not have to go to Japan to get recipes, but I refer to Farmers' Bulletin 685, where Mr. Fletcher, of Washington, gave more than a dozen recipes which can be prepared of native persimmon, where we can substitute Japanese persimmon to better advantage.

### Demand Growing

One very encouraging fact to growers of Japanese persimmon is the public demand is increasing quite rapidly. A grower in Fairhope, Alabama, told me that he had to pay freight on a shipment of persimmons to Chicago, seven years ago, but two years later another grower of the same place told me that she received \$8.00 per barrel in the Chicago market. I see now great many more persimmons on Mobile market than five years ago, yet all fruit dealers with whom I made inquiries told me that they can sell persimmon easier now than a few years ago, and many have reported to me that they could not supply the demand.

To summarize the foregoing discussion: Japanese persimmon is one of the most delicious and attractive fruits which have been neglected from the lack of public demand, mainly because it was not educated regarding this new fruit; growers did not make strong effort to advertise this flesh-building food, and they were handicapped by lack of cultural knowledge; growers failed to perfect the method of marketing by the assistance of artificial ripening; growers failed to develop by-product such as dried persimmon, persimmon jelly, etc.

We know now what were the drawbacks of the Japanese persimmon industry in this country. Opportunity is knocking at our doors. Let us grasp it to profit ourselves as well as the general public.

### HIS QUEER FEELING

A naval official praised at a dinner in Washington the old sea dog.

"One of these typical old sea dogs," he ended, "was persuaded one day in Philadelphia to attend a tea. I met him a short time afterward and said:

"Well, Marlinspike, I hear you have been doing tea parties in Philadelphia?"

"Yes, sir" the old salt replied "I did go to one tea party, sir."

"And how did you feel there among all those ladies?" I asked.

"I felt like a sperm whale doing crochet work," he replied."



## Agricultural Restoration in France

**I**NTEENSELY interesting is the account in a recent Scientific American of the agricultural work done by the French army in lands from which the Germans have recently been driven. Tree surveying has played a most important part in this restoration.

Truly remarkable, then, is the announcement recently made by French officials to the effect that work is progressing rapidly in the devastated districts, and that already there is promise of abundant crops in the recovered provinces. It happens that the Germans, needful of every bit of food they could possibly raise in any of their occupied lands, planted crops in these provinces, fully convinced that they would reap the harvest. And even, to their surprise, they were driven out, or at least decided to execute one of inimitable 'strategic retreats,' they were unable to destroy their plantings.

It so happens that France is an agricultural country, and her army numbers many workers of the soil; so when the French army recovered the provinces the soldiers on furlough offered to work the erstwhile German lands. Implements have been rushed from the interior to the newly ac-

quired regions, and work is proceeding satisfactorily on the military farms. Tens of thousands of acres bear signs indicating that they are 'Cultivated by the Army.'

"The fruit trees which the German invaders ruthlessly slashed and cut down presented a more serious problem. Yet when the French tree surgeons came upon the scene they soon found means of salvaging the grand old fruit trees which were the pride of the former French inhabitants. Correspondents tell us that thousands of these fruit trees are to be seen today in full bloom, with their trunks tied up with bandages in much the same way as a human arm undergoing medical care. Trees cut down have been raised, straightened, and the trunk properly reenforced with stout splints, with the result that many of them have been saved.

"Roads which were full of gaping holes caused by exploded mines, bridges, and other public works have been leveled and replaced. Indeed, all that still remains to remind the French and their British allies that those provinces were converted into a desert by orders of none else than von Hindenburg are the thousands of wrecked homes, churches, town halls, and schools. And these, too, will be speedily replaced by others."

## All Plants Subject to Parasites

All plants are subject to attacks by parasites. These parasitic enemies are different in structure as the plants on which they feed. Some parasites are microscopic plants called fungi, and are the causes of such well known diseases as apple scab, brown rot, and wheat rust. Others are known as bacteria, producing the virulent fire blight of fruit trees. All others are not plants at all but insects.

Of all plant parasites undoubtedly the insects have received most attention during the last 30 years. Their small size has rendered them obscure. Their obscureness has allowed them to multiply year after

year without being combated. Their increasing numbers have resulted in the death of thousands of trees, shrubs and green-house plants each year throughout this country. Hundreds of different kinds of scale insects exist. Some are large and active throughout their entire lives. The mealy bugs of the greenhouse are typical examples. Others are small and sedentary, becoming immovable soon after they begin feeding. The San Jose and citrus scales are well known species of this type. The ravages of such pests are so expensive that farmers of the United States are annually paying thousands of dollars either directly or indirectly to scale insects.

## Fumigate

**S**PEAKING of the necessity for general fumigation the Covina Argus says:

After the completion of a careful summer survey of the citrus groves of Southern California, horticultural inspectors are making reports which are briefly as follows:

"The hot weather of this season has led a great deal of black scale. There are evidences that considerably more scale has been killed by heat this summer than in previous years, owing to the intensity of the heat. But black scale has by no means all been killed. There is plenty of scale in evidence in every locality, which if neglected will seriously affect the crop of 1918 and seriously the crop of 1919. A thorough fumigation must be made in all orchards, to prevent this loss."

Ranchers have come generally to recognize that every year is a fumigation year in the Southern California citrus groves, no matter what has happened to lessen the scale. Hot weather does not assist the situation notably for the rancher to any great extent, for the foundation of scale control lies in the killing of practically all the scale, not 75 per cent of it

nor 80 per cent nor 90 per cent. An efficient control must be one that shows 99 per cent of elimination, or better. One half of one per cent of scale left in the orchards will not harm the orchards, but any larger amount will leave a residue sufficient to cause the loss of a part of the crop, and it is quite likely to be a large part of the crop. Scale in the orchard is one of the greatest causes for crop shortage that the citrus rancher is confronted with.

The situation now confronting the rancher is practically this—that the fumigation this year will have less scale to deal with than in former years, but 99 per cent of the scale now on the trees must be eliminated, or serious crop loss will result.

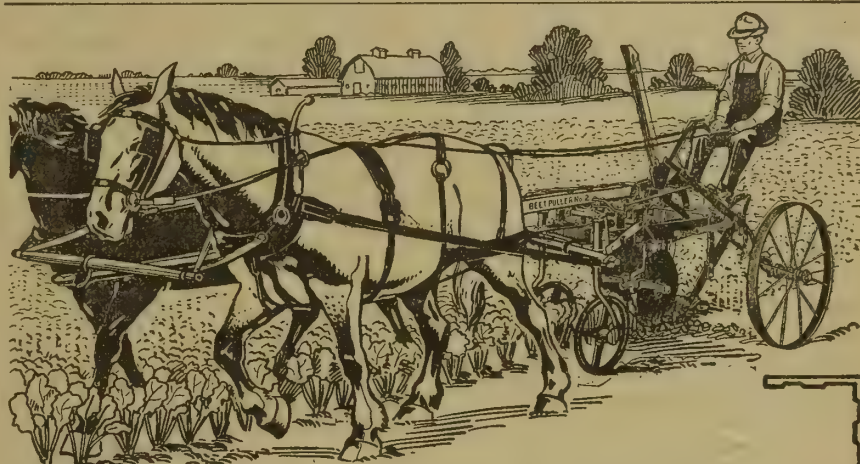
According to fumigation experts and horticultural men it is now time to begin fumigation in most parts of Southern California. Some groves in this country have arrived at this condition all of a month earlier than is usually the case, owing to the unusual weather conditions that have prevailed. The information is being sent out that ranchers should investigate conditions at once, and determine for themselves if this is true, and begin fumigation at a time when the height of effectiveness can be obtained, and at a time when fumigation companies can handle the business without too much hurry and congestion of business.



CUSTARD APPLE OR CHERIMOYA

In Mexico the common name of this fruit is spelled "Chirimoya." Evidently a different spelling is used in Peru, giving rise to the specific name Chirimolia and the English adaptations,

"Cherimoya" and "Cherimoyer," the latter most commonly used in the British colonies. Though the fruit came to California from Mexico, the spelling "Cherimoya" has been generally adopted.



## Moline Foot-Guide Beet Puller

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### MOLINE Walking Beet Puller

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Listers Potato Diggers  
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The Gasoline of Quality



Clean cylinders because Red Crown explodes completely, having correct boiling points in a continuous chain.

Standard Oil Company (California)

## Clean Cylinders



# STANDARD OF MATURITY FOR THE WASHINGTON NAVEL ORANGE

Continued from Page 171

high ratio for a short period, followed by a normal and lower ratio before the final ripening period sets in. An illustration typical of these cases was found in a Nordhoff grove. On December 26 the fruit from the selected tree in this grove contained juice having 11.8 per cent soluble solids and 1.63 per cent acid, giving a ratio of 7.2. On January 2 the solids had risen to 12.3 per cent and the acid to 1.75 per cent, giving a ratio of 7.0. On January 9 the figures were 12.4 per cent solids and 1.77 per cent acid, the ratio still being 7.0. On January 16 the solids were 12.2 per cent, the acids 1.81 per cent, with a ratio of 6.7. One week later on January 23 the solids were 12.7 per cent, the acids 1.43 per cent, with a ratio of 8.9. On February 1 the solids were 12.5 per cent, the acid 1.46 per cent, the ratio being 8.6. On February 16 the solids were 12.6 per cent, the acid 1.57 per cent, the ratio being 8.0. On February 23 the solids were 12.8 per cent, the acid being 1.38 per cent, with a ratio of 9.3. After that date with one exception the solid-acid steadily increased.

While it had been recognized during the first season that some very green fruit would pass the standard it had not been thought that such fruit would be given commercial consideration. There has unfortunately been some attempt to take advantage of this fact and to ship fruit even before it had begun to approach the final stage of maturity, and the Protective Association in Tulare County in order to meet this condition adopted a color standard which prohibited the sweating of fruit before it had

reached a color in excess of 50 per cent.

It was also discovered that unless the juice was thoroughly extracted from the pulp of the orange that the correct solids-acid ratio could not be determined. Oranges which are very lightly squeezed have a lower solids-acid ratio than those which are thoroughly pressed. This is due in a large part to the fact that the pulp nearest the center of the fruit, which is first removed by the usual method of squeezing, contains more acid and less sugar than that near the rind.

Another phenomenon was brought out in the fact that oranges, the juice of which contained a high percentage of soluble solids and were therefore high in sugar, were found to taste sweeter than those containing a low percentage even when the ratio of acid in the sweeter orange was higher than that in the poorer. This has led to many suggestions for a sliding scale which would exempt from the standard to some extent oranges containing high percentages of soluble solids. Peculiarly most of these suggestions came from regions where the fruit does not mature early and therefore does not attain a high content of sugar soon enough in the season to permit early shipments even under a very liberal sliding scale standard.

Practically no data have been submitted with the suggestions made, and where figures were used as a basis of suggestion they were from a limited number of analyses confined to one or two localities. The purpose of the present paper is to place before those interested in the subject, in a condensed form, such data as have been collected in all districts, which bear upon the question.

The purpose of the maturity standard is primarily to protect the consumer who purchases fruit which is fully colored, under the impression that he is obtaining food which will be satisfactory to his taste. Indirectly also the standard is a benefit to the orange grower in that it assures him that the purchaser will be satisfied with the fruit which he is selling, and in this way create a demand for it. Thousands of dollars have been lost by the California industry in the past by shipment of both immature and frosted fruit, in which the purchaser was unable to detect the defect, and from which he turned after a single experience to other satisfactory fruit which was available at the time.

In the preparation of a sliding scale the first question which must be decided is that concerning the point at which exemptions from the present standard should begin. In the light of our experience, extending over three seasons in California, we believe that an orange should only be exempted after the juice has reached a minimum of 13 per cent soluble solids, but in order to test the question fully a set of sliding scales have been prepared, beginning at 13 per cent soluble solids, and lowering the percentage in one-half per cent steps until 11 per cent soluble solids has been reached.

Thus if a sliding scale should be adopted which was based on 13 per cent soluble solids, fruit must contain juice having 13 per cent of soluble solids or over to come within this scale. Fruit not having reached 13 per cent would necessarily have to pass the 8-1 standard. If however it contains 13 per cent soluble solids it would pass the standard when the ratio of soluble solids to acid reaches 7.5 to 1. Further, if the soluble solids had reached 14 per cent then the ratio

at which the fruit would pass would be lowered to 7-1, and so on as set forth in the following table:

## Scale Based on 13 Per Cent Soluble Solids

Soluble solids in juice	Minimum ratio for passing
13 to 14 per cent.....	7.5 to 1
14 to 15 per cent.....	7.0 to 1
15 to 16 per cent.....	6.5 to 1
16 per cent and over.....	6.0 to 1

The second sliding scale to be considered is based on a minimum of 12½ per cent soluble solids; that is, in order to be included in the exemptions of this scale, the juice of the fruit must contain a minimum of 12½ per cent soluble solids. Fruit, the juice of which had not reached that figure, would still have to pass the 8-1 test. The following table shows the exemptions from the 8-1 ratio, which would be made by the adoption of this scale.

## Scale Based on 12½ Per Cent Soluble Solids

Soluble solids in juice	Minimum ratio for passing
12½ to 13½ per cent.....	7.5 to 1
13½ to 14½ per cent.....	7.0 to 1
14½ to 15½ per cent.....	6.5 to 1
15½ per cent or over.....	6.0 to 1

The third set of tables illustrates exemptions which would ensue from the adoption of scale based on 12 per cent soluble solids, 11½ per cent and 11 per cent.

## Scales Based on 12, 11½ and 11 Per Cent Soluble Solids

### Sliding scale on basis of 12 per cent soluble solids

Soluble solids in juice	Minimum ratio for passing
12 to 13 per cent.....	7.5 to 1
13 to 14 per cent.....	7.0 to 1
14 to 15 per cent.....	6.5 to 1
15 per cent or over.....	6.0 to 1

### Sliding scale on basis of 11½ per cent soluble solids

Soluble solids in juice	Minimum ratio for passing
11½ to 12½ per cent.....	7.5 to 1
12½ to 13½ per cent.....	7.0 to 1
13½ to 14½ per cent.....	6.5 to 1
14½ per cent or over.....	6.0 to 1

### Sliding scale on basis of 11 per cent soluble solids

Soluble solids in juice	Minimum ratio for passing
11 to 12 per cent.....	7.5 to 1
12 to 13 per cent.....	7.0 to 1
13 to 14 per cent.....	6.5 to 1
14 per cent or over.....	6.0 to 1

(Mr. Chace has given tables showing percentages of fruits in different sections of the state at certain picking periods. Because of length these are omitted.)

The fact that no increase in the amount of fruit which could be shipped from a district would be obtained by the introduction of these sliding scales may be due to two reasons: First: A large percentage of the samples collected may have passed the 8-1 standard. Districts of this type include Orange, San Bernardino and Riverside Counties. There are subdistricts however where some increase in early shipment would be permitted by the adoption of a sliding scale, which is not apparent when the averages for the counties are considered. A striking case in point is the district of Upland, where of the 41 samples examined before February 15 but 12 per cent passed the 8-1 test; while based on 13 per cent soluble solids the number would have been more than doubled and more than tripled when the scale was based on 12½ per cent. In Orange and Riverside Counties the local districts coincide reasonably well with the county averages. Second: While a small number of samples may have passed the 8-1 test there may not be a suf-

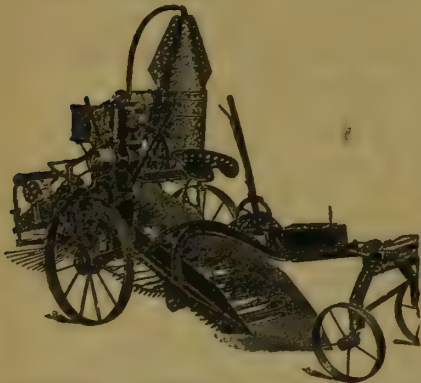
ficient number of samples contained above the average percentage of soluble solids to bring the fruit within the exemptions permitted under sliding scale. In other words, in some districts good fruit would not be affected because it already passed 8-1 standard; in other districts poor fruit would not be affected for the reason that it does not contain a sufficient amount of soluble solids to come within the exempted classes.

Considering the matter as a whole while there are undoubtedly exceptions to the rule, it does not seem that the adoption of the sliding scales here presented would materially increase the volume of early shipments. Of course it can be said that the exemptions are not sufficiently liberal to permit any considerable increase but as has been previously stated the purpose of the standard is first of the protection of the consumer, and when we consider the averages of the districts it does not seem that a sliding scale is worthy of adoption which is based on less than 13 per cent soluble solids, or certainly less than 12½ per cent; for if percentages lower than those are considered the scales will be based on figures which is not much above the average of that sent from California during the shipping season.

Among other suggested standards which have been offered as a substitute for the 8-1 standard is the color standard. It is a well-recognized fact that the oranges in the several districts of California do not color with equal rapidity. In some districts oranges color before they sweeten in other districts they are quite sweet before colored, and the trouble with the color standard is that it will permit the shipment of very sour oranges from some districts and will prohibit the shipment of sweeter material from other districts. It is possible that this discrepancy may be taken care of by sweating in districts where the coloring is not so rapid and that the market will take care of the more and more poorly-colored fruit.

The following summary is made from data collected during three years' work on the color shown in samples of oranges received at the laboratory. In the summary the term "substantially colored" is used to denote color in excess of 75 per cent. This is merely a relative term and the division is made at this point solely for the reason that it was considered that oranges which had colored to this extent might be shipped without sweating.

In Butte County 21 samples of standard oranges were substantially colored against 29 samples of standard oranges, and but two of the standard samples contained less than 75 per cent color. In Sacramento County the ratio is very different, for 15 samples of standard oranges were substantially colored while all of the standard samples (12 in number) were above 75 per cent. In Placer County the ratio of fully colored standard samples to fully-colored standard samples is 9 to 3; in Solano County, 1 to 2. In Fresno County on the other hand but 12 samples were below the 8-1 standard were substantially colored; while 34 standard samples were up to that mark. Tulare County, which is one of the districts where the fruit becomes sweet before it changes color, shows but 4 substandard samples colored above 75 per cent and 444 standard had reached that color. In Los Angeles County 147 substandard samples were 75 per cent to 100 per cent colored against 360 standard samples of the



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color. In Orange County there e but 9 substandard samples substantially colored against 57 standard ples of the same color. In San ardino County the ratio was 40 191. In Riverside County only 1 standard sample was substantial- colored, while 98 samples above dard had reached 75 per cent. In tura County the ratio is 15 to 53. onsidering these data from anoth- point of view it was seen that in e County with the samples below tio of 6-1 the greater part are very an; with a ratio of 6-7 the oranges about evenly distributed between four classes of color; from 7-8 the ority are fully colored. The stand- oranges are practically all sub- tially colored. The same is true acramento County when fruit be- a ratio of 6-1 is considered, but n it reaches a ratio of from 6-7 a ter part (that is, 19 out of 24 ples) is substantially colored; n a ratio of 7-8, 16 out of 17 were ntially colored, while all the idard fruits had reached that col- In Placer County the same fact is true for fruit below the 6-1 o; between a ratio of 6-7 the sam- were evenly distributed as to r, but from 7-8 and above standard samples were fully colored. In sno County the color begins to ap- r in samples with a ratio of 6-7; een 7-8 nearly 50 per cent of the ples were fully colored, and above ver 80 per cent had reached the stage of color. In Tulare County w 6-1 no samples are substantially red; samples having a ratio be- en 6-7, only 7 per cent are sub- tially colored; between 7-8 25 per t; above standard over 75 per cent he samples are well colored. In Angeles County samples having tio below 6-1 over 20 per cent are l colored. Those having a ratio een 6-7 over 50 per cent are well red; those with a ratio of 7-8 rly 90 per cent are well colored, le samples above standard are ctically all fully colored. In Or- e County none of the samples be- ratio of 7-1 were substantially col- ; 9 out of 15 samples with a ratio een 7-8 had reached that color, le all of the above standard sam- were well colored. In San Ber- dino County 15 out of 21 samples a ratio of 6-7 were well colored; ut of 38 with a ratio of 7-8, and r 90 per cent of the standard sam- were well colored. In Riverside nty also over 90 per cent of the ples were substantially colored. Ventura County all of the samples mined were fully colored, 4 out of aving a ratio of 6-1 to 7-1; 11 hav- a ratio of 7-1 to 8-1; and 53 being ve standard. Considering these data as a le it will be interesting to com- e the averages obtained on all the ples for the period during which k was carried on. These averages, ether with the number of samples, given in the following table:

District	Number samples	Solids	Ratio
te	110	12.17	7.3
ramento	96	11.17	6.4
er	22	12.32	6.5
sno	67	11.49	9.6
are	808	11.91	9.3
tura	68	13.42	9.4
Angeles	562	12.47	9.1
nge	73	12.00	9.7
Bernardino	358	12.95	9.9
erside	172	12.65	11.0
Averages		12.25	8.8

Summary  
The introduction of sliding scale standards would not allow any considerable increase in the early shipments of oranges. While certain limited lot- ties might increase early ship- ments by such changes in the present dard, the increase in shipments ould be comparatively insignificant. Adoption of a sliding scale based 13 per cent or 12½ per cent soluble ds would have very little effect n the industry.  
The adoption of a color standard permit the shipment of a con- siderable quantity of oranges which e not reached the 8-1 test in a at majority of the districts, and in ew districts will permit the ship- of very immature and sour or- es.

# Grapefruit in California



THE question of growing the grapefruit, or pomelo, in California is a live one, though some have urged that the planting be very limited. For many of us the Califor- nia fruit with its "tang" is far more appetizing than the sweeter, juicier Florida fruit. The trade generally does not agree on that point, hence the warning "plant with care."

At the last state fruit growers' convention held in the southern end of the state, at San Bernardino, A. D. Shamel of the United States depart- ment of agriculture discussed the pomelo question so fully that we quote from his paper:

The poor reputation of California grapefruit as a whole, particularly in many Eastern markets, has led many people to doubt the advisability of any attempt to grow or at any rate ex- tend the culture of this crop commer- cially in California. Amongst the causes for this condition three of spe- cial importance may be mentioned: first, the planting of inferior varieties or those not suitable for California conditions; second, the planting of grapefruit trees on soils and under other conditions not adapted to the production of the best qualities of fruits; and third, the attempt to mar- ket the fruit before it is ripe.

The early plantings of grapefruit in California were of Florida varieties which were selected without much knowledge of their adaptability to California conditions. It is only in recent years that any real knowledge has been developed of the compara- tive value of several varieties for this state. Of the varieties fruited so far, one, the Marsh Seedless, stands out clearly as particularly adapted for California conditions and is of genuine commercial value.

It is becoming more and more evi- dent that the grapefruit trees planted on rather light, porous, and sandy soils produce fruits of superior com- mercial quality, color, and texture of rind to those planted on the heavier clay soils. That there is a relation between the character of soil and com- mercial quality of fruits can hardly be doubted. Many of the older grape- fruit orchards were planted on the lower valley and heavier soils, while most of the more recent plantings have been made either on higher lands having lighter soils or on soils possessing the desirable characters of texture and other conditions found by experience to be best for the pro- duction of this fruit.

A part of the California grapefruit crop is usually picked green or before it has fully ripened, and as a result its quality and flavor is frequently poor. An early variety is needed, producing fruits which will ripen from October until February, and this is one of the achievements worthy of the serious attention of citrus breed- ers and propagators. As a rule the California grapefruit crop of the es- tablished valuable variety ripens from May until July and some of the fruits can usually be held on the trees un- til September. Under proper condi- tions these late fruits can usually be held in storage safely until about the last of November with constantly im- proving flavor and little loss of weight from shrinkage. These condi- tions are: first, a uniform, cool tem- perature; and second, a uniform con- dition of humidity of about 90 per cent. The uniformity of humidity can be secured by ventilation and the use

of proper humidifiers. The condition of humidity in the storage rooms should be carefully determined by means of the sling psychrometer two or three times each day. Naturally the fruits for storage must be picked with the best of care in order to elim- inate so far as possible all mechan- ical injuries which are likely to re- sult in decay, the development of which is particularly favored by the high humidity necessary for success- ful storage conditions.

## Varieties

Of the Florida varieties of grape- fruit planted in California the ones most frequently tried have been the Triumph, Duncan, and Marsh Seed- less. The writer has been shown in- dividual trees of other varieties in several Southern California orchards, but knows of no commercial plantings in bearing of other varieties than those named above. Trees of so-called seedling origin or of uncommon and probably comparatively recent in- troductions have also been found in fruit in a few places. As a matter of fact the writer knows of no careful and adequate comparative trial of grapefruit varieties in California. The extensive propagation and planting of a carefully selected and extensive col- lection of types and varieties under- taken by the citrus experiment sta- tion at Riverside will undoubtedly give us much needed and reliable in- formation as to the comparative mer- its of the established varieties from Florida and other grapefruit districts in this country and abroad, for Cal- ifornia conditions.

The Triumph grapefruit trees in Southern California observed by the writer produce large yields of rather small fruits, containing many seeds, usually from 25 to 50 in each fruit. This character bars this variety from serious consideration for commercial planting in California.

The Duncan grapefruit trees ob- served in Southern California tend to produce rather large, round fruits, usually containing more than the number of seeds desired for market purpose. The fruits observed have had thick rinds as a rule, the quality of the juice was somewhat inferior, and the rag was coarse in texture and very bitter. The last characteristic may have been due to local condi- tions, as no comparison was made with other varieties of grapefruit

grown under the same conditions. The Imperial, Colton Terrace Seed- ling, Auranium, Commercial, and Blood varieties and types of grape- fruit, and the Sampson tangelo, have also been propagated and planted to some extent in California. The re- sults of these plantings have not as yet demonstrated them to be a com- mercial success in California. Simi- lar isolated plantings of related and other varieties of grapefruit are still in the experimental stage so far as California is concerned and need not be considered further in this discus- sion.

The Marsh Seedless, or Marsh, variety of grapefruit has been found to be the best of all the varieties grown in California and in districts having similar conditions. If all of the plantings in California of vari- eties other than Marsh Seedless from which fruits are marketed, were re- placed by Marsh Seedless, either by replanting or rebudding the establish- ed trees, the writer is strongly of the opinion that the result would be very beneficial to the industry as a whole.

According to Hume, the Marsh Seedless variety was introduced in Florida by C. M. Marsh, of Lakeland, Florida. The original tree was said to be a seedling, although the writer wishes to point out the fact that near- ly all fruit growers upon finding an unusual tree in their orchard have called it a seedling. This universal custom is responsible for much mis- information concerning the origin of fruit varieties. The writer would like to suggest to citrus fruit growers and others that unless it is definitely known whether or not a tree originat- ed from a seed or a bud, the origin of the tree be left in doubt and a simple statement of the facts concerning the finding of the tree be made and re- corded. There is no longer any reason or excuse for anyone jumping to the conclusion that an odd or unusual tree must of necessity be of seedling origin.

In connection with the history of the origin of this variety the further statement is made that "this pomelo has not the distinct, pronounced flavor of the typical fruit, but the quality is good and the fact that it is so nearly seedless is a very desirable feature." This statement concerns Florida grown grapefruit and is a comparison of the Marsh Seedless with other Florida grown varieties. It is an illustration of the fact that the behavior of a variety in one sec- tion of the country is not a reliable criterion of its behavior in other dis- tricts having different climatic, soil, and cultural conditions.

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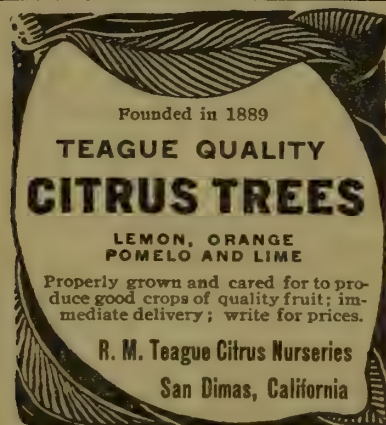
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# Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

### Turkeys and Chickens Poisoned

I had 25 young turkeys of three or four different ages. One day they started taking fits and inside of three hours they were all dead. The next day several chickens died. They just went up to the water and drank and then threw their heads back and took fits. I threw out a beef heart that was covered with red ants and they ate from it. Do you think it might have been the ants? They were used to having fresh meat as we fed them jack rabbits but not that day or the day before, so it was not poisoned rabbits.—Subscriber, Huron.

I do not know how the eating of poisonous ants would affect chickens or turkeys, but the symptoms in this case are those of violent ptomaine poisoning, and I would rather think the meat was tainted and the birds poisoned by it than blame the ants. If the meat was perfectly fresh and sweet, however, we shall have to conclude that the ants either poisoned the turkeys that swallowed them or the meat over which they ran. Won't some reader of the Cultivator who has had experience with red ants come to the rescue and enlighten us as to the probable effect on chickens and turkeys of eating them? As a rule, the birds know better than to touch such things but there may be exceptions.—J. A. K.

### Farm Loan

I wish to know exactly where to apply to get a loan through the federal farm loan board.—Subscriber, Orange County.

Write Federal Farm Loan Bank, Berkeley, for particulars as to organizing a local farm loan board or, better, to learn as to whether one has already been organized near you.

### Trespassing Poultry

Does poultry have the right to run at large, or are the owners required to keep them from doing injury to other people's crops? What are the proper steps to take to prevent this trespass?—Subscriber, Heber.

Unfortunately our laws in relation to livestock at large are in such a condition that legally it is almost impossible to compel a person to keep his stock at home. If one has his place surrounded by "substantial fence" then the law permits collecting damages for any injury the stock may cause. Whether it would construe "substantial fence" to be such as turns poultry no one seems to know. The best way to control such a matter is the exercise of common neighborliness. There are but few people in this world but will not take care of their own stock when requested to do so and where damage is being caused to adjoining property. Of course there is always the stray law, but the cost of having stock impounded and cared for is greater than that which the law compels the owner of the stock to pay for its keep. This permits the overbearing stock owner to cause serious injury to neighbors property.

### Potato Tuber Moth

I send potatoes. What is wrong with them? The infection seems to spread among good ones. What is this bug or insect which infests them? Does it exist in the soil and crawl into the potato or what is its method of work?—Subscriber, Somis.

This is the larva or "worm" of the

potato tuber moth, *Phthorimoea operculella*. They do not exist in the soil, or rather do not inhabit the soil and from there enter the potato, but the egg is laid on the potato, or sometimes on the stem of the growing plant, and secures entrance as soon as hatched, by burrowing. The "worm" will vary from 1-16 to 1-2 inch in length according to the age. The eggs may be deposited on potatoes after digging if they are left exposed in the field or in the shed and in that way the larva which changes its form into the moth perpetuates its species. Your good potatoes should be separated at once from those which are infested and placed where the moth may not reach them to deposit their eggs. Owing to the high price of potatoes it would perhaps be well even to treat those which are infested with carbon bisulphide, putting all the potatoes in a tight box or room and using a pint of carbon bisulphide for every thousand cubic feet of space in the room. The infested potatoes should be disposed of as soon as possible after digging or they will be the cause of serious loss.

### Planting Geraniums

When is the best time to plant geranium hedges where cuttings are to be used?—Subscriber, Somis.

The geranium is an exceptionally hardy plant. It will stand for "slipping" and planting almost any season of the year. The nearest to complete failure we have ever seen has been when they were planted in full flow of sap in the month of June. If they have not been given an abundance of water and are partially dormant, any time from now on would probably prove satisfactory. Some of the best results we have ever seen with geraniums is where the tops have been taken off and been prepared for slips or cuttings, then left in the open air for several days before being placed in the soil.

### Building Brooder House

I am building a brooder house 10x12 facing the south. Am going to put in four sash 34x34 in front. How high should they be from the floor to get the most sun on floor space, and what size brooder stove should I use? What suggestions can you make as to ventilating same?—Subscriber, Pasadena.

The windows should be on a level with the floor so that the chicks may have the extra warmth of the sunshine shining directly through the glass and may have the utmost amount of light on the floor where they must of necessity remain. Watch a brood of chicks crowding against the glass of their brooder as the sun begins to sink and you will realize how unhappy they would be if they could not look out. The size of the brooder stove depends entirely on the number of chicks to be hovered. The bigger the flock the bigger the stove. Any brooder stove catalogue or dealer in poultry equipment will tell you how large a stove you need for the number of chicks you plan to rear in one flock. It is well to remember that the number of chicks a given brooder will care for is apt to be overestimated. Many a brooder which is advertised as large enough for 100 chicks does better work with 50 or 75. Most brooder stoves and heaters are supplied with their own ventilating system. This is the weak point, however, with so many otherwise excellent de-

signs, that the addition of a couple of small windows high up on opposite sides of the house, which can be opened and closed at will, could hardly come amiss. You will do well to put at least one of your windows on pulleys so that it can be raised the middle of the day. Chicks need fresh air just as much as they need heat.—J. A. K.

### Drake or Duck?

Please let me know how I can tell drakes from ducks? Mine are three or four months old.—Subscriber, Strathmore.

It is difficult with most breeds of ducks to distinguish between the sexes before they are mature. A drake is heavier, his voice is deeper and hoarser, and his tail has a more pronounced curl, but these differences are in many cases so slight that they are hardly noticeable even when the birds are full grown.—J. A. K.

## Legal Queries

Louis B. Stanton, attorney, 243 Wilshire Building, Los Angeles, will answer legal queries in this department.

Immediate mail replies cannot be given except where fee to Mr. Stanton is paid. When replies are wished in Cultivator address query to 115 1/2 N. Broadway, Los Angeles.

### Windbreak Destroyed

I hired a man to care for and water a windbreak on my ranch. Ran cattle broke the fence and destroyed the windbreak. Can I require the hired man to put up the fence and pay damages for the trees?—Subscriber, Chatsworth.

It would hardly seem from the statement of the case that the man you hired contracted to protect your windbreak and fence from cattle. If he fulfilled his duties of caring for and watering the trees it will seem that that was as far as he was required to go; hence, you would have no redress as against this man. Possibly you might have a cause of action against the owner of the cattle.

### Infringing Patent Right

Does the law require that if an article is patented it shall be so stated on the article? Is one justified in assuming that a new article just received from the factory, bearing a statement of patent or intention of patent, has not been patented? In such case would a person have a right to make it for his own use or sell it to others?—Subscriber, Fellows.

Patentees are required to give notice that their articles are patented by placing a notice to that effect on the articles wherever possible, but if impossible, as in the case of medicines, then upon the article containing them. In the absence of such notice on the article no damage can be collected for infringement unless after actual notice of the existence of the patent the infringer continues to make the article.

### SON OF MINE

Son of mine, as I see you there,  
Engrossed in your book, in your dear armchair,  
Free, as I know, from all worldly care—  
I wonder how long ere the call may be  
That summons you in a trice to be  
Ready to strike for your liberty,  
Son of mine.

Son of mine, I shall have no fear,  
If the call be sounded, that you shall hear  
Your country's voice with an eager ear,  
And shall bravely stand at the first alarm  
Pledging the strength of your strong young arm  
To shield your home and your heart from harm,  
Son of mine.  
—Francis T. Leahy in The Brooklyn Eagle.



# Citrous Ornamentals

Written for California Cultivator By Ernest Braunton

VERY florist and nurseryman in the Eastern states deals in tub or pot plants of ponderosa lemons, Otaheite oranges and other citrous plants. In California trees of this kind are so common that we scarcely consider them as ornamentals. Nothing else so strongly appeals to our first-time visitors. They wish first to pick an orange and then see a palm. Bearing all this in mind it would seem that we overlook what should be a marked characteristic of ornamental grounds. We do grow a few citrous plants of flower value such as *Choisya ternata* but we could employ plants of the genus *Aspidosiphon*, the more ornamental of our species, for example. Then every yard may contain one or more specimens of the better and budded class. Avocadoes, a group or two of guava trees, feijoas, carissas, and other standard evergreen fruit shrubs of acknowledged value as ornamentals. We live in California why not have gardens Californian in tone and color? Why, in such a climate, should we plant cone-bearing trees or deciduous trees, both classes smacking of the north of ice and snow and in general inhospitable rather than inviting. Let us put on figuratively at least a friendly, welcoming front as though we fully realized and appreciated that we live in the land of many opportunities and that we are the world to know it and also to make our pleasures.

## Christmas Flowers

The red floral bracts growing just above and around the yellow flowers of the poinsettia have come to be known as "Christmas Flowers." It is the time to put vigor into these plants. Remember they are natives of Mexico and the needed stimulus is a combination of heat and water. The average garden soil is not enough but in texture it should be light rather than heavy and the drainage should be good. Under such conditions in hot weather poinsettias should have plenty of water; they also need daily spraying to keep foliage free from choking dust. Poinsettias are within the power of every garden owner to have large and attractive heads of scarlet bracts unless Jack Frost catches them first.

## Warm Water

Chilly water is never good for plants either in the soil or on the surface except when plants have been hardened, in which case the colder the water the more slowly will the frost be thawed, with a correspondingly less damage to foliage. All sickly and weakly plants are benefitted, when needing moisture, if the water applied rather warm, and all water at all times and under all circumstances, whether applied to tender plants or to orchard trees, would serve the purpose better if a few degrees warmer than the soil to which it is applied.

## Poultry Manure

On the farm the housewife is generally boss of the garden; also of the poultry yard. Under these conditions it should prove an easy matter to secure the poultry manure for the garden. It is worth three times as much as that from the larger farm animals and is therefore worthy of care. Let it dry and keep it dry unused. It is rich in nitrogen and

poor in phosphorus. It is also in a very concentrated form and if diluted and reinforced a little it becomes ideal for garden use. An acknowledged authority advises adding to every ten pounds of manure ten pounds of other matter, four pounds of which should be acid phosphate. The remaining six pounds should be sawdust or some other dry material. This gives a good balance of the three most necessary elements. Do not mix lime with it at any time.

## Plant More Hibiscus

Where frosts are not severe we cannot grow any flowering shrub of greater attractions than the Chinese hibiscus. No one will deny their claims to beauty for the flowers are large and showy yet not coarse, and the colors are superb. The plants are easily grown, of good foliage and habit, clean and attractive in color. They are particular as to soil or general conditions. But frosts injure them and unless the district is considered fairly free from chilly Jack it is better not to plant hibiscus.

## Monotony in Hydrangeas

For a quarter century we have been growing the beautiful *Hortensia* variety of hydrangea, and no one questions its value as a high class ornamental. But since its introduction many years ago there have been bred many variations of this type; new species and hybrids have been introduced, and thus new forms, colors, etc., may be had. Some of these are superior to the old type, of which we grow so many that somewhat of monotony prevails. Some of the new ones are of dwarf habit and may therefore be planted in situations barred to the larger plants. Inquiry of your dealer will elicit information regarding the new sorts.

## Time for Pansies

It is time now to sow pansy seeds for winter flowers, and one need not spend much money, time or labor in getting a stock of young plants. A single ounce of seeds has been known to produce 50,000 plants. Even dealers buy but one-eighth ounce of high priced seeds and get 5000 plants if good care is given. Put a box of fine sandy soil in a shady place, sow the seeds, merely scratch them into the surface. Water carefully and keep soil damp but never allow to remain soggy. When young plants are large enough to handle, it is better to plant them in boxes, so when they are later planted in the garden a small square of soil may be taken with each plant. This ensures success. Sandy loose soil is best for pansies; coarse, lumpy soil will never do. A light, fine mulch of sifted stable manure will prove a great help if applied to the plant beds.

## Peonies Proving Popular

Peonies are growing in popularity everywhere, largely by reason of the great improvements made in them during the past few years. But in California they are becoming decided favorites whereas a few years ago we grew scarcely any. A deeply stirred soil that is not too heavy and yet is rich in decayed manure (not decaying) is the ideal. We must stir deeply to provide for a moisture holding soil; peonies will not thrive if soil is allowed to dry out. In addition a top mulch of any good material is necessary to keep the soil cool. If these precautions are taken good peonies may be grown, for the best and larg-

est I ever saw grew near Compton, Los Angeles County, during the past year, and they had no special soil or care.

## The Epidermis or Plant Skin

The epidermis of leaves, etc., which corresponds to the animal skin, is just as variable as the latter. In many plants it is tough and leathery; in others thick and corky; in some waxy or oily, and in a few plants contains water holding cells (in the India rubber plant, for example). In cabbage leaves the coating is waxy, doubtless to prevent loss of moisture, but perhaps to also prevent dew or water adhering that would interfere with the stomata or breathing pores. The common nasturtium sheds water from its surface entirely, and even if leaves are immersed in water it comes out with dry surface, and air bubbles from the stomata give the leaves a silvery appearance.

## SWISS CHARD WILL GROW EVEN WHEN WEATHER IS AGAINST IT

Plant some Swiss chard this season. It will grow under unfavorable climatic conditions and the leaves will remain tender throughout the season.

Swiss chard is a form of the beet, the foliage developing more prominently than the roots. The wrinkled leaves may be used as greens or the hard stalks may be cooked and served like asparagus. Chard has as much food value as spinach and tastes much the same. It is more easily prepared for the table, for the leaves are large and easily cleaned.

Cutting off the tops of the plants does not stop the growth. Repeatedly, new leaves will be produced. If a

surplus of chard is grown it may be used as chicken feed as it is relished by the birds.

## VEGETABLE SHOW

We have the premium list of the First National Vegetable Show to be held October 12-20 at Springfield, Massachusetts. This is a gathering of market garden people who will assemble in convention at the time of the show and endeavor to formulate a plan for protecting and advancing the gardening and truck farming interests.

The secretary is Sam W. Severance, Louisville.

## TYING ROPES

The boy who likes to splice and learn all the knots which may be made with rope should see, if possible, "Use of Rope on the Farm," Extension Service Bulletin Vol. XII, No. 5, of the Ohio state university. It is fully illustrated and will teach many a youngster most interesting splices and knots to be made. If postage is enclosed we doubt not the bulletin will be sent to California inquirers. Write the Agricultural College, Ohio State University, Columbus, Ohio.

If I knew you and you knew me—  
If both of us could clearly see,  
And with an inner sight divine  
The meaning of your heart and mine,  
I'm sure that we would differ less  
And clasp our hands in friendliness;  
Our thoughts would pleasantly agree  
If I knew you and you knew me.  
—Exchange.

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Combined with California Cultivator 1914  
Livestock and Dairy Journal, Established 1901, Combined with California Cultivator 1916Published By  
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We guarantee our subscribers against loss through dishonesty of any advertiser in the Cultivator. We do not attempt, however, to adjust trifling differences between subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within 30 days from date of the transaction, and the subscriber must have mentioned the Cultivator when writing the advertiser.

**THIS WEEK'S COVER**

Our Arizona contributor, M. E. Bemis, gives on the third page of this issue some most interesting items as to Arizona's methods in educating labor. More of the same information is given in the illustration on the cover page where some of the husky high school boys are shown shouldering their hoes and doing their bit in time of their country's need.

We have remarked that some of our farmers have been restive under the effort to salvage much of real value from the high school boys' desire to have a job on a ranch, and it must be confessed that it sometimes takes much patience to guide these youngsters into ways of creating rather than destroying. We believe the effort is well spent, and we also believe that this year of all years the youngsters have entered into the spirit of the time and have rendered excellent service and, as Mr. Bemis remarks, an asset has been created for another year.

**STATE FAIR**

The state is planning for a great fair. Manufacturers of tractors and all kinds of farming implements and appliances are arranging for big exhibits. Steel and other supplies are hard to secure, but the manufacturers realize that this is a time when fullest preparation on the part of all agricultural interests is required, and they will encourage this by making liberal exhibits at the coming fair. Livestock people say they will exhibit as never before.

We believe it will be a great fair. The Cultivator wants to do its bit, and to that end will give special attention to the fair in its issue of opening date. It expects to give a bit of history of the state fairs in California. There

will be items as to some of the exhibits that will be there; there will be illustrations of some of the stock. The paper will be mailed on Thursday preceding the opening day, which is Saturday, September 8.

We may suggest for the publication and advertising departments that an opportunity seldom equalled is offered to advertisers to reach a larger number of readers than usual as many copies of this issue will be distributed on the fair grounds during fair week, and the Cultivator, as it always has been, will be there in force.

**A COOPERATIVE WINNING**

Another \$1.50 has been added to the farmer's pocket by cooperation. The price made by the sugar factories of California has, through cooperative effort of the sugar beet growers, been advanced to \$6.00 per ton. This on beets testing 15 per cent sugar. Thirty cents is added for each additional one per cent of sugar.

This means a more just price in view of the quotations on sugar and the conditions of the times. Fruit growers, nearly all of whom are members of cooperative organizations, have benefited wonderfully by their united efforts. The alfalfa growers are winning by the use of the same means. Every year sees an extension of cooperative advantages. The bean growers are now organizing, and others are to follow. With sugar beets averaging close to 19 per cent sugar, \$8.20 will be the price to producers.

**JAPS TEACH AMERICANS**

Producers are finding more and more that there is necessity for cooperation. It has been noted that ever since the Japanese people began producing in California they have been cooperating, though not always in a way which was clear to the American producer.

In the recent special cantaloupe edition of the Brawley News congratulations were extended by the secretary of the Japanese Farmers' Association of the Imperial Valley, and referring to this organization and the necessity of standing together, its secretary, Mr. Shiozawa, suggested:

"What one can't singly accomplish can usually be achieved without much difficulty by a group of individuals. Such must be the aim of all organization, be it lucrative or beneficial; if not, it may be asked wherefore was it made."

The best of it is the Japanese cantaloupe growers are accomplishing results by their organizations. About Los Angeles similar conditions prevail, especially are the potato growers thoroughly organized.

**HARVEST TIME**

California was appealed to to give greater harvests than ever for the feeding of a hungry world. Harvest time is now here, and the full measure shows our response. The barley harvest, now practically finished, shows greater acreage and greater tonnage. The harvest is fully up to expectations, and already the plows have been started for next year's grain. Wheat will be planted far more extensively than the present year.

The bean harvest has begun, and as a rule satisfactory crops are being secured. Some fields were caught shy of water at the time of the hot spell; others not carefully planted nor cultivated will yield only indifferent crops; but the total will be enormous and will be needed.

In potatoes the quantity is great; the quality fair. Tuber moth and methods of growers not thoroughly familiar with best cultural practice are responsible for some low grade product. As to the tuber moth, it is no worse than usual and presumably horticultural commissioners will be fairly lenient in permitting sale of infested potatoes where they are for local consumption. Export stuff, however, must be up to standard.

The truck crop harvest is immense; many were induced to plant perishables without proper consideration of market requirements. This has resulted in consumers in the larger towns buying at low prices.

The citrus harvest now lasts for 12 months of the year. The first of November is usually considered the end of the season, but some Valencias will be marketed after that date and a few of the earlier Navel sections will begin harvesting about the same time. The past year's has been the record crop; the shipments to date have practically reached the 50,000 line, which is the top-notch in former years. Another 5000 cars, possibly more, will yet be shipped.

It has been a great year for California; excepting for citrus fruits another year promises to be even greater.

**FARM LOAN BANK**

"The unfortunate entanglement of officers and directors in the culmination of a series of incidents, each small in itself, might easily have been avoided by a little tact on one hand and frankness and forbearance on the other. They were accentuated by unfortunate newspaper publicity, some of which was surreptitiously given, and some unauthorized statements, all of which were inexcusable. They have now reached proportions which, in the judgment of the board, render it impossible for the parties involved to cooperate to the degree necessary for efficient public service which, of course, is the one controlling consideration."

"There being no other alternative, the board is reluctantly compelled to accept the resignations of Directors White, Douglass and Thomas. The resignation of Dr. Mead is accepted for the reasons previously stated. With a fine sense of their responsibility to the public interest, all parties to the controversy, of their free will and without pressure or suggestion of any kind, have tendered their resignations, in order that this board might not be embarrassed by having to differentiate between them."

After making the report in which the above is included, officials of the treasury department which made the investigation announced appointment of A. W. Hendrick of Nevada, who will act as special appraiser; Willard Ellis of Ogden, secretary-treasurer; John Guill, Jr. of Chico; A. C. Kuhn of San Jose; and W. H. Joyce of Los Angeles as members constituting the board. In referring to the appointment some reports have given Mr. Joyce as president and Mr. Kuhn as vice-president; others have exactly reversed the names.

In any case it is to be hoped that a harmonious working board is in the saddle, and while California is bitterly disappointed that Dr. Mead has retired from this work, the needs of agriculture demand fullest support of this institution. Disappointed applicants for loans should bear with the new board until it has time to get possession of all the details of the business, when we believe applications now being made will quickly be

disposed of. It must be borne in mind that this institution is travelling absolutely new road. This account in part for the rocks which have set some of our calculations.

Applications for loans in this tract have been more numerous than in any other, and this, of course, complicated the situation. Hoping for the complete success of the new management.

**Agricultural News Notes**

Ordinarily Michigan is the bean producing state; this year California is expected to go to first place.

The sugar crop of Hawaii for 1917 is estimated at over \$79,000,000 value. Last year it was valued \$68,000,000.

It is now estimated that the United States will produce this year about 19,000,000 bushels of rice as compared with about 9,000,000 last year.

Machinery has been introduced to the Hawaiian Islands for the manufacture of bags from the fiber in nana plants. The bags will be used as containers for raw sugar.

New Zealand is a great exporter of dairy supplies, the exports last year amounting to 39,847,000 pounds. The shipment was slightly under that of the preceding year, but returns of producers were greater.

New Zealand's wool sales during nine months aggregated 446,000 bales. This was more than 100,000 bales greater than the preceding year. Shipping facilities being light, a little of this stock has gone forward.

Most of the coffee raised in the Hawaiian Islands is shipped to the Philippines. To increase profits the coffee land soy beans and other vegetables are raised between rows of coffee plants, especially when plants are young.

Tasmania is investigating possibilities of shipping apples into New York City. Her harvest time is March, April and May. Tasmanian apples are said to be of excellent flavor and shipments to London have usually been successful.

The government of Italy has established rules governing agriculture which specify often to smallest details methods of work, especially contracts between landlord and tenant. Even methods of using implements and tools are given.

The appeal to the shippers to aid the campaign to lessen car shortage was responded to so liberally that the car shortage on August 1 was one-fourth of what it was on May 1. The railroads are promising to push even car to its limit.

Three large cooperative organizations operating elevators in Saskatchewan, Manitoba and Alberta have over 48,000 share holders and their assets are in excess of \$8,000,000. Last year they handled 90,000,000 bushels of grain.

The soy bean is one of the principal products of Manchuria, the annual production running between 1,500,000 and 2,000,000 tons. The production is increasing rapidly. A new factor affecting production of soy beans is the growth of the new sugar beet industry.

With all the rest of marking up of food products now comes the announcement from Japan that lack of shipping facilities brought about by the war prevents moving of the great tea crop and, local supplies being shortened, six, seven or eight cents per pound is to be added at once.



# Agricultural News Notes of the Pacific Coast

## Northern California

Lake County's crop of pears will be its largest.

Contra Costa County has 2000 acres of almonds in bearing.

Humboldt County's fair at Ferndale begins Tuesday, August 21.

Almond harvest is progressing in all of the producing sections.

"Hop Pickers Wanted" ads are still running in the Northern papers.

It is estimated that California will produce 5,000,000 bushels of rice this year.

The Vintage Festival at St. Helena is to be held August 31 to September 3.

Wild ducks are causing immense damage in many rice fields of Butte County.

Sheep breeders report larger demand for pure breds than any preceding season.

Two salmon packing plants have been erected at Fort Bragg, Mendocino County.

Rice growers are concerned as to securing sufficient storage for this year's big crop.

The commerce on the San Joaquin river in 1916 aggregated 824,223 tons, which was valued at \$42,179,160.

The directors of the state fair are endeavoring to secure a big exhibit for the coming fair September 8-15.

Hops have passed the 30 cent a pound mark, and some large growers predict 40 cents will yet be reached.

The Humboldt County Fair is being held this week at Ferndale. Prof. Abel is judging the livestock classes.

Paradise, Butte County, has harvested the biggest and most satisfactory berry crop ever grown in that section.

A landowner in Butte County is suing a water company because of damage from seepage of waters from irrigation canal.

Many Lassen County pastures have been ravaged by grasshoppers so that livestock men have been compelled to seek other pastures.

Experts of the soil survey department of the United States department of agriculture are making investigations in Nevada County.

The newly organized Pear Growers' Association contemplates the erection of a cooperative cannery unless buyers make a more satisfactory offer.

Articles of incorporation of the California Pear Growers' Association have been filed and the eleven directors have been empowered to effect a permanent organization.

The Nevada County Cannery at Grass Valley is running on beans. The cannery runs on beans, pears and peaches and is paying \$40 per ton for pears, \$40 for best quality peaches and \$60 for beans.

The farm adviser's schedule calls for meetings in Alameda County at Livingston, August 20; Niles, 22; Alameda, 24, and Oakland, 27. The county director's meeting will be at Hayward, August 25.

Land owners in reclamation district 833 in Butte County are refusing to pay assessments "until it has been established that said district is in all respects a valid and legal district and that all the proceedings connected herewith are likewise valid and legal."

## Central California

The cannery at Oakdale, Stanislaus County, is running on peas and beans.

Red spider has made serious inroads on bean crops of the Turlock section.

The Commercial Club of Fresno is aiding in the fruit harvesting labor problem.

The boys agricultural club pig growing contest ended at Kerman, Fresno County, last week.

Stanislaus County reports its harvest of grain ended, the Oakdale section alone producing over 20,000 tons.

The farms of the Oakdale irrigation district will produce at least 500 per cent more than in any preceding year.

Arrests have been made at Terra Bella, Tulare County, because of father and son stealing 18 bags of wheat.

There have been several disastrous fires in Fresno County, nearly all of which are known to be of incendiary origin.

This week, August 13-18, is squirrel week in Tulare County. Horticultural Commissioner Collins has charge of the campaign.

The fruit handling division of the United States department of agriculture recently held a "melon handling exhibit" at Turlock.

The Stanislaus County Swine Breeders will make an association exhibit at the Stanislaus county fair at Modesto, September 17-22.

The district fair to be held at Fresno the last week in September is planning to give special attention to exhibits by boys agricultural clubs.

Souvenir packages of Fresno County's raisins were distributed at the recent International Typographical Union convention at Colorado Springs.

Vineyardists of the central San Joaquin Valley district are urged to abide by the wage scale recently adopted by the Valley Fruit Growers' Association.

The section south of Kerman, Fresno County, is planting extensively to sweet clover and finds that if cut young this clover makes excellent hay and is good pasture.

Wheat buyers at various points in the valley have not been anxious to buy at present wheat prices. Fear of government prices permitting of no increase is given as the cause.

The preserving company at Modesto will can 4,000,000 cans of fruit, nearly double the output of last year. At the present time the cannery is running about 65,000 cans daily.

San Jose Grange Patrons of Husbandry has requested that no farm adviser be secured for that county, but that the work be placed in the hands of County Horticulturist Earl Morris.

Kings County will observe the last three days of August as squirrel poisoning days. Every resident of the county is urged to aid in this wholesale raid. Squirrel meetings are being held in all sections.

Two new dairy laws became effective August 1. The Rose law, providing that cream must be cooled within one hour after milking, and the Satterwaite bill, providing that all butter, ice cream and other dairy products except cheese must be manufactured from milk of tuberculosis-free cows or from milk that has been pasteurized.

## Southern California

Citrus orchards are being fumigated for black and citricola scale.

El Cajon, San Diego County, is discussing the matter of good roads bonds.

The Los Angeles County council of defense is endeavoring to cut consumers prices of fish.

Fumigation cost has been increased about one cent per tree because of higher price of cyanide.

The state will spend \$750,000 in highway improvement in the Imperial Valley during the next year.

California fruit is being shipped from Pomona, Hemet and Kingsburg to the English army in Egypt.

Lima bean growers of Ventura County have decided not to press further sale of this season's crop.

Palmdale, Antelope Valley, grew in 1916 about two acres of beans; this year's crop will be harvested from 2000 acres.

Imperial Valley farmers have contracted their "corn" crop at \$60 per ton. Offers for fall delivery are \$35, however.

Various citrus growers' associations will be holding their annual meetings during the first two weeks of September.

Lima bean growers of Ventura County are taking steps to save all the bean straw which will command a long price this year.

The Southern California Automobile Club has placed over 17,000 signs along the highways of the southern part of the state.

The recently enacted food bill will make provision for new farm advisers, and it is estimated a dozen will be appointed in the near future.

The Imperial Valley cotton growers are urged to sign up with the county council of defense for the number of hands required in the cotton harvest.

The California Development Board will meet at San Luis Obispo September 7 and 8 and discuss labor and other questions of interest to farmers.

Pomona recently shipped four carloads of apricot pits to Santa Clara where their oil is extracted. Germany was formerly the market for these pits.

Beet growers are demanding an increase in price of sugar beets, for with increased labor and all other costs they cannot be produced at present prices.

The war department is asking for bids on nearly 2,000,000 pounds of Irish potatoes and 500,000 pounds of onions for Camp Kearney, San Diego County.

Yucaipa's Southern California Apple Show is to be bigger and grander than any preceding year. The valley will have an output this year of 125,000 boxes.

The state highway commission is investigating "The Rim of the World" in the San Bernardino Mountains. It is hoped that the commission will improve this wonderful highway.

The Prune and Apricot Growers' Association has appointed C. G. Hamilton supervisor of receiving and packing dried fruits taken into the Southern California warehouses. Mr. Hamilton will oversee the work at Hemet, Santa Paula, Santa Ana and Banning.

## The Coast

Walla Walla, Washington, will ship 400 cars of onions.

Arizona short staple cotton has sold as high as 24¼ cents.

Maricopa County, Arizona, has 137,679 acres planted to alfalfa.

One bunch of Oregon wool clip was sold at Shaniko at 60¼ cents.

Arizona cantaloupe fields averaged from 200 to 224 crates per acre.

A million bushel grain elevator is to be erected at St. Johns, Oregon.

Linne County, Oregon reports about 50 per cent of last year's apple crop.

Oregon reports about ten per cent increase in crops this year over those of 1916.

The University of Arizona is appealing for more warehouses for storing this season's big crops.

Jefferson County, Washington, is making extensive experiments in the growing of Indian corn.

The good roads advocates of the state of Washington are urging plans for a 3000 mile concrete state highway.

Cotton growers at Chandler, Arizona, are assured that they will have sufficient labor to handle the coming crop.

Sales of several carloads of hogs have been made at the Portland stockyards at between \$16 and \$17 per hundred.

Oregon cow testing associations report severe falling off of all cows during the latter part of July because of short pastures.

This season's output of the cantaloupe crop of the Salt River Valley, Arizona, amounted to nearly 1300 cars of 325 crates each.

One ranch near Chandler, Arizona, is maintaining a cannery of its own. Some especially fine peaches are being packed under their own brand.

The state college of Washington recently managed a sale at which there were sold over 1000 registered rams and nearly 2000 pure bred and range ewes.

The Farmers' Union Grain Agency at Pendleton, Oregon, controls its own large elevator, and on its total investment has declared a dividend of ten per cent.

Livestock men of the Northwest have charged that the movement which aims to stop the marketing of young meat is a boycott against the livestock interests.

The first offering of this season's barley grain at Walla Walla, Washington, commanded \$35 per ton. The average production per acre in that section is 70 bushels.

Farmers of Sulphur Springs Valley, Arizona, have organized a cooperative oil company which is buying sufficient oil to run plants of all the farmers for a year to come.

The wheat yield of Western Saskatchewan, Canada, will be greatly reduced by excessive heat during the latter part of July, the thermometer registering from 95 to 100 degrees Fahrenheit for 18 days.

Montana farmers have had a bad year. The winter was long and severe, the spring backward, and the usual June rains did not come. July has been hot and dry. A letter from White Sulphur Springs states that there will not be enough grain raised in that valley to feed the chickens.



## A Strange Belief About Forest Fires

**A**N odd belief is widespread through the mountainous regions of California in the benefit and value of forest fires. The essence of this belief, known as "light burning," is that a fire spreading along the ground in the forest does no damage to the timber, but removes the litter and underbrush which, if allowed to accumulate, becomes fuel for a fire that in time will consume the mature timber. Therefore, in the opinion of those holding this theory, occasional fires in a forest are beneficial and necessary. The Indians and early settlers, it is said, always "light burned" the forests in order to make feed for the deer and the cattle and to clear the brush out of the way, and these fires did the forest no harm, but, on the other hand, did a great deal of good.

This theory, declare the experts of the forest service, although a somewhat plausible one on its face, is entirely fallacious as light burning does immense harm. The damage done to the young growth is severe. Fifty per cent of the trees between ten and 15 feet high are usually killed by a fire running through the forest. Nor is any permanent protection given by the removal of the litter on the ground by fire, for within a few months it accumulates thicker than ever from the immense amount of foliage and young stuff killed but not consumed by the light fire. This material begins to fall soon after the light fire, and in a year or two is often more plentiful than ever before.

A few years ago the forest service experimented with "light burning" on an 80-acre tract in Shasta County near Castle Rock. The tract, which had not been touched by fire for 14 years, consisted of dense thickets of

young trees, mature timber, patches of brush and grass. Fire was allowed to run uncontrolled over it. Part of the litter was consumed and much brush was killed but not burned. Sixty per cent of the young trees between ten and 15 feet high were killed. Six months later the litter on the ground was just as plentiful as it had been at the time of the fire. Two and a half years after the experiment the needles and leaves on the ground were 50 per cent more than at the time of the burn. It was estimated that the risk of fire in this tract had been increased at least 50 per cent in less than three years.

This erroneous theory has not been entirely confined to mountaineers. A year or two ago the officials of a Sierra power company, it is said, thinking to decrease the fire hazard along the right of way of a large lumber flume, caused to be set controlled fires. A year or two later an accidental fire spread to this right of way, and so great was the accumulation of the needles and debris, the fruit of the light burn, that this accidental fire could not be controlled. It wiped out several hundred feet of flume, causing a great loss to the company.

It would have been much better for the forests of California, declare the forest experts, if the Indians and early settlers had not set the fires they are credited with setting. As a result of fire, there is not a forest in California that contains as many mature trees as the ground is capable of supporting. Of the 1,300,000 acres of land covered with brush in the national forests of California, a million acres at one time supported dense stands of mature timber. There is evidence at hand that 25 billion feet of mature timber have been destroyed

by fire in California, enough to run all the mills of the state for 25 years. There is one region in the Squaw Creek country in Shasta County of 150,000 acres that in the sixties was heavily forested. Today it is chiefly a chaparral desert due to a fire in the seventies. Another fire in this same region on the southeast slope of Mt.

Shasta near McCloud destroyed 10,000 acres of yellow pine and sugar pine in the seventies. The timber has never returned. Chaparral has taken its place. Undoubtedly, declare the forest officers, this belief in the value of light burning has been responsible for a loss of millions of dollars to California.

## Hemp in the Imperial

**A** NEW crop with which much of promise for the Imperial Valley, and perhaps other sections of the state, has been tested in the Imperial Valley, 200 acres of hemp having been grown this season. The illustration

tucky the average growth is about six feet. A few weeks ago an experimental cutting was made and the fibre sent East where it was made into yarn which was pronounced to be of fine quality. One thing in favor of the hemp industry in the Imperial



Imperial Grown Hemp

On the Timken ranch. One of the finest productions of hemp yet grown. C. O. Bullis manager of the ranch is shown in the picture.

below was taken by A. M. Nelson of the Imperial Valley and shows the husky growth taken on. Investigations have been made by General Freight Agent Clapp of the Southern Pacific, and he says:

"This is the first year's planting and it is a little early yet to determine the production per acre and the quality of the hemp itself, because harvesting has just commenced, but there is every indication that the production per acre will be heavy and that the hemp is of A-1 quality. It is said to surpass any hemp grown in Kentucky; it reaches a higher stand, approximately 11 feet, while in Ken-

Valley is that the crop comes in ahead of the frost, which means that it will not be discolored.

"A decorticating machine has been invented by George W. Schlicten which is said to be a success; it has already been tried on both hemp and cotton stalks. If this machine in practice runs true to the experiments that have been conducted it will be a boon both to the hemp industry and in utilizing the cotton stalks because the fibre from both can be separated much more economically than by hand, and it would not be surprising if the hemp planting next year in the valley amounted to 10,000 acres."

## To Arm the Farmer

**I**N the Implement and Tractor Trade Journal we find some sensible advice on arming the farmer:

Unless the farmers can have their tools the country can't have its food. That is what is worrying the farm operating equipment industry.

Steps have been taken by the National Implement and Vehicle Association to gain government aid in heading off the danger. The council of national defense, and others in authority at Washington, however, are so busy with the problems of training and munitioning troops that they are overlooking the needs of the farmer.

When Russia first entered the war the officials at once set every large

factory to work making munitions. This ukase that went out from Petrograd affected all the plants making farm machinery. They had to drop that and get into the feverish production of "war goods."

### How Russia Blundered

But it wasn't long until the Russian government realized its mistake. Although in desperate need of all sorts of military supplies it began to see that no national progress could be made without improved farm machinery.

As soon as the tools of the farmers began to wear out and they could buy nothing new to replace them, the country felt that empty feeling in the region of the stomach. So orders were issued to set the farm machin-



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for this modern farming aid. Make application NOW to your nearest branch bank. EQUIP YOUR FARM with the Plowing Power you will need when the Fall Work Rush Begins. WORK DAY AND NIGHT WITH A

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Inexpensive and Easy to Operate  
POWERFUL - - RELIABLE - - STURDY

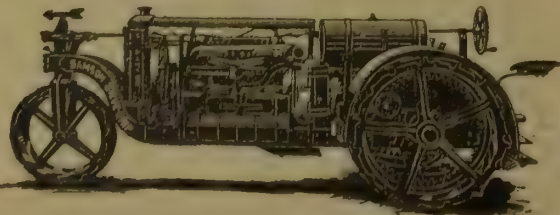
Two Models, R-12 and S-25

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### SAMSON SIEVE-GRIP TRACTOR CO.

(Division, General Motors Co.)

STOCKTON, CALIFORNIA, U. S. A.





ery plants back to making farm machinery again. They have been at it ever since.

### Must Have Farm Tools

It is this blunder that the farm operating equipment industry of America fears may be repeated on a vastly enlarged scale in this country. Even before the United States entered the war, steel was so high and hard to get that the implement factories were desperate. Now that America is one of the Allies the situation, from the viewpoint of the farm im-

plement makers, is anything but improved.

Farmers throughout the country are beginning to see that their supply of tools is threatened. They fail to understand how they can respond to the cry for greater crop production without implements, even if they do have to pay more for them just as the miller pays more for his wheat. They are perfectly willing to help win the war, as they have been besought to do from so many quarters, but they must have tools. It is the particular mission of the implement makers to "arm the farmer."



ALIFORNIA has developed its rice industry from 1200 acres in 1912 to 100,000 acres in 1917. Climatic and soil conditions are different

from other localities in the United States where rice is grown, which makes it necessary to develop new varieties. In California it is essential to have an early maturing variety that will yield well and give good milling results.

The government rice experiment station at Biggs, in cooperation with the Sacramento Valley Grain Association, Inc., has tested more than 1200 distinct varieties, besides many selections and hybrids. As a result of this work during the past five years several new varieties have been developed. One of these is known as No. 1564 and has been increased from a single head in 1912 to a quantity sufficient to seed over 8000 acres this year. It is about 15 days earlier than the leading commercial variety now grown, the yield is as heavy, if not heavier, and the milling yields and cooking qualities are superior. With this new early maturing variety the rice grower is practically assured of getting his crop harvested and thrashed before the fall rains commence, which factor greatly reduces the element of chance.

The seed of this new variety was increased last year by several farmers under general supervision of the government rice station and the Sacramento Valley Grain Association. The Association purchased all of the seed from the growers in accordance with their agreement, in order that the

distribution and allotments to the rice growers would be made without partiality and at a reasonable price for the seed. The association allotted seed sufficient to seed about 8000 acres this spring.

Milling tests have been made by the Pacific Rice Milling Company of Biggs, Phillips Rice Milling Company of Sacramento, and C. E. Grosjean Rice Milling Company of San Francisco. All of these tests have shown that the rice has exceptionally good milling qualities. From the results of extensive culinary tests conducted by the department of agriculture, it has been shown that this new rice is one of the very best cooking rices grown in the United States. — The Great West.

### CALL FOR FOURTH ENTRY 1917

The fourth entry of butter and cheese for the 1917 Educational Scoring Contest will be due Friday, September 7, 1917. Entries should be at State Fair Grounds, Sacramento, not later than that date.

Entries will be eligible to compete for the state fair prizes. The State Agricultural Society is giving \$874 to be distributed as special prizes and prorated for dairy products scoring 90 or above. If you do not receive a premium list write Secretary of the State Agricultural Society.

Prof. H. S. Baird of the division of dairy industry, University of California, is in charge of the contest.

We agree that life is a problem. Let's make it one in addition, not subtraction. It is the "sum" of all the days that we want, not the "remainder or difference."



Blasting Out the Stumps

Explosives are effective and economical in removing stumps, boulders and other obstacles to more and better farming. This shows method of boring under stump to place charge of dynamite.

# I Say "Don't Buy This Tractor or Any Other Until You Get This Book"

It tells all about the most wonderful little Tracklaying Tractor ever built for Orchard and Vineyard work. Write me direct today, or send the "Tractor Opportunity" coupon. Lowest prices now.

My name is W. B. Raymond and I am the man in this concern whose job is to get the story of the wonderful little Bean TrackPULL Tractor before orchardists and vineyardists. And I say "Don't buy this tractor or any other until you get the TrackPULL story, because that story may revolutionize your tractor ideas to your great benefit.

"There are some things that the TrackPULL won't do and you want to know those things before you buy a Bean TrackPULL—and there are other things it will do that other tractors can't do, and those things are vitally important, particularly to vineyardists and orchardists.

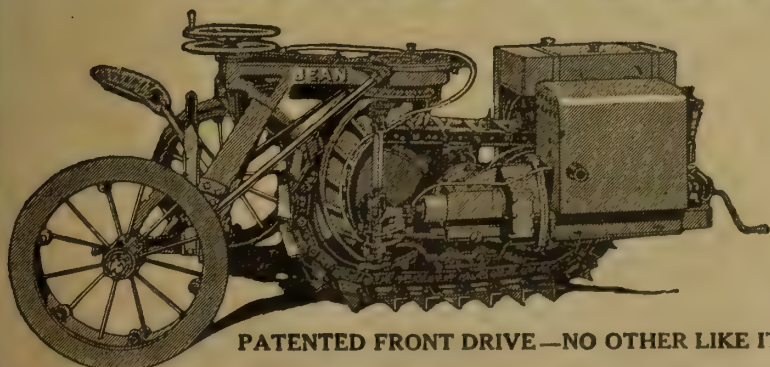
"The front drive principle—steering with the track that PULLS—is just one of the features of this great little tractor

that is patented. No other tractor is like it. A patent, of course, always means a big advantage.

"Look at the illustration. The Bean—6 h. p. at the draw bar—pulls instead of pushes itself over the ground and you steer with the track that pulls. That means you can do everything with the Bean that you do with horses plus a lot of things horses and other tractors never have done—like going under tree-boughs only four feet off the ground and pulling full load on turns. The Bean works between seven-foot rows in vineyard—that's another advantage.

"But I couldn't begin to show you in an ad all the advantages. They've got to go into a book, and you ought to have that book before you buy a tractor because it will save you money."

## BEAN TrackPULL Tractor



PATENTED FRONT DRIVE—NO OTHER LIKE IT

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Send me the coupon below and I'll send you the book free. Read about the "Fifteen Features of the Bean." The price is \$1150.00 now—the lowest priced track-laying type of tractor built—but material costs are steadily going up, so I suggest you act quickly before a raise. There's a real tractor opportunity in this low price.—W. B. R.

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Makers of the Famous Bean Sprayers and Pumps

The Bean TrackPULL Tractor will be at the California State Fair, Sacramento, September 8th to 18th. Meet us at the Los Angeles demonstration September 18th to 22nd.

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City..... State.....

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Kind of crops grown.....

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## Who's Who

Written for California Cultivator By F. F. Stonerod

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photographs and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Other sketches and portraits will appear in the next and following weeks.

**T**O the livestock men of this state D. J. Stollery needs no introduction. We should qualify that statement a bit perhaps by saying beef cattle and horse men, as it is in these two branches of the industry that he has been actively engaged for a number of years.

Mr. Stollery was born in London, England. He graduated from Ion House School, Hampton Court, and then decided that the little Isle was not big enough for his activities so he wrote to an old college chum who had a big herd of registered Shorthorn cattle in western Canada that he would accept his invitation to pay him a visit and see for himself what a great place Canada was. That was in 1902. He assumed charge of one of Manitoba's biggest farms for two years after he got nicely settled.

About this time an opportunity to come to California presented itself so he resigned his position in Manitoba and entered the real estate business in San Francisco. Always a keen sportsman and fond of country life Mr. Stollery became an active member of most of the exclusive Peninsula clubs, not the least of which was the San Mateo Polo Club of which he has been secretary for many years. Through business and social relations Mr. Stollery became associated with Wm. D. M. Howard, the man who imported the first herd of pure bred Shorthorn cattle into California in 1857. At Mr. Howard's untimely death in 1915 Mr. Stollery was the sole director of the corporation who held out for retaining the Shorthorn herd intact. As administrator of the estate he showed rare ability and judgment. The Shorthorns became

the property of A. K. Macomber, San Francisco millionaire, and were moved to the Paicines Rancho in San Benito County, and Mr. Stollery assumed full charge for the new owner, which position he filled in an able manner until recently when he was forced to relinquish full charge, due to multiplicity of business interests. However, he is still associated with the Paicines people as sales manager. Mr. Stollery maintains offices in San Francisco, making periodical trips to Paicines.

There is not a finer herd of Shorthorn cattle in the world, everything considered, than this same Paicines herd as it carries the blood of animals with world wide reputations and is maintained at high standard by frequent additions of the best bulls obtainable. Looking after the details of a herd numbering well over 700 head of registered animals is a man sized job, and this man not only fills it acceptably but finds time to look after numerous other duties.

He is secretary of the California Shorthorn Breeders' Association, and the members showed great foresight in selecting this capable young Englishman for the position. He is a

live wire and gets results, and is extremely popular with everybody. His enthusiasm over Shorthorn affairs is unbounded, and as long as he is secretary of the association it will expand and be a power for good.

Mr. Stollery is a young man of



David J. Stollery

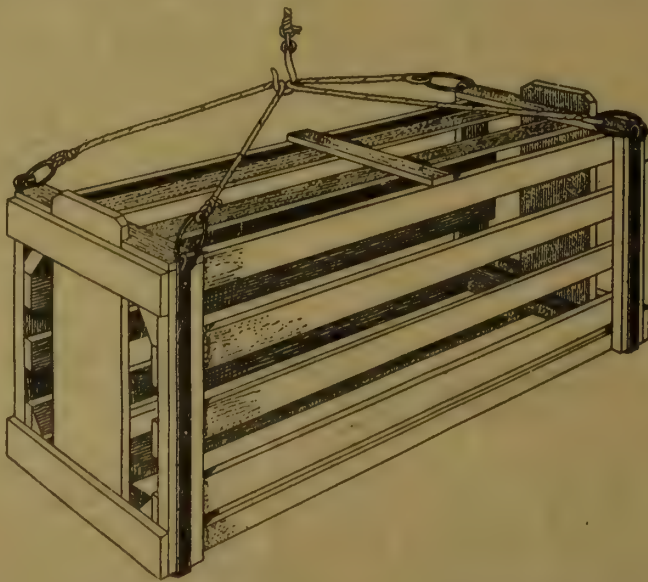
pleasant manner, is easily approached, likes to ride, and knows a good Shorthorn when he sees one. He knows how to sell them too, which is due partly to his training and partly to natural ability.

## Hoof Trimming Crate for Hogs

Written for California Cultivator By J. I. Thompson

**I**T is somewhat annoying and generally quite difficult to properly trim hogs' feet. The herd boar may be gentle enough so that his feet may be properly leveled and his toes shortened while he is lying down, but many hogs being fitted for show do not submit so readily to this operation. It is quite exasperating to have trimmed three feet and, in your anxiety to get them as short as pos-

as an ordinary shipping crate. It may be any length, but should preferably be from five feet to six feet long. The height can be about three feet. The width should be 24 inches on the outside. A drop board is provided at each end so that the hogs can walk out instead of back out. The bottom needs chief consideration. It is made of three two-by-fours laid flat, one running along each side and the other directly through the middle,



sible, have pricked the sensitive part of the foot just enough to jog the hog's memory permanently, so that he immediately gets up and walks away whenever an attempt is made to finish the job.

Due to just such experiences as these, herdsman Jack Finlay and the writer worked out the plans for a crate herein illustrated and described.

The general plan is much the same

leaving a space of six inches on each side and the other directly through the middle, leaving a space of six inches on each side of the center two-by-four. Running from the inner edge of the outside two-by-fours up to the side of the crate is a piece of one-inch-by-eight inch. This makes a sort of V-shaped trough out of the bottom of the crate, and it is these sloping sides which carry much of the hog's

weight. The rest of the weight is carried by the center two-by-four which is well padded with old sacks. A piece of strap iron is run across the bottom and up the sides at each end of the crate, on the top of which iron rings are placed. A rope is run through these four rings and attached to a block and tackle by which the crate and hog are lifted high enough from the floor so that the feet can be easily reached. We have used this crate for various sized hogs from 150 pounds up to 800 pounds and find it entirely satisfactory. We often remove the front drop and trim the ears and head. The hogs seem to be entirely helpless but contented when hoisted up in this manner, for they do not struggle at all and apparently take a nap while being manicured.

## CARNATION STOCK FARMS AUCTION SALE

This sale will consist of approximately 150 head of registered Holstein females and males. Approximately 75 females and 10 males will be offered by the Carnation Stock Farms. The females are all good individuals and practically all of them are bred to the herd sires, Johanna McKinley Segis, King Segis 10th, Matador Segis Walker, Dutchland Governor Sir Colantha. The first three of these bulls are well known to Holstein breeders, because they are direct descendants of the famous King Segis family. Johanna McKinley Segis and King Segis 10th are half brothers, while Matador Segis Walker is a son of King Segis 10th and a very splendid individual, who is rapidly proving his transmitting ability. Dutchland Governor Sir Colantha has proven his right to be claimed as a son of Colantha Johanna Lad by having a daughter who is a world's record junior two year old—Von Heim Winnifred Colantha, producing 117.81 pounds butter in 30 days.

Among the ten young bulls offered, Korndyke Rag Apple Milla, 163749, is a son of the famous Rag Apple Korndyke 8th, and carries 75 per cent of the same blood as the bull that sold for \$20,000 at the Detroit sale in June, 1915. The dam of this young bull is a daughter of the great Pontiac Korndyke. This double fusion of Pontiac Korndyke and world's record blood will surely produce excellent results when the daughters of Korndyke Rag Apple Milla freshen. Others are sons of McKinley, the senior herd sire and son of the famous King Segis and the 40 pound cow, Johanna De Kol Van Beers.

The health of all animals offered by Carnation Stock Farms at this sale is guaranteed by certificate of health issued by the United States bureau of animal industry.

This will be the first sale held in the new Carnation Stock Farms sales pavilion at Kent. John L. Smith, owner of the Hazelwood Farm of Spokane, Washington, will offer about 75 head at this sale, among which will be the prize winners or the descendants of Mr. Smith's prize winners at many stock shows. Sale will be held on Wednesday and Thursday, October 3 and 4. Catalogues and other information will be given out at a later date.

## ANTELOPE VALLEY FAIR

The Antelope Valley Fair will be held in Lancaster September 26, 27, 28 and 29 inclusive. The fair buildings have all been erected and the road to the fair grounds has been well prepared for the occasion. The management especially wishes to make this a live stock exhibit and wants exhibition of stock from outside points if possible.



Purebred Registered  
**HOLSTEIN CATTLE**

Enthusiastic Holstein Clubs, county, district and state, have been organized all over the country, and they are making wonderful progress in establishing testing associations, and in cooperative effort in eradicating disease among their animals. They inspire in their members a high standard of dealing, and in many ways accomplish the maximum of good for all breeders of Holsteins in their localities. There's big money in the big "Black and White" Holsteins.

Send for FREE Illustrated Descriptive Booklets The Holstein-Friesian Association of America, F. L. Houghton, Sec'y, Box 120, Brattleboro, Vt.

## Finely Bred Holstein Bulls

from dams of the best blood lines. They are well developed, of splendid individuality and type. Our place is within one mile of the city, so they are easy to see.

**H. B. Cowan**

Modesto, California

Rossmead Farm

## POLAND-CHINAS

Won second on boar and sow P.P.I.E. 1915. Champion sow at Fresno and Hanford 1916. Young stock of this breeding for sale.

F. D. ROSS

Hanford, Cal.





## Breed Leaders

Every breed of live stock has its outstanding character the same as the human kind. A great dairy cow has proved her ability to produce anywhere up to 15 tons of milk annually; the trotting horse has secured his record around two minutes; the beefmaker has shown his ability to make the least amount of feed into the greatest amount of food; swine, sheep and others of the live stock family have shown themselves great characters. In addition—and here is where their worth is proven—these animals can transmit their productive power to their offspring.

Beginning with the issue of August 4 the Cultivator gave an account of Pieterje Bloom of the university farm dairy herd. Some things she has done and more that her daughters have done were chronicled. She was a most worthy leader in this series of articles. Others of her kind follow. More of the "handsome is as handsome does" type of animals will be given in the columns of the Cultivator during the next few months.

### ESCALON FASHION PRINCESS

Written for California Cultivator

**S**HE is one of the best animals we ever bred," said A. B. Humphrey.

When the American Berkshire Association announced that a \$50 silver trophy would be awarded to the best animal bred by consignor, sold in the Western Berkshire Congress sale at Davis in February 1917, Charlie Maurer asked Mr. Humphrey "Do you want to win

neck is short and evenly blended into a shoulder that is neat and very smooth. She is perfectly filled out in the heart girth and has a wide chest. Her back is wide and well arched, her ribs well sprung and the loin well covered. The width of the body is well carried out to the rumps and the tail setting is high. She has plenty of bone and stands up well on her feet—in short she is a very symmetrical, beautiful sow.

Her sire is Fashion Longfellow 5th, 199110, who is from Fashion Long-



A Champion in Good Company

Champion Berkshire sow, Escalon Fashion Princess 224400 shown at Chico 1917 fair. She was exhibited by Butte City Ranch. The connoisseurs behind her are W. P. Dwyer and sons, Chas. Leonard, Wm. Sproule, Pres. S. P. R. R., Maj. A. L. Nichols, Robert Durham.

that?" To which Mr. Humphrey replied "Sure, I do." "Well, Princess can do it," said Charlie. And she did.

She was bought by Harry C. Moore, president of the Pitman-Moore company of Indianapolis for \$500, the top of the sale. Being well along in pig to the service of Grand Leader 2d, she was sent up to Butte City Ranch to farrow before shipping her East. She was such a favorite there that Mr. Moore was persuaded to sell her. It is a long trip to Indianapolis by express, and a valuable animal might be lost or injured en route.

She farrowed seven fine pigs March 5, 1917. These were weaned and she was shown at the Butte County Spring Exposition at Chico, winning grand championship in very strong company.

Escalon Fashion Princess is an exceptional individual. She has a perfect head, short and broad, with a very intelligent countenance. Her

fellow, 179729 and Premier's Bernice Lass 2nd, 151210. Her dam is Star Princess 16th, 182554, who is from Superior Star, 145224, and Mayhew's Princess, 135579.

Fashion Longfellow 5th was one of the good breeding boars of the Humphrey herd, as was his sire, Fashion Longfellow sired by Premier Longfellow, the grand champion at the St. Louis World's Fair.

Star Princess 16th is by Superior Star. Star Leader, the reserve grand champion boar at San Francisco—recently sold to Anchorage Farm for \$1500—is out of a Superior Star sow.

Mayhew's Princess is by Prince of Perkins 3d, of a family that has produced many good ones in California.

Premiers Bernice Lass 2d represents the Bernice family, highly prized at Grape Wild Farms.

Escalon Fashion Princess is one of the animals in the Butte City Ranch herd that is not for sale. She is the kind of a producing individual that helps to make any herd famous.

## Field Notes from the Live Stock Men

H. M. Barngrover of San Jose formerly with the Anderson-Barngrover Manufacturing Company, has an 800 acre stock farm in the Indian Valley, Plumas County, on which he has 60 pure bred Herefords headed by California Prince 2nd, one of the choice sons of Prince Lad 11th, bred at our state farm at Davis. Plumas County is 3500 feet in altitude, a rich grass and hay section well calculated to produce cattle with plenty of vigor and stamina. Claude Peter and L. Z. Smith both have Hereford herds in the same county.

The Second Annual Ram Sale under the direction of the National Wool Growers' Association will be held at Salt Lake City, Utah, next week, August 28-30.

Anchorage Farms, Orland, has purchased three fine Berkshire brood sows from Thatcher, Ennis and Wil-

liamson; Rookwood Lady 96th, Rookwood Lady 97th and May Belle of U. F. 4th.

Homer Hewins, Jr., manager of the Maplewoode Ranch of Calistoga, reports the sale of young Holstein bulls to A. L. Tubbs Company, Calistoga, and the Good Templars Home of Vallejo.

F. M. Johnson has sold recently, bred sow and boar to Phillip Duffy, Napa; three gilts and a boar to D. Fricot, Angels Camp.

H. P. Eakle, Jr., reports recent sales to Gallinas Land & Stock Company, Gallinas; three sows to Mrs. R. L. Estes, Sacramento; five sows to A. L. Cohen, Sacramento; one boar to F. E. McCune, Cranmore.

Guy H. Miller has recently sold two young Jersey bulls. The buyers are Sinsheimer Brothers, San Luis Obispo, and Wallace J. Sinclair of Fairmead.

## Closing Out Sale of Live Stock at a Bargain

An Opportunity to Secure a Choice Lot of Young Holstein Heifers Sired by Registered Bulls from Full Blood Unregistered Dams.

30 Head of 15 to 18 months old Holstein heifers now being bred to Registered Holstein Bull.

4 Head of Grade heifers.

7 Head grade four and five year old cows.

1 Registered two year old Holstein Bull, Segis Paul Pontiac de Kol Burke.

1 Two year old Guernsey Bull, sired by May King of Fern Ridge, a bull that took third at the San Francisco Exhibition in 1915, Dam Imported Lady of the Forgettes.

Wish to sell in single lot and will make special price, on the above stock.

ALSO a choice lot of brood mares, Jacks and Jennets at a bargain price.

### El Cerrito Rancho Company

CORONA

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### Santa Anita Rancho

Anoakia Breeding Farm



**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by imported Stallion Ibn Mahru, head of our Arabian stud. Dams are the choicest thoroughbred mares of Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahru, world renowned imported stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China hard boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the very best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted Prince Gelsche Walker, and bulls from one World Record cow and two California State Record Cows. Write for details.

Correspondence Invited

Anita M. Baldwin

W. H. TAYLOR, Superintendent

Santa Anita, Cal.

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GLENSIDE ROYAL 408155

Our herd of registered Shorthorns has been carefully selected from the leading milk producing strains of the breed and is being developed along the same lines in our hands.

The herd is headed by

GLENSIDE ROYAL

a prize winner at the 1913 International and grand champion at Panama-Pacific Exposition. Sired by him and out of large cows of good milk production we offer for sale a few choice young bulls. Our entire herd is tuberculin tested.

Alexander & Kellogg, Suisun, Cal.

Farm on Grisy Island.

## Shorthorn Bulls and Heifers

We have twenty bulls and ten heifers for sale at present. This is the best lot that we have ever had for sale. Mostly two year olds, registered, tuberculin tested and all reds in excellent condition and splendid individuals. Write for prices or better come and see them.

H. L. & E. H. Murphy

Six miles from Sacramento

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### Shorthorns---Paicines Ranch Company

Offers for summer and fall delivery both registered and unregistered weanling bull and heifer calves. For prices and particulars apply to

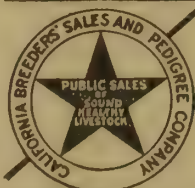
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For the Prevention of Blackleg  
in calves and young cattle

Their superiority is due to nearly 20 years of specializing in "Vaccines and Serums only."

Year in and Year Out they give better satisfaction than any other vaccine made, and the cost of a few cents per dose is cheap insurance against a disease that always takes the fattest and best.

Single Pills may be used for ordinary and range stock.

Double Pills should be used for pure bred and high grade stock.

Use any Injector, but Cutter's simplest and strongest.

### Prices:

10 dose pkg. Single pills \$1.00  
50 dose pkg. Single pills 4.00  
10 dose pkg. Double Pills 1.50  
50 dose pkg. Double Pills 6.00  
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Insist on Cutter's. If unobtainable, order direct.

Write for new booklet, "The Control of Blackleg." It tells about Anti-Blackleg Serum which cures Blackleg and may be used simultaneously with vaccine to combat outbreaks and safely protect valuable stock.

The Cutter Laboratory, Berkeley, Calif.

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## CARBOLA

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Will not blister, flake or peel. No odor to taint milk. Kills infectious disease germs, lice, mites, fleas, etc.

10 lbs. (10 gals.), \$1.00 and postage.  
20 lbs. (20 gals.), \$2.00 delivered.  
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Trial package, that covers 250 square feet, and descriptive booklet for 26 cents.

Get some from your dealer. If no one, send your order direct with his name.

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## HOLSTEIN-FRIESIAN CATTLE

Registered young bulls from best families. Some of serviceable age.

## REGISTERED BERKSHIRE PIGS

Masterpiece, Longfellow and Robin Hood Strains. Fine individuals of both sexes—we pay registration fee.

Careful attention given to mail orders.

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**SANDYACRE FARM, Home of  
Marsh's Big Type Poland-China Hogs**

"MODEL MAJOR" winner of three firsts and two Grand Championships is at the head of my herd of prize winning sows. My sows are the easy feeding, big litter kind that have quality. Now booking orders for June delivery of spring pigs. Satisfaction guaranteed or money refunded. **E. I. MARSH, Modesto, Cal.**

Correspondence with the advertisers in the California Cultivator will convince you that their articles will save you money.

## A Modern Hog House

Written for California Cultivator  
By H. J. Baade, Napa County Farm Adviser



WITH the present high price of feed the farmers who own live stock and are able to make a profit by feeding animals find that modern equipment is very necessary and in many cases essential.

Mr. Homer Hewins, Jr., of Cali-

cleaning the troughs are left in the direct sunlight for eight hours. All pens are supplied with running water. The outside runs are eight by 40 feet, with rock foundations, well drained.

A special feature of the barn is the window and roof constructions which are so arranged that the sun's rays



A Modern Hog House  
On the ranch of Homer Hewins, Calistoga.

stoga, a breeder of Berkshire hogs and Holstein cattle, has built what we consider a modern hog house. The accompanying picture will give the reader an idea of how this house is constructed. The dimensions are 30 by 50 feet. It has six pens, or compartments, which connect directly with runs outside where the hogs can go to air.

The barn is also equipped with storage bins, running water, and wooden troughs lined with galvanized iron. These are not fastened. This makes it easy to clean and scrub them, which is done once a week. After each

strike the entire floor surface of each pen each day. The sun in rising and in setting occupies certain angular positions which, according to the arrangements of this barn, cause the run rays to strike all of the floor surface.

To keep the hogs from fighting, individual feed pens have been constructed around the self-feeders. Hog oilers are also kept in good repair and supplied with oil at all times. Mr. Hewins finds that by properly caring for hogs he is able to keep them in excellent condition and on a minimum of feed and receives excellent returns.

## Feeding Buttermilk to Hogs

Written for California Cultivator By Prof. F. W. Woll



ANSWERING inquiry of an Imperial Valley subscriber as to value of buttermilk for feeding to hogs Prof. F. W.

Woll of the state university gives emphatic warning against feeding buttermilk which may be taken from tanks allowed to become foul with injurious cultures. We have also heard others give warning to swine producers to be sure to know whether creamerymen allow washing powders or soaps used in washing creamery machinery to escape into the buttermilk fed. Any creamery which does this should not sell buttermilk for livestock consumption. Prof. Woll writes:

The effect of diluting buttermilk intended for pig feeding would be to decrease its feeding value. Undiluted buttermilk is worth at least as much as separator skimmilk for feeding purposes, but the more it is diluted with water, churn washings, etc., the lower will be its feeding value. If the dilution is carried so far that the volume is twice that of the original buttermilk the liquid will have no more value as a pig feed than an equal amount of whey. The dilution does not detract from its feeding value in any other way than that it forces the pigs to drink large quantities to meet their feed requirements, and more solid feed must be supplied to furnish sufficient nourishment for a satisfactory body growth.

Experiments have shown that the nutrients contained in skimmilk or

buttermilk are best utilized by swine if fed with grain in the proportion of 1:3 to 6 pounds of milk, preferably about 1:4.

Practically all buttermilk in this country is sour, being obtained as a by-product in the manufacture of sour cream butter. As such it is loaded with lactic acid bacteria which, as is well known, are healthy organisms. People who use sour milk as a regular part of their diet are less subject to disease and more likely to live to a ripe old age than other mortals, according to the claim set forth by the French physician and scientist Metchnikoff whose views have been accepted by good medical authorities. Nobody need, therefore, be afraid of drinking fresh buttermilk or sour milk or feeding it to pigs. When it comes to feeding buttermilk or any other kind of milk that has been kept in dirty tanks and allowed to ferment, the situation is different. It is, of course, dangerous to feed a material containing positively injurious substances like soapsuds, but dirt and filth are equally bad, for disease forming or putrefactive bacteria are likely to be introduced with it, and if nothing worse happens, may derange the digestive apparatus of the animals. In case of valuable animals, the injury done will be more disastrous than in case of common unimproved stock, but in either case cleanliness in handling and feeding the milk is of the greatest importance, and permanent good results in feed-

## THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

## Gombault's Caustic Balsam

IT HAS NO EQUAL

For the Human Body

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

Perfectly Safe and Reliable Remedy for Sore Throat, Chest Cold, Backache, Neuralgia, Sprains, Strains, Lumbago, Diphtheria, Sore Lungs, Rheumatism and all Stiff Joints

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if properly filled with correctly prepared ensilage, will pay you better than any other investment you can make for your stock, and save waste foods. Ensilage must be cut and conveyed at the least possible expense and the most economical and satisfactory results are obtained by the use of the

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Gertie's Son's Victor No. 123159  
Dam, Victor's Lady Kate, (R.O.M.) of 587 lbs. Butter in 303 Days as a 4-year-old.

135 Registered Jerseys in my herd, including 18 Register of Merit Cows. Blue Ribbon winners at 1916 Kings, Kern and Tulare County Fairs.

Invest in Jerseys and Start Right  
Visitors Welcome Correspondence Solicited  
**A. A. Jenkins**  
Tulare Cal.

## Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count Glory, 428982, grand champion at the California State Fair, 1916. Berkshire herd won Premier Exhibitor's banner at P. P. I. E.

513 Hearst Bldg., San Francisco  
Carruthers Farms, Mayfield, Cal.



ing butter milk can only be expected when it is fed without admixture of foreign substances (except pure water) and under strictly sanitary conditions.

This implies that the vat must be kept thoroughly clean and sterilized occasionally with live steam, so as not to contain diseased germs or give

rise to injurious fermentations. Under the new state dairy law, cream manufactured into butter must be pasteurized, and that should destroy all disease producing organisms in the buttermilk as well, but does not remove the necessity of taking all possible precautions to keep the buttermilk tank clean and in a sanitary condition.

## Revada Guernseys in the Public Eye

Written for California Cultivator By F. F. Stonerod

**W**HEN B. E. Nixon purchased his beautiful country place in the Napa County hills a couple of years ago he had in mind the establishment of a high class herd of registered Guernsey cattle, the production of a guaranteed grade of milk, and a permanent home for his family.

Since the ground was first broken in 1915 Mr. Nixon has erected a number of fine buildings, silos, put in a reservoir, and has the entire acreage of tillable land producing feed and forage for the big herd of Guernseys.

In selecting his cattle the owner of Revada looked to productive capacity and breeding rather than to show yard points although he has purchased several animals which won laurels at the state fair last year their first time out.

In a long line of splendid bulls and females two individuals stand out as leaders of the breed. One of them is Imp. Clatford Fay of the Mill 65657, and the other, Itchen Daisy May King of Langwater 17349.

Clatford is a remarkably fine individual and a heavy producer. She was born on the island of Alderney seven years ago. Her sire, Chieftain, was a noted Island show winner for two years in succession. Her dam was Betty 3rd. She is an A. R. cow with a high record although she has never been extended. She freshened on August 5 and gave birth to two fine bull calves sired by Ricardo of Edgemoor, the son of the world's fair champion bull, Itchen May King. Mr. Nixon has put her on test and she will have every chance to make a creditable record. She has large capacity, a remarkable udder, and everything else in her favor to be a champion. Itchen Daisy May King of Langwater is the bull Mr. Nixon paid \$8000 for, the record price for a Guernsey bull. The news that this famous young bull was to come to California and head one of the finest herds of cows was almost too good to be true. He was bought at private sale only after Mr. Nixon had all but exhausted his per-

suasive powers on the owner. I inferred that it was Mr. Nixon's herdsman, Geo. Hemming, who finally influenced the transfer, but be that as it may the fact remains that California got a Guernsey bull whose breeding, individuality, and proven transmitting ability stamps him and his get as a sire of the first magnitude. Indeed when it is considered that his two day old son sold at over \$1000 at public sale this spring, and two daughters at \$1375 each in the same sale; that two of his first daughters on test have made 555.53 pounds fat, and 591.52 pounds fat respectively, the latter in 340 days as a two year old; that he is a full brother to Ne Plus Ultra, whose first 12 daughters averaged 615.32 pounds butter fat in one year; and that his dam is also the dam of King of the May, 20 A. R. daughters, it will be seen why his former owner regretted parting with him even at such a long price.

Besides this noted bull Mr. Nixon has two others which have an opportunity to make a reputation. Both have excellent breeding and are good individuals. Ricardo of Edgemoor 34367 is a real show youngster, having won his spurs at San Francisco, and will add more laurels. He is by Duppee's world champion, Itchen May King, and out of Imp. Lady Gip, 55121, a cow who has a record of better than 600 pounds butter fat in one year.

Imp. Roberts Secret, 30805, has enough breeding and records in his pedigree to assure him high rank among the bulls of the breed. His sire, Imp. Osseo 4th was a noted winner on the island while his dam, Guernsey Fleurie 3rd of the Cloture, 8459 made 598 pounds butter fat in one year.

Geo. Hemming, the manager of Revada, is a capable and efficient man in his line. Under his expert management enviable records may be looked for both at the pail and in the show yard.

Fresno County is making a hog cholera campaign.

## Skimmed Milk Hard Diet for Calves

Calves raised on skimmed milk are usually runty, pot-bellied, and suffer indigestion. Whole cow's milk is a perfect food for the calf, but skimmed milk is not. When the fat is removed a substitute is sometimes made by adding a handful of flaxseed meal or corn meal, but this sort of fat is not a full substitute for butter fat.

It is still a debatable question whether it pays in the long run to rob the future cow by stunting the calf for the sake of immediate profits. The practice of taking the calf immediately away from the cow is the usual thing in the dairies and, assuming that it is an economical thing to do, the question is how to feed calves on artificial food and keep them growing properly.

During the first few weeks the calf

is not capable of digesting normally any food save whole cow's milk. If he must subsist on skimmed milk, a little flaxseed meal or corn meal had better be added to the meal. The milk should always be given warm and never when it is frothy. Calves should never be given enough skimmed milk to entirely satisfy their hunger. If indigestion develops they should be kept on short rations for a day or two. If scours develops a little formalin added to the milk, combined with a restricted diet, will usually control it within a few days.—George H. Glover, Colorado Agricultural College.

### CAN'T BE DID

You can't keep a good man down, they say, and it's often just as impossible to keep a poor man up.



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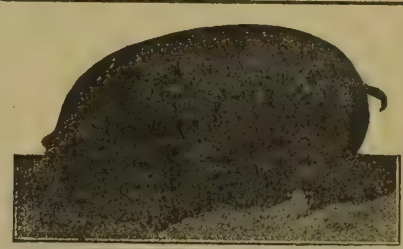


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Hanford, Kings County, Cal.



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F. A. Langdon  
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Llano Vista Ranch, Perris, Cal.

F. V. Gordon  
Owner

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# Midsummer in the Poultry Yard

Written for California Cultivator By Jean A. Koethen

**M**IDSUMMER is the time when it is easiest to neglect the ordinary routine of the chicken yard, yet it is also the time when many unusual things may be done to best advantage. The spring rush is over, baby chicks half grown, pullets well on their way to maturity, cockerels already gone to market or caponized, perhaps, to be held for Christmas orders.

That caponizing idea, by the way, seems to be gaining ground. I have not tried it, mainly because of a natural shrinking from cutting up live chickens, but also because doctors themselves seem to disagree. The people who have the most to say about caponizing are chiefly, though not exclusively, of course, those who have caponizing instruments or books on the subject to sell. Some others declare that the caponized cockerel gains very little in weight over the uncaponized bird, and that the only

object in caponizing is to make the birds less quarrelsome and willing to hover chicks. Undoubtedly the capon is a good mother and he can cover many more chicks than a hen. With an incubator for hatching and a few capons for mothering, one might easily dispense with both hens and artificial brooders for rearing chicks.

If any caponizing is to be done the late cockerels, which are now two or three months old are the ones to be caponized. They are not worth much as fryers and will be too young for breeders another spring. It would be worth while for almost any one with a steady hand to buy a set of instruments and try making a few capons to use as brooders. The operation should be performed as soon as the testicles, which are under the ribs on each side of the back, can be plainly seen, and before they begin to develop. With some breeds this is as early as two months of age, with others it may be four or five months. I dressed a Light Brahma cockerel last week, which, though nearly five months old, was in just the right stage for caponizing. A little experience will soon teach one the exact size of bird to select for this operation. It is best to begin with one you wish to eat, for the beginner is very likely to kill a few in learning. The instruments are always accompanied with explicit directions for their use, which should be followed with exactness as to each detail.

With the beginning of the molt, dropped feathers give the yards a particularly untidy appearance. It is some trouble to rake these up, but well worth while if one cares to have the chicken yard look like the "park" it is sometimes called. A flock of vigorous, red-combed birds loitering comfortably in the shade in neat, well-raked yards is always a pleasant sight and one in which the owner cannot fail to take pride.

Do not spare the hose in summer. Wash off the roosts and walls of the house after the droppings have been carried out. Get the cobwebs off the under side of the roof. Sprinkle the yards often and do not forget to have one particular place under the shad-

iest tree where the ground is soft and moist for dusting. Liberal use of water saved my hens in that extraordinary hot spell last June. I sprinkled the ground several times a day and the inside of the house at least once. I even sprinkled the trees so that the water might drip from them. Three times during the day fresh drinking water was given. When I found a hen panting under the roosts I took a stick or the hose and drove her out into the shade of the trees, for it is in the stuffy air of the house and not in the open heat hens die of heat.

There will be many broodies this month. If you have the eggs, try setting some of them. Those that are to be broken up must be broken gently. Roughness never paid yet in handling hens. A small slatted coop, just big enough to hold three or four hens—a frame covered with chicken wire will do just as well—that can stand in the run where the confined broody need not be too lonely, is almost a necessity where hens are kept. Put your broodies in this as soon as you find one staying on the nest at supper time. Give the feed they are accustomed to and fresh water. In four days let them go. In almost every case the desire to incubate will be gone by this time, and they can return to the laying pen.

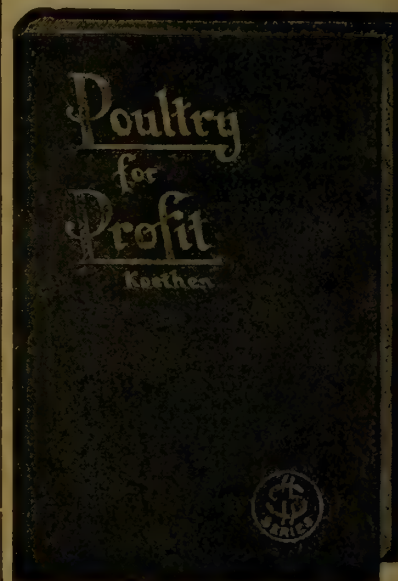
Broodiness in the heavy breeds is very largely the result of an overfat condition. A hen that receives in summer the same ration she has been accustomed to during the season of high production will put on fat because she is not laying as heavily as she was. The feed that should have gone into eggs now is turned to fat. "As long as you can keep a hen laying she won't get overfat," says a well-known Orpington breeder. Conversely, if you can keep her from getting fat by judicious feeding she will keep on laying, but this is not always true, for most hens stay laying while they molt. The point is, however, that it is always safe to lighten the ration of heavy hens in summer. Give more green and less mash, and since hard grain is both expensive and fattening, feed as little as your judgment can be brought to approve. I am not sure that individual judgment can always be relied on. If you feel doubtful, take Professor Dougherty's rule of a quart of grain per day to 15 hens, and cut the amount down a little for summer.

The daily papers as well as the agricultural journals are reminding us that fall is spring in California, and now is the time to plant several things. Two of these are chard and kale, which if planted now in boxes will be ready to transplant into the ground about the time the fall rains begin. Chard, once started, lasts a good many months, and kale will furnish green feed for the hens for a year to come. There are the mangel beets, too. My hens have always scorned the roots, but the tops make splendid green feed, as do turnips. Hens like nothing better than turnip tops, and the turnips themselves may be cooked as part of the vegetable mash for breakfast or supper. All these things may be planted this month. August isn't the time to exhort to garden work, nevertheless, our extremity is such I think we shall have to plant, no matter how much we dislike it. Five o'clock in the morning is a splendid time for gardening.

If water is plenty there is no reason why in most localities the empty runs should not be planted to rape or barley. When water is scarce or expensive it is better to wait a month or so.

Santa Barbara County is appealing for suspension of the rabbit laws.

# Poultry can be made to Pay



**T**HERE are two methods of gaining knowledge, necessary to make poultry a success; experience—which is a long, drawn out, expensive road and the one too commonly used. Another method is by the careful studying of books written by practical poultry people who have made mistakes and successes and are willing to give this information in order that you may take the short road to poultry success.

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BY

Jean A. Koethen

Graduate of University of Calif.

Gives more practical knowledge of every branch of the poultry business in a more concise and simple manner than any similar book published. With the knowledge gained by a study of this work experience in the poultry business is not as necessary. Through its guidance obstacles are overcome before it is too late.

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## Are Your Hens Profits Satisfactory?

If not, there is something wrong; and by adopting the

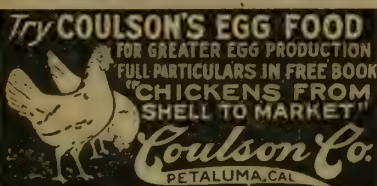
### "LEE WAY"

the wrong can be easily corrected. **Cash Prizes**

Those who will report to us by December 15th, 1917, the results received from use of the "Lee Way" and the "Lee Way Assortment" during the months August, September, October and November, we offer Cash Prizes for the 15 best reports:

First Prize .....\$25.00  
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# Science Says Buttermilk



Is the only preventative for White Diarrhoea. It further states that many birds that are apparently in perfect health have the germs in their system and that these germs are transmittable from both male and female to their progeny. Reference Bulletin No. 162—issued by the Department of Agriculture, Berkeley, Calif. Write Berkeley for this bulletin.

Don't take any chances, use Globe "A-1" Buttermilk Mash. It prevents White Diarrhoea, it increases the appetite, it aids digestion, it produces more eggs for market and better eggs for hatching and it costs No More than other good mashes.

It's the Lactic Acid in Buttermilk that does the good work. The dry buttermilk we use, chemically shows 10,000 Live Active Lactic Acid Bacilli to the cubic centimeter. Write us for Free Literature and sample of this wonderful feed. Not an ounce of filler used. Satisfaction guaranteed or money refunded.

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# Buttermilk GLOBE A-1 Dry Mash

## Mr. Poultryman: TRI-STATE MOLT MASH

will help your hens through the molt and make it possible for you to stay in the business.  
SOLD by our agent in each town or inquire of GLOBE MILLS, LOS ANGELES, Southern Wholesale Distributors, or TRI-STATE POULTRYMEN'S COOPERATIVE ASS'N., Headquarters, Fresno, California.



## RIDING IN THE TONNEAU

Did you ever go touring with friends when you were given your choice of a seat in just about such a way as "Which would you rather do or ride in the rear seat?" asks Frank Farrington, writing in the current issue of American Motorist.

Continuing, Mr. Farrington says:

"Some people like to ride in front and some like to ride behind, but it is my observation that the people who like the tonneau are just as likely to have the front seat wished upon them, while those who want to get in behind the windshield quite frequently have to take the breezes in the rear.

"I don't think the driver, or the person in control of the driver, gives sufficient thought to the comfort of those poor, luckless wights back there at the mercy of the gales and the swaying and swinging and skidding of the car on poor roads.

"Plenty of owners, thinking to give the old lady a pleasant afternoon, have put Aunt Emma through such an experience as she would not undergo again for a peck of potatoes or a bushel of onions. The care-free individual who habitually drives the car knows mighty little of what it is like to ride behind with a feeling that there is nothing between life and death but a trust in Providence and a firm grip on the top braces.

"For the people who like the rear seat, who are accustomed to it and who are equipped for it, nothing need be said. They are happy there or anywhere. But I think some consideration should be given the people who have not motored enough to believe the driver is inspired by the Almighty and competent to work miracles with a steering wheel and two sets of brakes."

## PROPER WAY TO WASH A CAR

The commonly used rubber hose is perhaps the best method of cleaning the lower portions of the car, such as wheels, running gear, mud guards, etc. But it is positively injurious when used on the body and highly finished surfaces, says a writer in the current issue of American Motorist. The force with which the stream of water impinges on the surface causes the sand and dirt adhering to the body to be driven into the varnish, destroying its brilliancy, and no amount of polishing and rubbing will restore its former lustre. The body should be washed with lukewarm soap and water and immediately dried with a soft chamois. Many owners use a mixture of cylinder oil and kerosene which they apply on the body, rubbing it dry afterwards. Another scheme is to use a mixture of boiled linseed oil and turpentine applied sparingly and rubbed absolutely dry. The use of this polish will restore even an old car to a degree of splendor that will please the user.

## LAW OF COMPENSATION

Charles' mother was reproving him for not being more tidy about his hair, when his uncle, who was very bald, thinking to soothe his feelings said: "Charles, don't you wish you were as bald as I? Then you wouldn't have any hair to comb."

Charles heaved a long sigh of resignation.

"No, I don't," he said. "There would be that much more face to wash."—Exchange.

## DIFFERENT ANSWER

"Am I the first girl you have ever loved?"

"No, you are the sixteenth, and my taste has been improving right along."—Kansas City Journal.

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Liner rates: Single insertions 30¢ per word;  
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## TREES

Here is Your Opportunity to Secure All citrus trees. We offer several thousand 2-year-old lemons, Eureka and Villa Franca, also Washington navel; also several hundred Valencia on sweet root. We call these good trees and we know whereof we speak. ALBERT JACKSON, Upland, Cal.

By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator. The cost is only 3 cents per word per issue, with a minimum of 35 cents.

Four Thousand Eureka Lemons, six thousand Valencia, five hundred seedless Grapefruit, two years old; good stock. For sale or trade. What have you? Smith & Lane, Glendora, Cal.

For Sale—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. Randall Bros. Nursery Co., Whittier, Calif.

Citrus Trees—All kinds, any quantity. Butler's Morning Side Nursery, Lamanda Park, Cal.

Sour Orange Seedlings.—About 10,000 fine plants about 2½ years old. Ready now for immediate planting; \$20 per thousand, fine root. McMillan Citrus Nurseries, Puente, Cal.

Avocado Seedlings in flats \$14.00 hundred. Geo. Michels, R. No. 2, Box 462, Pasadena.

Citrus Nurseries, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

## WANTED

Wanted—Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' work to right parties. Address J. H. Yetter, Sales Department, 810 Santa Marina Building, 112 Market St. San Francisco, Cal.

Experienced Orchardist understands pruning and caring for trees, can give good references. Wants position handling orchard work. Address P. O. Box 171, Victorville.

Position Wanted as first class American or California cheese maker and factory manager. Best references. E. Cultivator.

We Buy Weed Seeds—Mustard, rape, anise, bitter clover, etc. Send samples. Write us, stating quantity and price. Globe Mills, Los Angeles.

One of the Most perplexing problems to farmers and ranchers is that of help. A small liner ad in California Cultivator is the quickest and easiest means of securing farm help.

Wanted.—Quote best price on Valencia orange trees. Fred G. Smith, 320 Marsh-Strong Building, Los Angeles. Main 3604.

## FARM LANDS FOR SALE

For Sale.—A going ranch (160 acres) at Bakersfield. Ideal for dairy; 80 acres in alfalfa, abundance of ditch water always available. Good house, barns, shade and fruit trees. Price \$30,000 including complete outfit of farming implements, wagon and four horses. Half cash, balance to suit, six per cent. Owner, 636 Wesley Roberts Bldg., Los Angeles.

For Sale—Fruit ranch 21A Santa Clara Valley. 16a. prunes, 3a. apricots. Trees 13 years old very thrifty. Excellent soil. Good irrigation and pumping plant. House and buildings. Complete fruit drying equipment. Farm machinery and horses. Owner John Silbersack, San Martin.

Oregon, California Government Lands. Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

## POULTRY

Day Old Chix—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Calif.

Poultry Wanted.—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

Half Price Sale Pullets, Cockerels, Hens, 200-290 egg Leghorns, Wyandottes, Rocks, Reds, Orpingtons, Anconas, Minorcas. \$3-\$10 profit per hen this year. C. Beeson, Pasadena, Calif.

"Eastman's Bred-to-Lay" Barred Plymouth Rocks, August chicks and eggs. Fairmead Poultry Farm, Fairmead, Cal.

## AGRICULTURAL IMPLEMENTS

Large Assortment slightly used and agents' sample plows, harrows, cultivators, wagons. Call and see them before buying. Save 50 per cent on some. Four floors. Largest stock. Arnott & Company, Ranchers' Supply House, 112 to 118 South Los Angeles St., Los Angeles.

Bean Threshers Attention—The best and cheapest source of power for small threshing outfit is a Little Bull Tractor. Will haul your outfit anywhere and give ample power at the belt at very low cost. Several of these tractors have been used for this purpose two seasons with great success. Terms if desired. Low prices. See P. J. Weisel & Co., Anaheim, Cal.

## LUMBER

Lumber—Sash—Doors—Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A.R.W. Shingles 50¢ per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.

## HOGS

Chester Whites, the Billiken Brand.—Your duty is to raise more hogs and increase the meat supply. The demand for pork exceeds the production. Get started with some of these Chesters; 3 bred sows farrowed in April, 1916, due to farrow in September, and October; 18 October gilts bred to farrow in October; 3 October boars ready for service. All first class in every respect and good enough to fit and show at the different Fairs this fall. All are cholera immune and will be registered free. Write for price list and booklet. C. B. Cunningham, Box C, Mills, California.

Grape-Wild Farm Berkshires—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

Large Yorkshires—Choice spring boars, gilts and weaned pigs from champion sow P.E.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

Wanted—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 15 cents per line.

Rancho Rubio Durocs.—Nothing to sell at present. A fine bunch of gilts and a few extra good service boars for this fall. Elmer Lamb, Ceres, Cal.

Big Type Durocs. Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

Cholera Immune Duroc-Jerseys. Big type. Weaned boars and gilts from 500 to 700-pound sows. Prize winning stock. Derryfield Farm, L.O.O.F. Temple, Sacramento.

Choice Boar Pigs for Sale—Sired by Superba 220620, champion Poland boar at San Francisco. Prices right. C. R. Hanna, Riverside, Cal.

Duroc-Jerseys.—A few gilts for sale out of the grand champion sow at Riverside. Peters, Lamson & Walker, Devore, San Bernardino County.

Most Money in Duroc-Jerseys. Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

One Large and two medium type boars extra choice, 9 and 10 months old. W. Bernstein Ranch, L. C. Trehwitt, Mgr., Hanford, Cal.

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.

Large Type Poland Chinas are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Calif.

Model Herd Berkshires bred for size and quality. Weanings and gilts. J. L. Gish, Laws, Calif.

Carruthers' Farm Berkshire Hogs. Our herd won Premier Exhibitor prize at the P. P. L. E. Exposition, Mayfield, Cal.

Poland-Chinas.—A few good breeding boars. S. F. Williams, Orland, Cal.

## MISCELLANEOUS

Slacked Lime—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road Pasadena.

Make Money writing short stories or articles. Good pay. Send for free information. United Press Syndicate, Los Angeles.

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

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Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

At Last the Perfect Sile—the Stay Round. No hoops, no bolts. No experiments. Any one can erect. Close price. Address D. O. Lively, 215 Hobart Bldg., San Francisco.

Registered Shires—Blackhawk Stock Ranch. Importers and Breeders. Easton & Ward, Burlingame, Cal.

## CATTLE

D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.

Registered Holsteins out of A.R.O. Dams. Grandsons of King Korndyke Hengerveld Ormsby who has 20 A.R.O. daughters with records of over 29 pounds. Look up this sire. Geo. Kounias, Modesto Farms, Modesto, Cal.

Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

Veramont Stock Farm Pure Bred Herefords. Location Plumas County. Ideal for stamina and vigor. Bulls for sale. Address H. M. Barngrover, San Jose, Cal.

Registered Holstein Bulls from high producing dams for sale at reasonable prices. Also a few choice females. McAlister Sons, Chino, Cal.

Thirty high-grade Holstein Cows and one registered Holstein bull. Chas. Hubbard, Riverdale, Calif.

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WINDMILLS, SPECIALLY PRICED. 8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel; 12-ft. aeromotor and swell steel tower, \$88; 16-ft. aeromotor and tower, \$135.

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RANCH MACHINERY. Walking plows, \$2.75 up; spike harrows and cultivators, \$2.50 up; 4 and 5-ft. Fresno, \$9 to \$12; wheel barrows, \$2.50 up; 350 ft. ¾-in. cable, 6c; water troughs, \$4; bone grinder, \$6.50; feed mill; sprayer; mowers, rakes, buck rake, \$20; belting, all sizes; sundries too numerous to advertise. Material guaranteed as represented or money refunded. Down town office DEMMITT CO., UP-STAIRS 120 N. Main. Yards, 816 Yale, Los Angeles. Phones 15191; Bdwy. 1984.

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## PATRIOTIC

The children were having a review lesson in history. The teacher said: "Columbus had a compass to sail by. Did Ericsson use a compass?"

"No," answered the boy; "he sailed by the stars."

"And what else?" asked the teacher.

After a moment the boy replied, "And the stripes."—Exchange.



## The Cultivator Patterns



7814—Girls' Dress. Cut in sizes 6 to 14 years. Linen, gingham or serge can be used to make this dress.

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Pattern Department  
California Cultivator  
Los Angeles

## Household Department

HO! FOR THE COUNTRY ROAD  
Out into the hush of the rose-flushed dawn,  
That is wakened by bird song, low and sweet,  
We take our way on the open road,  
Where no sound is heard but the engine's beat.

The prairies stretch out like a wide, green sea,  
Far out to the blue horizon's rim,  
Where the last, late star of the night has dropped  
Down into the shadows, cool and dim.

O, the glad, free life of the open road,  
Out where the breezes of Heaven blow;  
And what is tomorrow or yesterday?  
Fling care to the winds, as away we go!

I sing as I swing to the engine's beat,  
The soft winds tossing the grassy sea;  
You may cling to your walls of bricks and stone  
But the boundless sweep of the road for me!  
—Florence Jones Hadley in American Motorist.

### TOMMY COTTON

Written for California Cultivator  
By Mrs. P. E. Tucker, Visalia

**T**OMMY COTTON was a half-grown kitten when I got him, and he was not white, but red, having made his bed a few nights before in a can of red ochre dust some painters had left uncovered. Calling on Tommy's mistress one morning she asked me if I would take Tommie to the country as she could not wash the red out of his fur. So I took Master Cotton home with me.

Tommy had a passion, it seems, for a family of his own. A few nights after he came I had an old hen refuse to own a bunch of chickens, so I took them to the house and put them in a box with a cloth over the top. The next morning I found Tommy Cotton in bed with the chickens. Being a cold wet day I kept the chicks that day and night in the house. The next day I made a small yard and a house of a box with a cloth I could raise and lower above the chicks and put a small thin feather cushion on top. The chicks went under the cushion from the yard; Tommy went to bed on the cushion under the roof. In a few days those chicks would follow the cat around the yard and cuddle up around him in the sun, and with Tommy's help I raised 20 out of the 24 until they were large enough to broil.

One evening, coming home from town late, on putting the chicks to bed I found six of the youngsters missing, and no amount of calling or hunting brought them to light, and no Tommy either so I shut the others up and did the rest of the chores. About nine o'clock that evening I heard the cat call as he did when he called his family so I thought he wanted in. I took a light and went out, and there sat Master Cotton by the back of the summer kitchen, but he would not stir when I called to him, only to take his paw and reach in under the floor. I went and looked to see what he had, and there in a corner of the shed were those six little strays cuddled as close to their adopted dad as an inch board would allow.

Every day those chicks had fresh meat for breakfast or dinner. It was certainly amusing to see them scamper when Tommie came in with a big squirrel. He would eat the head off, then sit down and call. When those chicks were two and a half months

old they were taken to the chicken house, which nearly broke Tommy Cotton's heart.

He promptly took possession of a litter of seven little day old puppies, greatly to the mother's displeasure, and for a week it was which and tother with Tommy and Picus over those pups. At last Mother Picus gave up and allowed Tommy to share her home and family.

When they were old enough to run around, every morning while I did my chores I would see Tommy coaxing those pups out to the alfalfa field where he taught them all to hunt squirrels and gophers. But being little house dogs and full of funny tricks I again broke up Tommy's adopted family but kept one for him, and some day may tell of little Polly-wiggle, and what she learned to do, which is almost as interesting as what Tommy did.

Now comes the strangest part of Tommy's doings. For some weeks something had disturbed the incubator chickens at the chicken house at night. So I set some traps and in the morning one trap had been pulled loose and was gone.

A few days after I saw Tommy take a squirrel under the house and leave it, and he did the same thing every day for about a week, until I came to the conclusion he must be feeding something there. But it was so dark I could see nothing; so I caught Mr. Tommy and shut him up. On the third morning of Tommy's confinement, a beautiful black and white, small, long distance scent bottle crept from under the house and ambled up to the door with my missing trap on its hind leg. Well now, but this was the limit, and also the last of Tommy Cotton's family notions of adopting some other father's offspring.

Tommy did not live many weeks after this last odorous child of his adoption was dispatched, whether from grief or too high living we do not know.

Tommy Cotton lies in the garden under the cherry tree after three years of a very useful life.

### "HE PRAYETH BEST WHO LOVETH BEST—"

Written for California Cultivator  
By Ida Jones Griffiths, Caruthers

**W**OMEN have been known to make pets of tigers, elephants, monkeys, men, and all sorts of other wild animals, but not many can boast of having had a pet mouse. Women and mice seem to have very little in common, and few know how engaging a mouse can be.

Should Mistress Mousie visit our homes at night a piece of toasted cheese enticingly placed in the jaws of death is the only welcome she is likely to receive; if she ventures into our presence during the day we are too busy climbing chairs and tables to think of being friendly. As a rule no one dreams of cultivating the social side of a mouse, and cannot imagine what an engaging little creature she is.

A few summers ago, when camping out at Big Creek, I met the only mouse I ever got acquainted with. I had been out all the morning and was hurriedly walking along a trail that led to lunch, when I espied a wee baby mouse rushing around plainly hunting for home and mother. Now

babies, be they furred, feathered, or human, are my delight and lost babies are especially appealing. So you can guess that at the end of the trail we lunched together quite happily.

When my father and brothers returned to camp that evening I proudly displayed the new baby, but they were quite unimpressed, although later they found my pet rather amusing.

At first Mistress Mousie lived on tiny drops of milk licked off her whiskers, but after a while she took to nibbling crumbs of bread, cake and cheese, with tiny drinks of milk in between. She made her repast very leisurely—a few nibbles at a crumb, a sip of milk, then she would sit up and trim her whiskers, wipe over her face, neck and ears, after which she would nibble another crumb, take another drink of milk, and attend to her toilet once more. This continued throughout the meal; a nibble, a drink, and a wash, over and over again, until she had eaten enough. It was most amusing, especially when she sat on her haunches cleaning herself, and I wish that every boy and girl that object to having their faces washed could see how diligently Mistress Mousie went into the corners, and the attention she paid to the part behind her ears!

She soon became very fond of me and liked nothing better than to snuggle up in my hand and go to sleep. My bed was out under a big pine tree, and hers was in a paper sack suspended from one of the branches. Every afternoon when I lay down to rest or read I would take down the paper sack and put it on my bed, and she always crept out and went hunting all over, running here and there, until she found my hand. Then she would snuggle down in the palm and go to sleep.

Being well-fed she never bothered our food, and soon became fat and sleek and grew very fast. She was never timid when alone with me, but feared my father and brothers, and greatly objected to loud noises. My brothers loved to watch her feed. As a diner out, they said, she was the cutest ever, and were especially delighted with the way she scrubbed the back of her neck and behind her ears. If either of them made the least noise during the performance she would rush into my hand, and peer out at them with black beady eyes.

One evening I was bending down watching her eat supper, when my

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brothers rushed into camp, announcing their return with a loud and joyful noise as usual. This scared my little pet; she sprang to my knee and disappeared over my shoulder in a flash. We searched everywhere but could not find her, and gave her up for lost. An hour later I felt something move in my hair, and there she was hiding amongst the hairpins!

One morning I found her gone. Anyone who has ever lost a pet will understand how I missed her. More than a week later I was awakened by something scampering over my face. I opened my eyes, and there was Mistress Mousie. I put out my hand, and she ran into it, snuggled down in the old way and went to sleep. After this she would be missing several days together, but each time on her return she was as tame and affectionate as ever.

At last she returned no more. I often wonder what became of her. My brothers believe she was killed, but I like to think that, at the perfect end of a perfect day, my little pet met Mr. Mousie, and together they went forth on the Great Adventure.

SAIRY WINKUM  
Written for California Cultivator  
By Louis H. Wheeler, Chino

I would like to tell you a story about Sairy Winkum just as it was told to me. That is the name of an old blue hen that has always kept us laughing at her because of her funny habits. Among other things she does is to come and pick my apron when hungry. She will take hold of the hem and jerk, jerk until I look down, then she scratches the ground and looks as if trying her best to see a grain of wheat; then she looks up at me and gives such a comical slow wink. I think her eyes are different from any other hen's, but it always seems like a well-planned scheme to get any extra feed; and I have to admit that it usually works, too. So you see why we call her Winkum. Then father said that was only a last name, after all, so he put in the Sairy. Usually Sairy furnished us with her share of big white eggs, but if ever she made up her mind to sit, there was no making her change it. Sit she would; if not on eggs, then on something else. Once she even tried to coax pussy's kittens into a nest; but puss soon settled that by carrying them one by one clear out of her reach.

One morning father came in laughing. He had a basket, and as he set it down, he said, "Well I reckon we'll break Sairy Winkum of sitting, this rip." I peeped into the basket and saw nine good sized turtle eggs. Father!" I exclaimed, "where did you find them? I'm sure Sairy won't have a thing to do with them. She would rather mother cats than those things."

Father just laughed and said, "Well, we'll see. I found them in the sand down by the river and we'll see some on any way." So he fixed a nice nest and put the eggs in, then showed it to Sairy. She never hesitated a bit, but just settled herself over those eggs as if they were quite the proper spot.

Of course we didn't expect her to stick to it; we thought she would gure out in hen fashion—some way—that those were trouble makers, but he didn't. When we would look in on her she would greet us with an awful squawk and that same ridiculous low wink of hers, and soon it became the habit of every farmer with-

in miles of us to ask laughingly about Sairy and her eggs.

And then one morning father called us to come and see Sairy. There was poor Sairy Winkum, almost distracted, every feather standing out, and in the nest into which she was looking were nine little squirming, snapping turtles.

Utterly perplexed, several times she tried to hover over her uncanny brood, but the situation was too much even for Sairy; and with a prolonged squawk she flew clear across the garden and deserted her freaky family. And from that day to this she never again insisted on setting. But she keeps her funny slow wink and nothing would tempt us to part with Sairy Winkum.

AN UNWELCOME GUEST  
Written for California Cultivator  
By Ida M. Blake

It really is hard to believe that a skunk can have good manners, and perhaps this one might not have if its disposition had been put to a severe test. But anyway there is a skunk or at least there was a skunk in one of our mountain canyons that demands a good deal of respect for its behaviour on a certain night not long ago.

You see John's sister has a mountain cabin in this canyon where the family often spend a pleasant weekend, (providing no unpleasant disturbances occur).

John having finished his college course, was seeking rest and recreation for a few days so decided that the canyon was an ideal place. While there alone he showed his good judgment by sleeping out of doors, and all was well. One evening a friend of John's, Harry Lincoln, arrived on the scene, and as matters of business would not permit a long visit they both decided to sleep indoors rather than bother taking an extra bed outside. Of course like all modern thinking people they wished to leave doors and windows open, which they did.

Late in the night Harry awakened with a start to hear a strange nibbling sound in the cabin. It was as dark as a pocket and you may be sure there were no electric light buttons to press in that mountain wilderness. So John waked up and a serious discussion of the situation took place in whispers. "What do you suppose is in this room, John?" "I don't know, but maybe it's a skunk." "Well, what do you suppose he is eating, he seems to be nibbling something,"—then with a sudden start of memory, "Why I left a bag of peanuts on the table and the animal is having a feast."

It was then decided that a light must be had; but where were the matches and where the candle?

Men may be brave in battle but when there are prospects of a skunk in a room they seem to be perfectly willing that the other fellow should be "Johnny-on-the-spot." After stealthy manoeuvring on the part of both, a "bug-light" revealed to their expectant gaze a pretty black and white animal contentedly eating peanuts on the hearth.

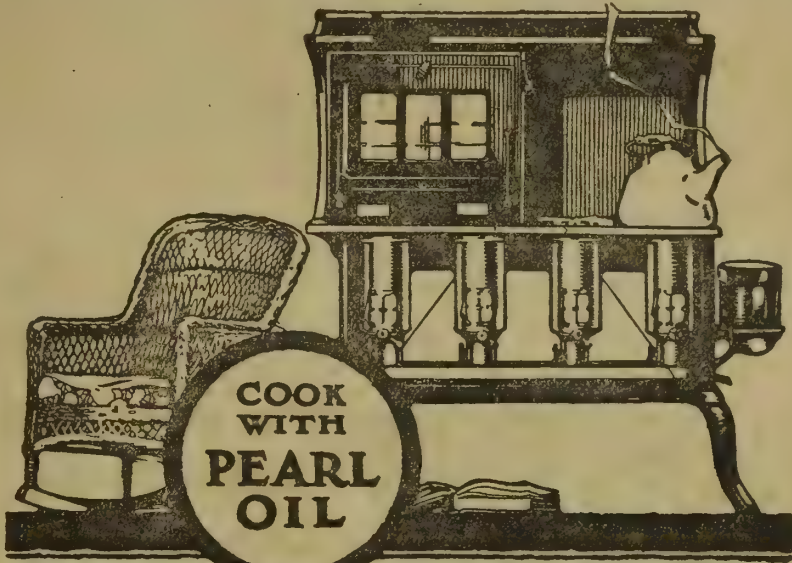
How to get the animal out of the house was a question. Harry decided that he wanted the peanuts worse than the skunk did, so as the bag was on the table within arms reach, he carefully secured the treasure and hid it under his pillow. John conceived the bright idea of throwing a few peanuts out on the steps for a

bait, and sure enough the scheme worked to perfection and the skunk took his departure. You may be sure they were not long in closing and locking the door. Several times the skunk begged to come in but the boys thought his good manners had been sufficiently tested and would not listen to his pleading.

PRIZE WINNERS  
Prize winners this month are Mrs. P. E. Tucker of Visalia, first, for her story of Tommy Cotton, and Ida Jones Griffiths, Caruthers, second, for her mouse story.  
A number of other delightful stories are coming.  
The subject of the September contest will be announced next week.

FINDS EASY WAY TO PEEL PEPPERS FOR HOME CANNING PURPOSES

How to peel peppers easily for home canning has been found out by the University of California. This is by dipping the peppers or pimientos in boiling five per cent lye for half a minute to a minute and a half and then washing them immediately in cold running water. After chilling the skins may be slipped from the peppers. The peeled peppers have been canned successfully in the laboratory by placing them in solder top cans, filling the cans with hot water or a weak brine, sealing the cans with solder, and cooking in boiling water for 15 minutes. The cans must then be chilled by immersing in cold water. The five per cent lye is made by dissolving 6½ ounces caustic potash or caustic soda in one gallon of water.

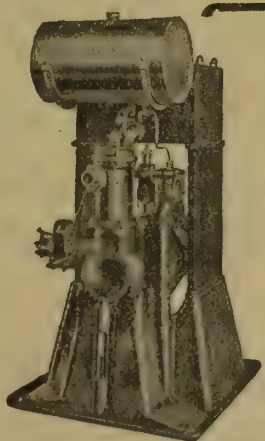


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## Veterinary

Answers in this column by Dr. Wm. Petrie, 2714 South Harvard Blvd., Los Angeles, are without charge. For immediate mail answer remit \$1.00. In writing questions give full symptoms or particulars of injury of animal. Unsigned communications receive no attention.

### Sick Calves

Does extreme hot weather, 114 to 116 degrees, hurt new born calves? I have one that is very sick and pants all the time and another that is not so bad. They were sucking the cows but lost appetite so I have to pour the milk down their throats. Please tell me what is wrong?—Subscriber.

Hot weather does not usually affect young calves unless they are left

right out in the sunshine where they will be exposed to the heat of the sun. Could not guess what is wrong without more symptoms and the history of the case.

### Breeding a Mare

Have received much benefit from reading your paper, now would like to ask what I must give a mare to get her in heat as I have a fine chance to breed her. Any suggestions will be thankfully received.—Subscriber, Victorville.

First get the mare in fine condition; not too fat, and give her plenty of exercise. There is no medicine necessary unless you give her a tonic to improve her condition. You might try some powders containing four ounces of gentian, two ounces of nux

vomica, two ounces of sulphate of iron and enough ground fenugreek to make one pound. Mix. Give a tablespoon of the medicine once a day.

### Sick Hog

Have a Duroc-Jersey sow seven months old which is lame in the hind quarters. She is worse some times than at others. I feed beet pulp, bran and middlings in equal parts. The rest of the hogs are all right.—Subscriber, Wheatland.

It may be rheumatism. Give these powders: Two ounces of salicylate of soda, two ounces of bicarbonate of soda and two ounces of powdered buchu leaves. Mix. Give a teaspoon in the feed twice a day.

### Cow Not Breeding

I have a cow about three years old which does not get with calf. She comes in heat all right. Have examined her and find the os closed, opened it but that did no good. Have washed her out with baking soda, etc. She was fresh about eight months ago. Is it contagious? Can you recommend some practical up-to-date book on the diseases of cattle and hogs.—Subscriber, San Jose.

We believe that the best answer to this question is to refer the writer to the columns of the Cultivator as far back as he is willing to go. Scarcely a month passes without the cultivator containing several answers to questions almost exactly like this. The government issues a book on the diseases of cattle. We presume you could get one by writing your senator or representative. If the readers of the Cultivator would save their papers they would soon have an answer to almost any question they might ask. An index is printed twice a year and by referring to that one could turn to a question and answer that would just fit his case.

### A GLIMPSE AT THE WORLD'S MARKETS

Heavy rains in Texas give more promise to the cotton crop, to which New York responds by beating down prices to the extent of \$3.90 per bale. Prices are now ranging from 23 to 25 cents. New Orleans spot market on Tuesday was from 23.12 to 27.

The office of information of the United States department of agriculture announces that a survey of all stocks of wool in all parts of the United States is to be made. According to preliminary summary there are now in hands of dealers and manufacturers 370,000,000 pounds of grease wool, 47,000,000 pounds of scoured wool and 29,000,000 pounds of pulled wool.

The Strawberry Growers' Association of Northern California has fixed on \$5.00 per chest as their minimum. The minimum was not reached this season until August 19.

Meat packers of San Francisco are

marking up hogs, but California quotations do not yet approach the Eastern prices. Chicago prices are now practically at the 20 cent mark.

Promise of immense corn crop is tending to weaken prices somewhat in large grain centers. Oats reflect closely the corn condition.

Los Angeles is proving a good apple market this season, some Greenings selling at \$1.25, but prices are generally holding above the \$1.50 mark.

Los Angeles potato prices are far better than anticipated, ranging between \$3.10 and \$3.40. Onions are still in the dumps.

Wheat dropped below \$2.00 per bushel for the first time in weeks in Chicago on August 16. General trade conditions are good, but fear of government price control prevents speculation.

Riverside proposes to install a dehydrating plant for handling all kinds of fruits and vegetables. It is proposed that before another season a plant that will be able to handle over 25 tons of potatoes a day will be in operation.

The Breeders Gazette predicts that corned cattle are due to reach \$15.00, in fact, \$14.75 has already been paid in Chicago for some exceptionally fine steers.

A great many feeders range cattle from the Northwestern drought sections are being thrown on the market at \$9.50 to \$10.00.

One week recently showed a decline of 65 cents on spot corn in Chicago.

It is probable that before this column is read highest quality hogs will be commanding 20 cents per pound in the Chicago stock yards.

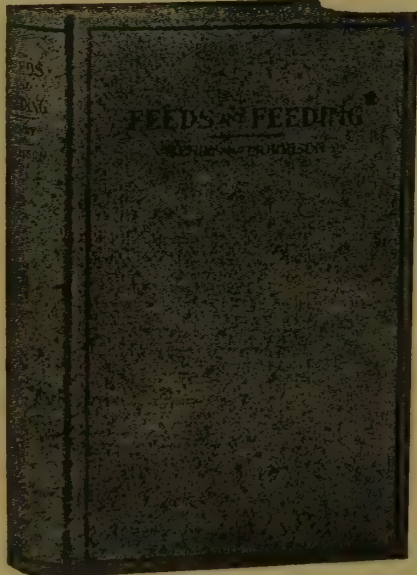
Reports from United States Weather Bureau correspondents for the week ending August 21, 1917, are to the effect that the weather was unusually favorable for the advancement of growth, and it was especially favorable in the Coast counties, where the nights and mornings were either cloudy or foggy and the days were sunny and warm. The barley harvest is practically completed and the thrashing yields continue satisfactory. Corn is making good progress and the kafir and milo varieties are looking remarkably well. Some farmers have begun cutting green corn for ensilage. The peach harvest is well advanced and the yield is good, except the fruit is slightly undersized as compared with last year's crop. Pears are dropping more than usual, which it is believed is due to the hot spells that occurred last June and July. Grapes are ripening satisfactorily and shipments of Thompson Seedlings and Malagas from the San Joaquin Valley are increasing rapidly. Red spiders are unusually numerous on the almond trees and growers will spray for them if the pests get any worse. Farmers are still planting late potatoes and this crop made good progress during the week. In a few of the northern counties and also on the land back of the Sacramento River, potatoes are poor; but in the localities where the acreage is largest, the crop is generally in a promising condition. The bean harvest has begun in the neighborhood of San Diego and the recent weather has been especially favorable for this crop. The acreage is large and while some inexperienced growers planted too early and their crops did not bloom or set well and others lost heavily through grasshoppers, the general outlook for this crop is good. In the southern counties some complaint is made of aphides injuring beans; but this pest has not become general and no spraying for them has so far been reported as having been done. Rice is doing splendidly and no complaints are made about this crop. Some lice are reported on lowland hogs, but it is thought that they will not do any great harm. The sugar beet harvest is progressing slowly and labor for handling this crop as well as for general farming is scarce and costly.

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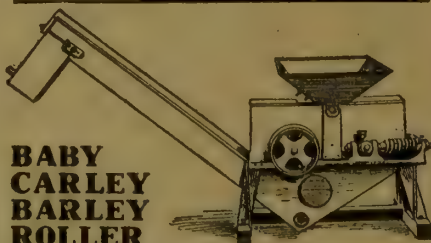
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## Fair Dates

(Several fair dates have been changed from those originally published in order to avoid conflict with state and other local and county fairs. Below dates have been checked up by fair secretaries within the week:)

St. Helena Vintage Festival, St. Helena, August 31 to September 3.

Arbuckle Almond Festival, Arbuckle, September 7, 8, 9.

State Fair, Sacramento, September 8-15.

Stanislaus Live Stock Show and Exposition, Modesto, September 17-22.

Kings County Fair, Hanford, September 17-22.

Fresno District Fair, Fresno, September 25-29.

Napa County Fair, September 22-26.

Glenn County, Orland, September 26-30.

Antelope Valley Fair, Lancaster, September 26-29.

Kern County Agricultural Fair, Bakersfield, October 2-7.

Yolo County Fair, Woodland, October 4-6.

Riverside County Fair, Riverside, October 9-13.

Tulare County Citrus Fair, Visalia, November 16-24.



## Los Angeles Market

Los Angeles, Aug. 22, 1917.

## BUTTER

Rcts. wk. ending August 21, 318,950 lbs.  
Produce Exch. Quotations.  
Price to trade 4c higher.  
California extra creamery.....42  
Extr. Cry. Exch. past wk.  
Aug. 15 16 17 18 20 21  
17 42 42 42 42 42

## CHEESE

Brokers' prices:  
California fresh, lb.....24½@25  
Oregon Longhorn.....27@27½  
Illamook Trip.....26  
Domestic Swiss.....32

## EGGS

Rcts. wk. ending Aug. 21, 1917, 870 cs.  
Exchange quotations. Prices include  
cases and fillers valued at 35c.  
Fresh extras.....43½  
Case count.....42  
Pullet.....38  
Fresh Ranch Exch. past wk.  
Aug. 15 16 17 18 20 21  
17 41 42 42 42 43 43½

## POULTRY

We quote to producers:  
Broilers, 1½ lbs. and up, 20; small.....18  
Fryers, 2½ lbs. and up.....22  
Hens—Leghorns, 13@17; Heavy Cold.....22  
Roasters, 3 lbs. and up.....22  
Ducks, lb.....15@17  
Guinea, doz.....2.00@3.00  
Cooper, doz.....10  
Turkeys.....21@24  
Eggs.....10

## LIVE STOCK

We quote cwt. f.o.b. L. A.  
Corrected Wednesday morning, August  
5 by the Cudahy Company.  
Cattle—  
Leaf steers, av. 1000 to 1100 lbs.8.50@9.00  
Heifers, good.....6.50@7.00  
Cows, good.....5.50@6.50  
Fair.....5.00@5.50  
HOGS—  
v. 125 lbs.....12.50  
v. 150 lbs.....13.50  
v. 175-200 lbs.....14.00  
Rough, docked 20 lbs.; piggy sows, 40  
lb., stags, 40 per cent.....9.50@10.00  
Prime wethers.....9.00@9.50  
Wabs.....13.50  
Earlings.....10.00@10.50

## POTATOES

Wholesale selling price:  
New cwt. 3.00@3.50; lug.....1.00@1.10  
Weets, lb.....4@4½

## ONIONS

Wholesale selling price:  
Brown, cwt., 1.65; white.....1.65  
Garlic.....8

## VEGETABLES

Wholesale prices:  
Artichokes, doz.....50@90  
Beets, sk.....1.00  
Beans—Wax.....4½@5  
Limas, lb.....4@5  
Ky. Wonder.....4½@5  
Eggs, sk.....1.00  
Cabbage, lb.....1½  
Carrots, sk.....50@55  
Cauliflower, doz.....1.25  
Celery, doz.....60  
Corn, lug.....50@55  
Cucumbers, lug.....30@40  
GG Plant, lb.....4@5  
Orzeradish, rt. lb.....15  
Ettuce, doz.....35  
Eggs, doz.....30  
Lentils.....40  
Onions, green, doz.....25  
Kra, lb.....10@12  
Sass, lb., Telephone.....8@8½  
Peppers, Chili, lb., 4@4½; Bell.....4@4½  
Arasips, doz.....20  
Adishes, doz.....20  
Hubarb—Strawberry.....1.10  
Omaine, doz.....40  
Onach, doz.....17½@20  
Quash, Summer, cr.....35@40  
Crockneck.....35  
Hubbard, lb.....3  
Tomatoes, cr., 75; lug.....50@75  
Turnips, doz.....30

## FRUITS

Wholesale prices:  
Apples—Crabapples, lug.....1.30@1.35  
Alexanders.....1.75  
Skinner's Seedling.....1.50@1.75  
Bellflowers.....1.50  
Vocados, doz.....7.00@8.50  
Picots, lb.....3½@4  
Ananas, lb.....5  
Antaloupes—Standard.....1.50  
Tip Top.....60@1.35  
Ponies.....1.25  
Sasab, lb.....2  
Sas, box.....1.00@1.50  
Rapes, Seedless, cr., 80@85; Malagas 1.25  
Concords, cr.....1.50  
Black.....1.25  
Ectarines, lug.....1.35  
Sashes, lug.....60@1.50  
Ears, Bartlett, lug.....1.35  
Neapples.....1.25  
Ums, lug.....65@1.35  
Uines, lug.....85  
Ackberries, basket.....5@6  
Ganberries, basket.....5@6  
Asberries, basket.....7@8  
Rawberries, basket.....5@6  
Watermelon, lb.....1½@1¾

## CITRUS

Lemons, 6.00@7.50; juice.....2.50  
Lapefruit.....3.00@3.50  
Limes, basket.....1.00  
Lencias.....3.25@3.50

## HONEY

Wholesale prices:  
Rtr. White, lb.....11½@12½  
W. W., lb.....12@14  
mb., case, W.....3.75  
W. W. case.....4.25@4.50

## NUTS

Almonds, raw.....12  
Mac Nuts.....20  
Cans.....19

## RICE

Wholesale quotations:  
Broken.....6.25  
Broken.....4.75@5.00

## BEANS

Wholesale Prices:  
Lady Washington.....13.50  
Limas.....13.50  
Pinks.....10.00  
Manchurian Reds.....11.00  
Baby Mex.....9.00  
Garbanzos.....9.00@10.00  
Small White.....13.50  
Blackeyes.....8.00  
Tepary.....7.00  
Lentils.....13.00

## HAY

Quotations by Nichols-Loomis Com-  
pany. Wholesale prices to grower f.o.b.  
L. A. carlots.  
Tame Oat.....19.00@21.00  
Volunteer Oat.....14.00@16.00  
Wheat.....15.00@18.00  
Barley.....16.00@19.00  
Alfalfa.....15.00@18.00  
Straw.....7.00  
The Alfalfa Growers' Association of  
Southern California quotes: No. 1 Cow  
alfalfa hay \$22.50 f. o. b. Los Angeles,  
and Southern California points. No. 1  
horse alfalfa hay \$21.50 f. o. b. Los An-  
geles and Southern California points.  
Market has been good and demand has  
been exceeding the supply.

## GRAIN AND FEEDSTUFFS

Wholesale cwt. f.o.b. L. A.  
Alfalfa Meal.....1.75  
Alfalfa Molasses.....1.80  
Barley, Rolled.....2.75  
Barley, Recleaned, Whole.....2.80  
Barley, Hulled.....3.35  
Beet Pulp.....1.80  
Bran, Heavy.....2.50  
Cocoanut Meal.....2.30  
Cottonseed Meal.....2.75  
Corn, Yellow.....4.60  
Corn, White.....4.70  
Corn, Cracked.....4.65  
Corn, Feed Meal.....4.70  
Corn, Egyptian.....4.45  
Middlings.....3.10  
Milo.....4.45  
Oat Chop.....1.90  
Oats, White.....3.30  
Oats, Rolled White.....3.35  
Oats, Hulled.....5.20  
Oats, Rolled Chicken Groats.....5.30  
Oatmeal.....3.40  
Wheat, No. 1.....4.10@4.15  
Wheat, Cracked, No. 1.....4.50  
Rye.....4.10  
Blood Meal.....5.10@5.20  
Bone, Green.....2.85@2.95  
Bone, Dry.....3.05@3.15  
Charcoal, 50-lb. sk.....2.70@2.80  
Clam Shell.....70@80  
Grit, Granite.....65@75  
Oyster Shell.....1.25@1.35  
Sunflower Seed.....4.10@4.20  
Soya Bean Meal.....3.20@3.30  
Scratch Feed.....4.10@4.20  
Gritless.....4.30@4.40  
Rice Bran, ton.....40.00  
Middlings, ton.....45.00  
Rice Polish, ton.....49.00

## San Francisco Markets

San Francisco, August 21, 1917.

## BUTTER

Rcts. wk. ending Aug. 20, 453,300 lbs.  
Dairy Exchange quotations, lb.:  
Fresh extras.....41½  
Prime firsts.....40  
Extr. Cry. Exch. past wk and yr. ago.  
Aug. 14 15 16 17 18 20  
17 41½ 41 41½ 41½ 41½ 41½  
16 26½ 26½ 26½ 26½ 26½

## CHEESE

Dairy Exchange quotations:  
Cal. Flats .18@21½ Y. Am. .22@24½  
Jack cheese, fl. cr. .19@20

## EGGS

Fresh Ranch Exch. past wk and yr. ago:  
Rcts. wk. ending Aug. 20, 9158 cs.  
Aug. 14 15 16 17 18 20  
17 41 43½ 43½ 44 43 43  
16 33 33 33 33 33

Dairy Exchange quotations:  
Fresh extras.....43  
Firsts.....43  
Select Pullets.....40½  
Firsts.....39½

## POULTRY

We quote from producers, lb.  
Hens, large, 23@24; Leghorns.....16@18  
Small Colored.....19@20  
Broilers.....27@30  
Roosters.....29@30  
Squabs, doz.....2.00@3.50  
Ducks.....15@17  
Geese.....19@20  
Belgian Hares, live 11@13; dr.....15@16

## LIVE STOCK

Prices gross weight:  
Cattle: The following prices are for  
grass fed stock. Hay fed bring ½ to ¾ c  
more.  
Steers, lb., 6½@8; cows and heifers,  
4@7½; calves, 7½@9½.  
Sheep: Wethers, 10@10½; ewes, 8@8½;  
lambs, lb., 11½@12.  
Wethers, 10@10½; ewes, 8@8½; lambs,  
11½@12.  
HOGS—Hard grain-fed, weighing 100  
to 150 lbs. 13½@14; 150 to 300 lbs., 14½  
@15½; 300 to 400 lbs., 14½@15.

## POTATOES

Wholesale selling prices at wharf:  
New, cwt.....2.65@2.75  
Salinas Burbank, cwt.....2.90@3.00  
Sweets.....4@4½

## ONIONS

Wholesale selling price on wharf:  
Australian Brown.....35@90  
New Red, sk.....60@75  
Yellow, cwt.....60@75  
Green, bx.....50@60  
Garlic, lb., New.....3@4

## VEGETABLES

Wholesale selling price:  
Beans, string, lb., 2@3; sk.....75@1.00  
Fy. Garden, 3@5; Lima.....4@5  
Celery, San Pedro, cr.....3.00@4.00  
Corn, Green, sk.....1.75@2.50  
Cucumbers, lug.....20@35  
Egg Plant, lug.....65@75  
Okra, 10-lb. box.....75@1.00  
Peas, Halfmoon, sk., 2.50@2.75; lb.....5@6  
Peppers, Bell, lug.....50@75

Chili, lug.....40@60  
Squash, Summer, lug.....25@35  
Italian, lug.....50@75  
Tomatoes, lug, Delta.....75@1.00  
Bay, lug.....1.00@1.25

## CITRUS FRUIT

Lemons.....5.00@8.00  
Lemonettes.....3.50@4.00  
Grapefruit.....2.50@3.00  
Limes, Mex.....4.50@5.50  
Valencias.....2.65@3.25

## FRESH FRUIT

Wholesale selling price:  
Apples—  
Bellflowers.....1.00@1.25  
Red Astrachan.....50@1.00  
White Astrachan.....75@1.25  
Gravenstein, box.....1.25@1.75  
Alexander.....75@1.00  
Crabapples, box.....2.00@2.25  
Bananas, lb.....5  
Cantaloupes, Delta, lug.....50@75  
Turlock, cr., Standard.....1.50@2.00  
Pony, 1.00@1.25; Flats.....75  
Casabas, cr., 1.00@1.15; Flats.....50@75  
Persian Melons, cr.....1.25@1.50  
Cherries, dr., 1.00@1.25; lb.....8@10  
Figs, Bk., box double layer.....1.25@1.50  
White.....65@75  
Grapes—Tokays, cr.....1.00@1.25  
Seedless, sm. lug.....75@1.00  
Muscat, cr.....1.25@1.50  
Bk., cr.....65@75  
Malaga, cr.....1.00@1.25  
Nectarines, cr., 1.00@1.25; box.....50@75  
Peaches, cr., 50@75; sm. lug.....40@65  
Pears—Bartlett, No. 1 box.....1.50@1.65  
Ton, 35; cull, ton.....10.00@12.00  
Pineapples, doz.....4.00@5.00  
Plums, Tragedy, cr.....75@1.00  
Burbank.....75@1.00  
Damson, ton.....55.00@60.00  
Green Gage, ton.....40.00@50.00  
Prunes, lug.....65@1.00  
Blackberries, chest.....3.50@4.50  
Strawberries, chest.....5.00@6.00  
Loganberries, chest.....6.00@7.00  
Pineapples, doz.....4.00@5.00  
Raspberries, chest.....9.00@12.00  
Watermelons, lb.....1@1¼

## DRIED FRUITS

RAISINS—The California Associated  
Raisin Company last quoted new 1917  
crop cluster raisins for October, Novem-  
ber and December shipment in 20-lb  
boxes as follows: Sun Maid layers, \$1.50;  
3-crown London layers, \$1.50; 4-crown  
clusters, \$1.75; 6-crown Imperial clusters,  
\$2.60; 10-lb boxes, 25c and 5-lb boxes,  
50c additional. Bulk, vineyard run lay-  
ers 50-lb. box \$3.25; do, 100-lb. box, \$6.25.  
Sun Maid brand clusters—Per case:  
Fancy 1-lb. carton, 20 to cs, \$1.85; do, 24  
to cs, \$3.20 2-lb cartons, 12 to cs, \$2.20;  
5-lb. cartons, 4 to cs, \$2.30, all f. o. b.  
California common shipping points. Reg-  
ular California dried fruit terms.

PRUNES-APRICOTS—Opening prices  
on dried fruits of the new 1917 crop are  
as follows:  
Per lb., Bulk basis: Apricots, quoted by  
Apricot and Prune Growers' Association,  
Standard, 13½c; choice, 14½c; extra  
choice, 15c; fancy, 16c; extra fancy, 17c;  
fancy Moorpark, 17c; extra fancy Moor-  
park, 18c. Prunes, 6½-cent basis with  
1½c premiums on the 40s.

PEACHES—Under date of August 7  
Cal. Peach Growers, Inc., withdraw all  
quotations.

## HONEY

Comb, W. W., lb.....13@15  
Lt. A., 11@12; A.....8@10  
Extr. W., lb., 13; Lt. A.....11  
Beeswax, lb.....38

## BEANS

Jobbers' prices, cwt. recleaned:  
Limas.....12.00@12.75  
Bayous.....8.50@9.00  
Garbanzos.....6.00@6.50  
Small Whites.....12.50@14.00  
Mexican Red.....9.00@9.50  
Large White.....12.00@13.00  
Pinks.....9.00@9.25  
Black Eyes.....8.00@8.50  
Cranberry.....10.00@10.50

## RICE

Price to growers:  
Cal. Rough, cwt.....3.00@3.25  
Lower Grades.....2.00@2.75

## HOPS

Hops have been showing spectacular  
advances; some sales reported as high  
as 30 cents.

## HAY

Under date of August 18, Scott, Magner  
& Miller say:  
Receipts past week 2800 tons, last week  
3152 tons.

Receipts are small for this season of  
the year; shortage of cars can be given  
as the reason. Most receipts during the  
week were brought in by water, that ar-  
riving by rail being mainly in gondola  
cars which cannot be used after the wet  
weather starts in. The future outlook is  
anything but promising to those han-  
dling hay. Owing to the very high  
prices at the close of last season for the  
old crop many consumers went into the  
country and purchased without figuring  
difficulty of transporting and are now  
unable to get it.

We quote today wholesale prices in  
carload lots as appear from dealers'  
transfers upon the market. For prices  
to consumers charges of cartage, com-  
mission and handling expenses must be  
added.

Fancy Wheat Hay (light 5 wire

bale, ton.....22.00@23.00  
No. 1 Wheat or Wheat and  
Oat Hay.....18.00@20.00  
No. 2 Wheat or Wheat and  
Oat Hay.....16.00@18.00  
Choice Tame Oat Hay.....19.00@20.00  
Other Tame Oat Hay.....16.00@17.50  
Wild Oat Hay.....15.00@18.00  
Barley Hay.....15.00@18.00  
Alfalfa.....15.00@18.00  
Stock Hay.....14.00@16.00  
No. 1 Barley Straw, bale.....50@90

## GRAIN

Grain Exchange prices, ctl.  
Wheat, Northern Bluestem.....4.35@4.50  
Corn, California Yellow.....4.25@4.50  
Oats, Red Feed, 2.80@3.00; seed 3.00@3.25  
Barley, Feed.....2.25@2.27½

## FEEDSTUFF

Wholesale prices per ton:  
Bran.....38.00@40.00  
Cornmeal.....86.00@88.00  
Cracked Corn.....86.00@88.00  
Middlings.....49.00@50.00  
Alfalfa Meal.....24.00@25.00  
Cocoanut Meal.....38.00@40.00  
Shorts.....40.00@42.00  
Rolled Barley.....49.00@50.00

## SEEDS

Prices in round lots, lb.:  
Millet, recleaned.....4½@5  
Alfalfa.....20@21  
Flax.....6@6½

## Citrus Fruit Market

Los Angeles, Aug. 22, 1917.

The Valencia market has been spotted.  
In general the tone is somewhat easier.  
First class stock, however, commands  
fairly quick service. Immense quantities  
of deciduous fruit are filling all markets;  
California pears are one of the heaviest  
factors.

Lemons are still selling at good prices,  
some sales reaching as high as \$8.00, but  
the cool spell has materially lessened the  
keen demand. Besides many dealers are  
fairly well stocked and are waiting for  
lower prices. Shipping of lemons at this  
moment is exceptionally light.

## Shipments

Shipments of oranges from Southern  
California to date since November 1, 1916,  
36,420 cars, lemons 7235, total 43,655. To  
same date last year; oranges 28,729, lem-  
ons 6251, total 34,980. From Central  
California to date; oranges 5044, lemons  
164, total 5208. To same date last sea-  
son; oranges 5398, lemons 146, total 5544.  
From Northern California to date; or-  
anges 845. Same date last season; or-  
anges 60, lemons 1.

## FROM THE AUCTION

August 15  
New York: 25 cars. Val., \$1.75 to  
\$5.00. Grapefruit, \$1.20 to \$2.15.  
Cleveland: 6 cars. Lower. Val.,  
\$2.40 to \$3.35. Lem., \$2.90 to \$6.55.  
St. Louis: 2 cars. Val., \$2.35 to \$3.65.  
Lem., \$5.05.  
Boston: 7 cars. Val., \$2.70 to \$4.00.  
Lem., \$6.80 to \$9.00. Grapefruit, \$1.85 to  
\$2.05.

August 16  
New York: 18 oranges, 3 lem. Val.,  
\$1.65 to \$5.35. Lem., \$1.35 to \$8.15.  
Grapefruit, \$2.80 to \$3.30.  
Boston: 7 cars. Val., \$2.80 to \$4.05.  
Lem., \$6.05 to \$7.15.

August 17  
New York: 16 oranges, 1 grapefruit, 1  
lemon. Val., \$1.55 to \$5.30. Lem., \$6.65  
to \$7.05. Grapefruit, \$1.10 to \$2.65.  
St. Louis: 5 cars. Val., \$2.60 to \$3.40.  
Lem., \$3.05 to \$5.85.  
Boston: 9 cars. Val., \$1.90 to \$3.85.  
Lem., \$5.30 to \$8.25.  
Cleveland: 5 cars. Val., \$1.60 to \$3.80.  
Lem., \$2.85 to \$5.30.

August 20  
New York: 30 cars oranges, 3 lem.  
Val., \$1.75 to \$4.45. Lem., \$3.25 to \$5.40.  
Grapefruit, \$2.00 to \$3.25.  
Boston: 11 cars. Val., \$2.60 to \$3.55.  
Lem., \$6.00 to \$7.60.  
Philadelphia: 9 cars. Val \$2.10 to  
\$4.15. Lem., \$3.30 to \$4.65.  
St. Louis: 4 cars. Val., \$2.80 to \$3.25.  
Lem., \$4.10 to \$5.90.  
Cincinnati: 3 cars. Val., \$3.50. Lem.,  
\$5.70 to \$6.65.

August 21  
New York: 16 oranges, 3 lem. Val.,  
\$2.30 to \$5.75. Lem., \$5.75 to \$5.80.  
Grapefruit, \$1.00 to \$2.95.  
Pittsburgh: 2 cars. Val., \$3.45. Lem.,  
\$5.40 to \$7.00.  
Boston: 9 cars. Val., \$2.55 to \$3.90.  
Lem., \$4.85 to \$6.50.  
Philadelphia: 4 cars. Val., \$1.35 to  
\$3.40. Lem., \$2.70 to \$4.95.

## WEATHER CONDITION

San Francisco, August 18, 1917.

Loc.	Rainfall		Temp.	
	Wk.	Season.	Norm.	Max. Min.
Eureka	.00	.02	.14	58 50
Red Bluff	.00	.00	.00	100 60
Sacramento	.00	.00	.00	92 52
San Francisco	.00	.00	.01	64 50
San Jose	.00	.00	.02	78 54
Fresno	.00	.00	.00	100 60
San Luis Obispo	.00	.01	.03	76 50
Los Angeles	.00	.00	.00	73 60
San Diego	.00	.00	.00	72 56

## ALFALFA LAND

20 Acres and up planted in Alfalfa for dairying; also first-class Orchard Land.

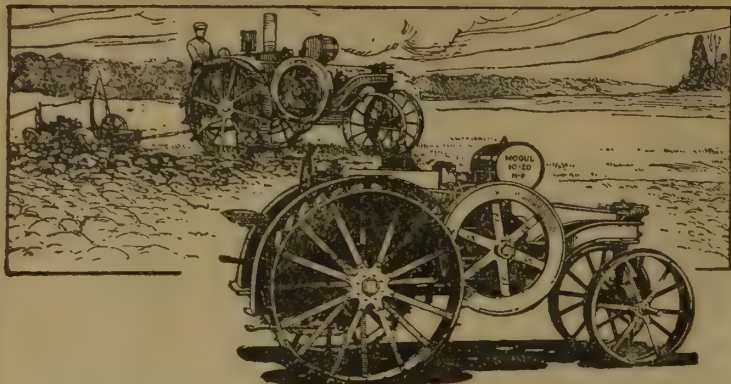
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In Contra Costa County—63 Miles from San Francisco

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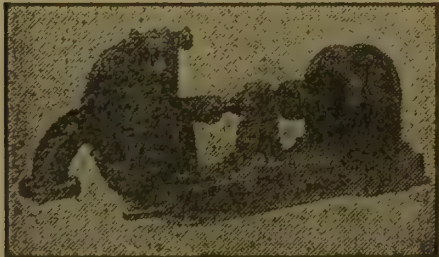
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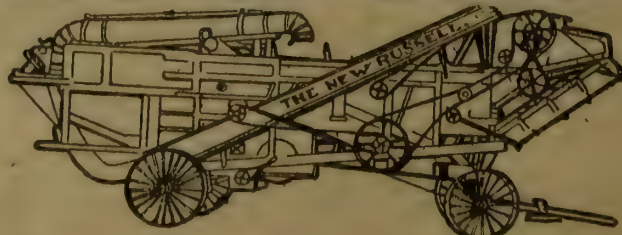


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An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

September 1, 1917

SAN FRANCISCO



California Feeding the World



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Using two horse implements the PONY will do the work of four horses for years without any expense for wornout parts.

The PONY does better work and more of it. It does the work quicker and at less cost. It lasts longer, and is easier and simpler to operate, has more power at less expense and greater efficiency with less effort.

## Special Features of the PONY

- it sells for only \$100.
- one person operates auto and implement from seat of auto.
- attached to a Ford it does the work of four horses. Other cars in proportion.
- needs no oil or grease; has no wearing parts.
- no gears to grind—nothing to get out of order.
- guaranteed more miles per gallon of gasoline than any other tractor pulling the same load.
- it turns in the same radius as the auto to which it is attached.
- it works for years without any expense for worn-out parts.
- it does not require an able bodied man to operate it.
- changed from auto to tractor in half the time required to harness and hitch up a team.
- you can drive to the field in your Ford, change to tractor, work all day, change back in five minutes and drive home in the auto.
- speed 2 to 15 miles per hour according to road and load.
- operates at less than half the cost of animal power drawing the same load.
- the PONY can work as long as desired every day in the year, if necessary, and costs nothing when not working.
- it holds walking plow in furrow without attention from driver. Plow raised and lowered at will from auto seat.
- the PONY is the real one man tractor; it is made to do the greatest amount of work with the least effort and expense.

—broad tractor wheels, 12 inches wide, replace the rear auto wheels. Each is fitted with 16 steel grousers. Rolled steel tires, five inches wide, replace front auto tires.

—an efficient lever raises a walking plow clear of the ground, enabling operator to back or turn square corners. The same lever can be adjusted to raise a cultivator, chisel, sickle bar, dump a rake, operate a disc or other implement from driver's seat.

—for a small investment an auto can be converted into four-horse service for farm use.

—while plowing the right hand rear wheel runs on plowed ground if desired, pulverizing and leveling clods or hard ground better than six operations with a harrow.

—it will do more in a given time and at less expense, and is adapted to a wider range of work than any other auto tractor.

—every pound moved requires power. Minimum weight means low operating cost. Excess weight is not essential to traction and diverts power from useful work to dead loss.

—the PONY adds only 95 pounds to the weight of a Ford, from 500 to 1300 pounds less than other auto tractors, which is a big factor, especially on hills or soft ground. The power wasted by heavier machines moving their own useless weight, the PONY applies to the load being moved.

—also other tractors having clumsy, quickly-worn cast gears which grind themselves out running dry in abrasive sand and grit, waste still more power. The PONY, having no wearing parts, applies this power to useful work. It also saves the expense and delay of replacing worn parts.

## A Real One Man Tractor

An efficient lever operated from the driver's seat raises and lowers the plow at will, enabling the operator to back, turn square corners, cross ditches or checks, or carries the plow clear of the ground as far as desired.

As the operator rides in comfort out of the dust, and sun too if desired, he can work much longer hours than when walking and urging a tired team.

Forged steel clevises hold a walking plow in the furrow without attention from the operator. Simply drive where you want to plow, and the PONY does the rest.

### The Vital Test

Your wagon will not last as long, and your team cannot haul as much hay, or haul it as cheaply, with half a ton of useless iron in the wagon, and the wearing parts running in grit instead of grease; neither can a tractor.

The PONY is built close to the ground and powerful. The low wheels give greater strength, pulling power, and stability on hillsides than is possible with larger wheels and heavier weight.

Double production without increased expense. The PONY takes a two horse implement twice as far in a day, and at half the cost of animal power, doing better work by reason of its speed.

Any one who can drive an auto can operate the PONY, though unable to follow a team.

The PONY can plow four acres where an ordinary team can plow two. It goes twice as fast as a team and turns the ground bottom side up instead of standing it on edge. It harrows, mows or rakes twice as much per hour as a team can and does much better work because of its speed. It goes to distant fields and returns as an auto in one-fourth the time required for teams, and is changed from Ford to PONY in the time required to unhitch from a wagon and hitch to a plow. Few people realize the value of speed with farm implements, and for all the little jobs that a team can do, because heretofore it has not been available. The PONY gives you twice the speed of teams and it does not lag toward the end of the day. It can work all day as a tractor and at night as a pleasure car. "The average horse works only 100 days in the year and his labor costs 12½ cents per hour, while one-fourth of all the land tilled in the United States raises 'horse feed,'" according to the United States Government

figures, and the horse eats the profits when not working. Tractor horse power costs about 3½ cents per hour, and they work whenever wanted. Tractors are not subject to disease, require little room, do not attract flies, and require neither care nor expense when not working.

Replacing animal power with PONY power not only doubles production by doubling speed with the same implements, it leaves the land and time now devoted to feeding and caring for horses available for food crops.

In the qualities that give a tractor real value the PONY has no rival in the tractor field. Don't underestimate the value of the PONY because the price is low. No other tractor regardless of price can do the same work at the same cost. The PONY not only does its work at less cost, it does better work and more of it than tractors selling for two or three times as much.

No money wasted buying cumbersome and useless parts.

No power wasted moving worse than useless weight, or grinding away clumsy wearing parts, which run in grit instead of grease.

No gears to grind, no wearing parts. Does not get out of order. No time or money wasted adjusting or replacing worn parts.

Eliminating so much weight and friction it requires less power to move itself, more power remaining for useful work.

No other tractor approaches it in speed. Two to fifteen miles per hour, according to road and load. The PONY is "Quick on foot."

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# California Cultivator

XLIX No. 9

LOS ANGELES: September 1, 1917

One Dollar Yearly

## 1917 Wheat Prices---A View of World Conditions

Chas. W. Holman of the U. S. Food Administration Writes of Stocks in Hand and Possibilities of 1918 Production. America's Responsibility is Great

THE United States food administration announces the following statement of the relation of America to the world wheat trade under conditions:

win the war first consideration the United States in its food production must be to feed the people within the confines of this government.

The second consideration must be our people to spare as much food products as can be spared to feed our allies, France, Italy, the United Kingdom and Belgium, whose normal consumption exceeds their production.

The third consideration must be to protect American farmers and other neutral parties in the wheat trade from the disastrous losses that might occur from the unprecedented choking of the world's arteries through which wheat ordinarily moves.

France, Italy, the United Kingdom and Belgium under normal conditions export annually 381,000,000 bushels of wheat. These nations have suffered a falling of their productivity as a result of being in the war. They now have a total wheat deficiency in proportion of about 200,000,000 bushels. It will be necessary for them to import within the next twelve months at least 577,000,000 bushels. Russia had an abundance of grain and a vast surplus, if this surplus could be released; Russia cannot move any grain to the Allies in quantities essentially important.

### Isolation of the Allies

Our Allies are isolated from practically all markets except the United States and Canada, as compared with pre-war conditions. The supplies of wheat in Rumania and Rumania are in the hands of the Central Powers. As already stated, the Russian supply is cut off. The voyages from Australia and India are three times as long and require, therefore, three times as many tons of shipping to move wheat as is required from North Atlantic ports. The voyages from India and Australia are also far more dangerous because of longer exposure to submarine attacks.

### Our America's Responsibility

The responsibility for furnishing the Allies this 577,000,000 bushels of wheat fall in no slight degree upon the United States and Canada. The estimated ordinary wheat surplus of the United States for 1917 is 88,000,000 bushels.

Probably the Canadian surplus will be 120,000,000 bushels. This will still leave a deficiency in wheat supplies of the Allies of approximately 369,000,000 bushels. This deficiency is still further enlarged by the fact that the United States must make reservations of wheat for neutral nations with whom we trade and from whom we secure essential products. Such reservations will increase the European deficiency to approximately 400,000,000 bushels.

The way to keep the Allies alive during the war is for us to economize

at every turn, and thereby increase the surplus from the United States to 200,000,000 bushels. This together with shipments from Argentina, Canada and Australia, should supply at least a minimum on which they can live.

### How the Allies Meet their Problem

One might think that the American wheat producer stands in a very safe position with regard to prices but such is not necessarily the case. The Allies, foreseeing their situation, have perfected buying arrangements and shipping arrangements, so that all wheat leaving free ports destined for consumption in any of their countries must be brought through a single agency. Arrangements are being made to liberate in far greater quantities the stored up supplies of India and Australia. Within the last few days Australian wheat has begun to arrive in America, and will continue to arrive in increasing quantities. Other important changes have occurred since the war that seriously undermine the stability of the wheat market and will tend to offset the apparent advantage of the American farmer in the world trade.

### How American Grain Trade Has Developed

To understand this situation, it should be remembered that for the past thirty years the marketing of grain in America has depended for its mobility upon the American system of "hedging." This system has grown out of the peculiarities of grain production. Somewhere a crop of grain is always ripening. Somewhere the weather is expanding or contracting the crop. Cable and telegraphic information reaching the buyer and seller on the open marts has been the basis of their hedging practices which have acted as a kind of insurance to the business. This practice and the unusual transportation facilities of the Great Lakes, have enabled American farmers to expand their wheat acreage, and American business men to develop the wheat industry, notwithstanding the competition of other nations with cheaper production costs and greater grain yields, as against our increasing production costs and lessening acre-yields.

So long as the world was at peace and trading had opportunity to function normally it is doubtful if any flat price could be made or sustained by any single country. Such flat prices would have to be by international agreement, which is almost impossible. But with the disruption of world conditions and the shutting off of the sources of grain supply in some countries, and the tendency to exhaust the grain supply in others, a nation like America may find itself in a crisis whereby it is forced to determine and control the price of this commodity to protect its own citizens.

### Precarious Condition of American Producers

That crisis has arisen. The war has disrupted the world wheat trade.

While our reserves are being exhausted, the reserves of other countries are banking up. For three crops the Russian grain has been held, finding very little outlet, and practically no outlet to European consuming centers. Australia has all of her last wheat crop, and part of the crop before, making a total on hand of approximately 180,000,000 bushels.

Another Australian wheat crop of approximately 100,000,000 bushels will mature in January, and Australia is looking for a market. To find this market Australia has removed her wheat and flour duty, so that this wheat can now move into America, in so far as the limited number of sailing ships available will permit.

India has a surplus on hand of approximately 100,000,000 bushels with this harvest. This wheat is locked up because of transportation difficulties.

Although last year's crop conditions were bad in Argentina, there is a greatly expanded acreage, and by January next, when her crop begins to move, Argentina should have a surplus of 150,000,000 bushels.

The American people are practicing economy as recommended by the food administration, and there is a likelihood that our 88,000,000 bushel surplus may be expanded to 200,000,000 bushels to be added to Canada's surplus of 120,000,000 bushels.

### Flood of Grain

That wheat from Australia, India and Russia, is awaiting exportation, restricted only by limited transportation facilities. If the war should end immediately this enormous surplus would be turned loose upon the world, flooding the markets. The war foundations of high prices would be knocked from under American wheat growers, because the normal export requirements do not exceed 600,000,000 bushels.

### Weakened Financial System

Again, the operation of the export embargo and the elimination of exchange trading in wheat futures, has taken the underpinning from the financial system which for 30 years has been trained to understand that a loan on wheat purchased by contract was a good security because the hedging system would offset any value depreciation should the market fall.

Without governmental aid the American farmer would be in a position of greater insecurity in the future than ever before in the history of this country. The danger to the farmer would be more acute because his costs of production have risen enormously during the war, and the ordinary organization of the business world would be powerless to prevent the possible decline in wheat values irrespective of the costs of production, and losses, would be enormous. This might disrupt the entire commerce of the United States and bring about a condition of financial insecurity.

### Protecting Producers and Consumers

To protect the public congress has

constituted an agency to step in between the central purchasing agency of the Allies and the unorganized American farmers. Congress has constituted a food control, placing this control in the hands of the President of the United States, and the President has designated the food administration to administer this work. The food administration now proposes to act for the American people to protect them in the matter of price and to provide the necessary financial guarantees to buy and store the crop of wheat on hand in 1917 at fair prices; to deal with the Allies, giving them only such surplus as can be spared; and to control the margin of profit among trading, milling, baking and distributing factors, to the end that feeds may be conserved for American farmers and cheaper bread and flour may be had by the American consumer. Congress has also made an appropriation of \$150,000,000, to enable the food administration to finance its operations. The food administration will operate without profit, putting only the actual cost of operations as its charge for the handling of the wheat crop.

### Fair Price Commission

In order to finance this undertaking and to supply our Allies, a fair price for wheat must be determined as the beginning of this work. Accordingly, the president of the United States has appointed a commission to ascertain what should be a fair price for the 1917 wheat crop. On this commission are represented farmers, consumers and the public at large. The members consist of H. A. Garfield, president of Williams College, chairman; Charles S. Barrett, president Farmers' Union, Union City, Georgia; William N. Doak, vice president Brotherhood of Railroad Trainmen, Roanoke, Virginia; Eugene D. Funk, president National Corn Association, Bloomington, Illinois; Edward F. Ladd, president North Dakota agricultural college, Fargo, North Dakota; R. Goodwyn Rhett, president chamber of commerce of the United States, Charleston, South Carolina; J. W. Shorthill, secretary National Council of Farmers' Cooperative Associations, York, Nebraska; Jas. T. Sullivan, American Federation of Labor, Brooklyn, New York; L. J. Tabor, master Ohio State Grange, Barnesville, Ohio; Frank W. Taussig, chairman Federal Tariff Commission, Washington, D. C.; Theo. N. Vail, president American Telephone and Telegraph Company, New York City; Henry J. Waters, president Kansas state agricultural college, Manhattan, Kansas.

It will be the duty of this commission to make a thorough inquiry into the costs of producing wheat, costs of milling, distributing, baking, etc. When its inquiry is completed and analyzed this body will announce the basic price at which the wheat will begin to be bought. This price will take into consideration not only the costs of production, but also a reason-

Continued on Page 211



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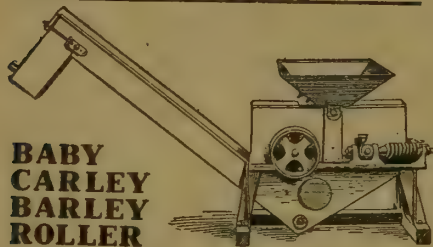
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## The Drying of Figs

By I. J. Condit

**D**RIED figs in California are made mainly from three varieties, the Adriatic, the Smyrna, and the Mission named in the order of their present importance.

The first crop of the Mission fig is generally sold fresh but may be dried, and at present prices the dried product may be the more profitable of the two. The second crop is mainly dried but on account of the black color of the fruit does not command as high a price as that of lighter figs. The Mission figs drop to the ground when mature, are picked up shortly after and dried on trays in the sun. No further treatment is generally necessary.

The second crop of the Adriatic and Smyrna is the only one of sufficient size and importance to be of value for drying. The limp and partly dried figs drop naturally or are lightly shaken from the tree and are picked up within three or four days since an inferior product results from too long exposure to the effects of sun, dust, and insects. The figs are hauled to the drying yard and spread on trays, after which the Adriatics are sulphured to bleach the skin and improve the

appearance. Sulphuring in lug boxes is often practiced but does not give as uniform or as good results as on trays. Smyrnas which are properly handled should not require sulphuring. Adriatics are dried in direct sunlight from one to three days depending upon the heat and humidity, while Smyrnas are best dried by stacking the trays one above the other so as to allow free circulation of the air between. Over-dried figs become tough, woody, and inferior. After sorting out the bird pecked and split fruit the figs are dumped from the trays into perforated boxes or containers, washed for 20 minutes in cold water containing four ounces of salt to the gallon of water, and again spread out for a final drying of half a day in the sun. They are then placed in piles on a clean floor or in sweat boxes, where they are allowed to go through a sweat for about two weeks, being turned with a shovel two or three times during that interval. Sweating equalizes the moisture and gives the product a better texture. The figs can then be stored for packing or sent to the packing house, care being taken in either case to prevent infestation by insects.

## Drying Sulphured Fruits

By R. Schmidt

**A**PPLES for drying should be thoroughly ripe, but not soft. They are usually pared, cored, and cut crosswise into slices about one-fourth of an inch thick. These slices are spread in a single layer on the trays and then sulphured for about 20 minutes and immediately set to dry. Apples are sufficiently dry when the slices separate after being pressed firmly together. They should be soft and velvety to the touch. They keep well if packed in boxes lined with paraffin paper.

### Pears

Pears are picked when the stem separates easily from the tree on lifting the fruit. They are placed on straw in boxes or bins to ripen to good eating condition which requires about ten days. They are then cut into halves or quarters, the stem and calyx removed, but not the core, and placed on trays.

The fruit on trays is then sprinkled with water and sulphured for at least 18 hours. Four to five pounds of sulphur are needed for the home sulphuring box. The sulphured fruit may be completely dried in the sun, but a better product is obtained if it is left in the sun for one or two days only and the drying finished in the shade. The finished fruit should be leathery, not brittle.

### Apricots

Apricots should be hand picked

from the trees, but sometimes are shaken off on sheets. They should be ripe but not very soft. They are halved and pitted. The halves are placed, "cupside" up on trays and sulphured for two or three hours. When sufficiently sulphured juice collects in the cup and care must be taken in handling to prevent spilling. The fruit should become a golden yellow, not brown, on sulphuring.

The trays of sulphured fruit are then placed in the sun. In hot weather the trays should be stacked before the fruit is quite dry and finished in the shade. When finished they should be leathery, not hard nor brittle. If allowed to become too dry they may be placed in a perforated vessel and dipped for a few seconds in boiling water. They are then spread out until the surface is dry and then packed in sacks or boxes.

### Peaches

Peaches should be gathered when slightly soft over the entire surface and sulphured as soon as possible after cutting and pitting. The methods are the same as for apricots.

For peeled peaches the skin can be removed by the fingers after sulphuring or after cutting and pitting by dipping in boiling lye (one pound of lye to ten gallons of water, and then immediately in cold water.

Other fruits which may require sulphuring are grapes, White Adriatic figs and Silver prunes.

## Drying Muscat Raisins

By Frederic T. Bioletti

**T**O make good Muscat-raisins, very sweet, large grapes and two or three weeks of hot, dry weather are necessary. These conditions occur in the interior. Nearer the coast the weather is usually cool and rain prob-

able by the time the grapes are sufficiently ripe.

The riper the grapes the better the quality of the raisins and the heavier the yield. They should have at least 25 per cent of sugar. The drying ratio varies with ripeness from 5:1 to 3:1.

At 25 per cent Balling 3.4 pound of fresh grapes yield one pound of raisins. The time of drying varies from nine days to thirty, according to weather. The most favorable minimum daily temperature for qualities between 80 degrees and 90 degrees Fahrenheit. At much above degrees the drying is quicker but quality inferior. Showers and weather may prolong the drying beyond 30 days.

The grapes are gathered directly on to 2x3 foot trays and dried between the rows of vines. The yard is first prepared by making a low soil ridge slanting to the south and near the south side of every alternate row. If the growth of vines is very heavy it may be necessary to cut away the ends of the spread canes.

Each tray receives 22 pounds of grapes, evenly spread and free from trash and leaves. When about three-fourths dry, the grapes are turned. This is in about nine days at an average maximum daily temperature of 90 degrees Fahrenheit. Two men the turning by placing an empty tray on top of the full one and revolving both from north to south, so as to change the position of the grapes well as turn them. After about three or four days at this temperature, raisin trays should be "stacked" in piles of ten or more; each pile being covered with an empty tray. It is advisable to do as much of the drying of the stack as is possible without running the risk of molding.

In case of threatened rain the trays are also stacked and then spread out again when the danger has passed. A little rain will not hurt the raisins before they are turned. Much rain, wetting after turning, will injure the appearance as layer raisins, but this can usually be saved by prompt turning on to new dry trays. In case of prolonged wet weather, it may be necessary to sulfur the stacked raisins. This is done by covering the stacks with a sheet or a balloon sulfur, and burning a few ounces of sulfur. When dry, the raisins are packed tight into sweat boxes 2x3 foot x 18 inches deep, holding about twenty-five trays. For home use, bins or boxes of any size may be used. Desiccated raisins are packed in layers separated by sheets of Manila paper.

This method can be used for drying other grapes though it is preferable to "dip" in some cases.

### CITRUS DERELICTS

**A**SERIOUS menace to the advancement of the citrus industry in the state and a factor that is giving the state plant board no end of trouble in its tireless effort to keep insect pests and diseases under control is the abandoned grove. The parasites of the citrus industry are to be found all over the state. In most cases they are absolutely worthless and will never be otherwise. At breeding places for pest and disease they serve admirably. Citrus canker will make the abandoned grove her final stronghold; here the dreaded disease may lie dormant for many months, a constant danger to surrounding groves. Often the owners of these groves are unknown; yet the law will not permit the destruction of the trees without a permit from the owner. The derelicts of the sea are hunted out and destroyed. Why not these derelicts of the citrus industry? They are certainly an eyesore to any community and in many instances serve to misrepresent the



territory to the prospective homeseeker and capitalist alike. These former groves are living monuments to failure. It is only natural that they should shatter the confidence and shake the faith of the newcomer. In many cases the fault lies with the man and not with the land or its location. Too often the attempt is made to engage in citrus culture with insufficient capital, and a limited knowledge pertaining to the work. Common sense and capital are two very necessary requirements in almost any line of endeavor and

the business of growing citrus fruits is no exception. Perhaps if these abandoned groves could tell their individual stories it would be clearly proven that it was the lack of common intelligence, judicious management and sufficient capital that brought about their present condition. A state law that would permit the plant board or any other recognized authority to destroy abandoned groves whenever found, either with or without the consent of the owner, would certainly be a credit to the legislature that passed it. — Florida Grower.

## Testing Sugar in Grapes

**S**TANDARDIZATION of fruits is demanded more and more, and now it is becoming a legal as well as an economic question. Determination of sugar content is comparatively simple for the chemist. We note in the Human News description of methods of ease of determination, by H. H. Jackson. From this we quote:

The ripeness of any fruit is usually expressed in the amount of sugar it contains or the ratio between the amount of sugar and fruit acid. We know a fruit is ripe when it has a high enough sugar content to taste sweet. However, sugar content is more important to the grower than the mere fact that it makes fruit taste sweet. High sugar content makes fruit weigh more, and so gives tonnage, especially with dried fruit.

Men who watched the raisin drying fall will remember that the ripest grapes dried the fastest and weighed the heaviest. Time was not saved by picking grapes green, since it took longer to dry them. A high sugar content makes them dry faster.

The fruit standardization law requires that grapes for interstate shipment should show 17 degrees Balling and 16 degrees in the case of Emperor. The Balling degree represents the pounds of solids in 100 pounds of grape juice. As this is nearly all sugar, it is often called the "sugar degree of percentage."

The Balling saccharometer is a glass spindle with an enlarged bulb at the base. The spindle is graduated in terms of "Balling" degrees. It reads the per cent of sugar in grape juice direct, and is so simple that anyone can determine the sugar content of his grapes in a few minutes.

Select four or five bunches in the vineyard from different parts of the vine so as to get average conditions. Crush the juice and strain through a cheesecloth. Place the strained juice in a long glass cylinder which is about two inches wide. Float the long bulb of the saccharometer, bulb down, in the juice. The more sugar in the juice the heavier it will be and the less the saccharometer will sink into the juice—the less sugar, the lighter the juice and the deeper the tube will go into the liquid. The per cent of sugar can be read direct by reading the Balling scale on the tube of the saccharometer. For instance, 20 degrees Balling means 20 per cent sugar in the grape juice.

The general level of the liquid is read in reading the height of the scale. The temperature of the liquid should be 60 degrees Fahrenheit (ordinary thermometer). For every 30 degrees above 60 degrees you add one degree of sugar to the reading given by the saccharometer. This is caused by the tube sinking a little too low in the warm liquid to give the correct per cent.

The interstate law does not consider shipping grapes ripe until they show a sugar content of seven degrees Balling, with the exception of Emperors, which need only 16 degrees Balling. Grapes for raisins will increase in sugar and give an increased weight until the skin begins to shrivel. In practice Thompsons should be picked when they show 24 per cent to 26 per cent sugar, as then they will give a maximum weight and at the same time are not ripe enough to drop very bad in picking.

Since sugar content is so important in determining the weight of both the green and dried grapes, I believe it would pay every grower to own and use a saccharometer. A few degrees difference in sugar content makes a good many pounds difference from ten acres of Thompsons.

\* \* \*

Druggists or dealers in chemists supplies can supply the saccharometers and other necessary appliances.

### MORE FARM ADVISERS

**T**HANKS to the passage of the emergency food production bill by congress there will be an additional sum of \$104,000 per annum available for extending farm adviser work in California. Governor Stephens has called a conference in Sacramento on Monday and Tuesday, September 10 and 11, at which plans will be laid for the extension of the farm adviser system to most of the agricultural counties of California. To that conference will be invited the members of the state council of defense, chairmen of county councils of defense, chairmen of county boards of supervisors, presidents of county farm bureaus and farm advisers.

Then 19 counties which have already organized farm bureaus and obtained county farm advisers have found that the system has resulted in great service to the prosperity and wellbeing of the county. Already farm advisers are at work in the following 18 counties: Alameda, Fresno, Glenn, Humboldt, Imperial, Kern, Madera, Merced, Napa, Nevada, Placer, Riverside, Sacramento, Solano, Stanislaus, San Diego, San Joaquin and Yolo. The privilege of obtaining a farm adviser is now, thanks to the new congressional appropriation, offered to San Bernardino and Tulare, which have already organized their farm bureaus, and to the following 19 other counties: Butte, Colusa, Contra Costa, Eldorado, Kings, Los Angeles, Monterey, Mendocino, Orange, Santa Barbara, Santa Cruz, San Luis Obispo, Shasta, Siskiyou, Sonoma, Sutter, Tehama and Ventura.

Funds are immediately available for the expansion of the farm adviser system, so it is expected that within a

few months 39 different California counties will actually have farm advisers at work, and a complete and unified system of farm organization.

### TO BE SURE

"We can all do something to help."  
"Yes, those who can't do anything else can sit back and advise the rest."

### AGRICULTURAL STATISTICS

We note the publication of "Agricultural Statistics", published at St. Louis, Missouri, containing the greatest mass of figures regarding agricultural affairs of the United States of any publication we have seen. It is issued quarterly at 25 cents per copy.



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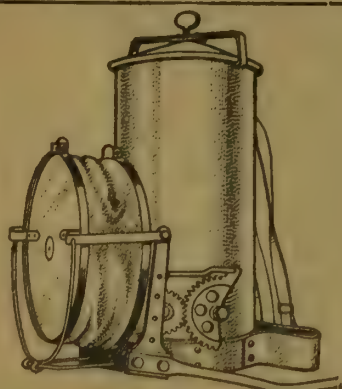
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## An Orange Grove Pest

By S. A. Cook



WRITER in the Journal of the department of agriculture of Victoria, Australia, refers to a new pest of the citrus orchards of that state. He

says:

A pest noticed in various orange groves in this state since December last, and which has now become very troublesome, has been identified by the government entomologist, C. French, Jr., as the light brown apple moth, *Cacoecia* responsible. From my own observations it would appear that its method of attack on the trees is as follows:

The eggs are laid on the rind of the fruit as well as on the leaves. The tiny caterpillar on emerging from the egg attacks the rind of the orange, generally where there is a leaf overlying and in contact with the fruit or where two or more oranges touch in a cluster of fruit. The caterpillar does not, as a rule, make its way into the orange immediately, but gnaws along the rind and eventually bores into it and feeds, to a slight extent, on the pulp, in which it forms a cavity under the rind. In any case whether the rind is bored into and through to the pulp, or only furrowed on the exterior, premature ripening

of the fruit ensues with a consequent weakening at the stem, and it falls in a semi-ripened condition. The caterpillar then emerges from the fallen fruit and enters the soil to go through a metamorphosis. The moth is about three-fourths of an inch in expanse of wings, and the upper pair are light brown in color and slightly barred while the under set vary from lighter brown to fawn without markings. The caterpillar when fully grown is about three-fourths of an inch in length and is of a light-green color.

The pest should be controlled as follows: Spray the trees thoroughly when the foliage is dry, with arsenic of lead, using a good pump with strong power behind the nozzle, so that the spray may be forced into the interstices and over every part of the tree, and the fruit clusters thoroughly covered with the poison. All fallen fruit should be picked up daily. The soil around the trees should be frequently stirred with a light cultivator so as to disturb any caterpillars which may be lurking there.

In view of the great expansion of our citrus industry and the serious depredations of this pest, every effort should be made by growers to combat it.

## Grapefruit in California



CONTINUING Prof. A. D. Shamel's address on the grapefruit situation in California we quote that portion of it which has to do with:

### Distribution of Plantings

According to Vaile in his discussion of the "Outlook for the Pomelo," 600 acres of grapefruit trees are in bearing in California, 1915, from which 250 carloads will be shipped and marketed this season. One thousand, one hundred additional acres of trees are under five years of age, from which it is estimated the California output will be more than doubled in the coming five years.

Further, Vaile states in this report that Florida has some 16,000 acres of full bearing grapefruit trees, from which this season about 8000 carloads of fruit will be shipped. In addition to this large planting Florida has about 45,000 acres of grapefruit trees between the ages of one and five years which in the next five years should produce a crop of about 35,000 carloads.

Porto Rico in 1913 exported to the United States 216,216 boxes of grapefruit, or about 500 carloads, estimating 400 boxes to the car. Cuba in 1912 exported to the United States the equivalent of about 250 carloads of grapefruit. In both Cuba and Porto Rico there are reported to be large new plantings of grapefruit trees so that the export of these fruits to the United States and elsewhere is likely to increase greatly over the past records. A comparatively small but rapidly increasing export of grapefruit to the United States from Jamaica and some other foreign grapefruit growing sections is evident from the observations and figures available for study.

Vaile offers the following comment on the grapefruit situation in California in consideration of the conditions in other grapefruit districts which compete with the California product:

"The grapefruit situation in California is on a reasonable and sound basis at present. It may be expected that the industry will be as profitable as any for a period of years . . . . It would strongly suggest that future plantings be very conservative. Do not hesitate to recognize the wisdom of seeking new acres adapted to the crop, and we sincerely deplore the commercial boosting of large tracts of new lands for grapefruit culture."

At least two facts must be remembered in considering this discussion. First, that Florida or foreign grapefruit is no longer admitted into California on account of the danger of the introduction of insect pests and fungous diseases through this means. No doubt other Western states where grapefruit is being grown will soon or later adopt similar protective measures, so that the population of these states and their Eastern neighbors will have to be supplied with home grown grapefruits. Second, the period of ripening of California Marsh Seedless grapefruit is during the summer months when no other known district has ripe crop available to supply the great Eastern markets. For these and other reasons California has an opportunity to develop a strong grapefruit industry, in the opinion of the writer providing only the best possible grade of grapefruit is produced and the fruits allowed to ripen before picking. The green, bitter and strongly acid fruits often found on the market under present conditions offer a strong argument for the establishment of a standard of ripeness for grapefruit by the growers, as has been done for oranges. For their self protection growers should look into this matter carefully and from an unbiased point of view and squarely face the consequences to the future of the industry of a continuation of the present unfortunate and uncontrolled system of marketing California grapefruit.



## Oranges Quarantined

Quarantine order number 28 of the Federal Horticultural Board prohibits the order of the secretary of agriculture, the importation into the United States from eastern and southern Asia (including India, Siam, Indo-China and China), the Malayan archipelago, the Philippine Islands, Oceania (except Australia, Tasmania and New Zealand), Japan (including Formosa and other islands adjacent to Japan), and the Union of South Africa, of all species and varieties of citrus fruits excepting only oranges of the mandarin class (including satsuma and tangerine varieties), except for experimental or scientific purposes by the department of agriculture. Oranges of the mandarin class (including satsuma and tangerine varieties), but no others, may be imported from the countries and territories above named but only under regulation.

Those contemplating the importation of oranges which are permitted, noted above, must make application for permits on forms provided for the purpose by the federal board of horticulture at Washington, giving

various information required in the application form, and must accompany the shipment with a certificate issued by an official of the country from which the oranges are exported, showing that they have been inspected and found to be free from visible infection with citrus canker, etc. All such oranges also must be reinspected upon arrival in this country.

### GROWERS' MEETINGS

The San Antonio Fruit Growers' Exchange announces annual meetings for Associations as follows:

Indian Hill Citrus Association—September 1.

La Verne Orange and Lemon Growers' Association—September 4.

Claremont Citrus Association—September 5.

Pomona Fruit Growers' Exchange—September 6.

El Camino Citrus Association—September 7.

Walnut Fruit Growers' Association—September 15.

San Antonio Fruit Growers' Exchange—September 11.

## Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unanswered communications receive no attention.

### Black Alkali

Would like information as to the method of neutralizing black alkali in the soil. Have been advised to use gypsum. Would this have the desired effect?—Subscriber, Mecca.

Gypsum will change your black alkali to white alkali, which may be dissolved and washed from your soil. Providing heavy irrigation can be given and you have a subsoil which drains the water away. The white alkali is less caustic, and after heavy irrigation some crops might be grown which would not grow in black alkali. Gypsum may be applied at the rate of a ton to the acre, but there is no harm if heavier application than this is made. For a very heavy sub-

soil, which provides satisfactory drainage, it is possible that an artificial drainage system might be necessary in order to give entire use of such land.

### Poplar Tree Pest

About a year ago I cut down and grubbed out a number of 20-year-old poplar trees. This summer nearly all the lateral roots have started to grow. I have been keeping them cut back as fast as they grow. Will these roots eventually die or how could I accomplish their destruction? It is not practical to grub them out entirely for the reason that they extend under orange trees.—Subscriber, Santa Ana.

Presumably these sprouts are coming from the ends of various roots which have been cut or plowed off and within a short time the continual sprouting will cause their death. It would not be possible to use any chemical to poison the soil without possible injury to the orange roots. The closer the growth is kept cut off the sooner the roots will be subdued.

### Keeping Prunes

What is the best way to keep dried prunes through the winter?—Subscriber, Loomis.

The first step is before drying, that is, do not dip in such strong lye or hold in the lye so long as to destroy the skin so the prunes will sugar after drying. When properly cured with good whole skins the only precaution necessary is to keep from insects. In a dark place sacks may be sufficient, but it is better to have in tight bins where insects may not enter. They may be kept perfectly by putting in glass or tins, sterilizing by raising the heat in the oven, or otherwise, for several minutes.

### Doe Too Fat

My hornless black and tan colored goat, which has dropped kids twice and gave about two and one half quarts last time (March 19), has now dropped off to about one and one half quarts. She is very fat but has a great appetite especially for concentrates. I feed her alfalfa by tying her out in a field and then give about two-thirds of a quart night and morning of beet pulp and coconut meal

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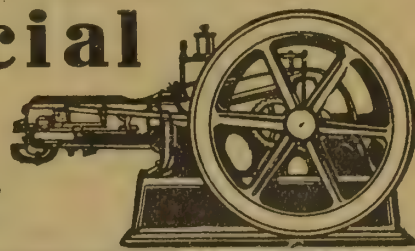
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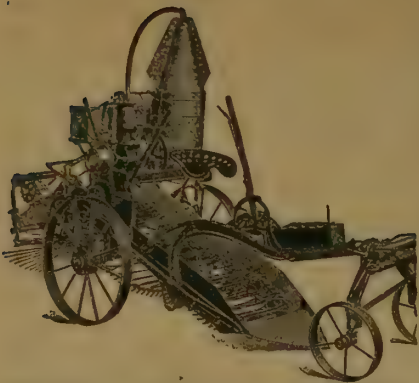
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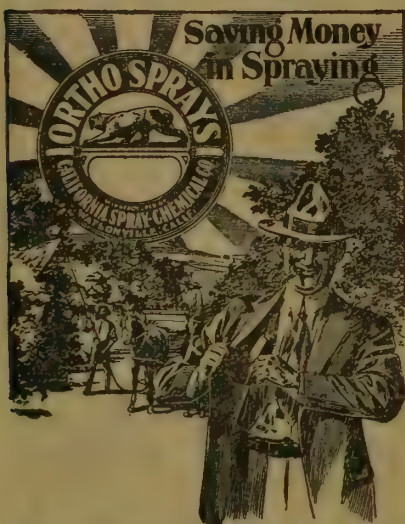




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soaked. The volume when soaked is two-thirds of a quart. Should I breed her again and, if so, will she drop off in milk rapidly? Is this tendency to fattening a bad one or is it my fault?—Subscriber, Rosamond.

This question was answered by Martha Howland:

I would suggest he cut down the concentrates, especially the cocoanut meal and beet pulp. Evidently the doe is not a heavy milker, but the gradual falling off in her milk is natural. She could be bred all right when she comes in heat, but it would be best then to gradually put her on a ration of rolled barley and bran, say a pint of each mixed together, given in two feeds, night and morning. If she shows great preference for the beet pulp, that could be added to her grain ration after she freshens again.

After being bred again she should be milked just as usual, for two months at least, or until she shows an inclination to go down in her milk. If she shows a tendency to dry after being pregnant about two months, as

indifferent milkers are likely to do, then gradually dry her off. And be careful at the next freshening to milk her regularly and cleanly so as to correct the tendency to turn her food into fat instead of milk.

#### Breeding Goat

A white goat, that I am milking was fresh in July of 1916 but seems to give the same pint night and morning that she used to give. She is just good and plump but cares little for the beet pulp though she does like rolled barley. Should she be bred now?—Subscriber, Rosamond.

This question is answered by Martha Howland:

It would seem best to breed the white doe as early in the season as possible, for if she passed another season without freshening she might form the habit of not breeding, which sometimes happens with animals that are allowed to go empty for a year or more. The same grain ration should be given to this doe as is given to the black and tan colored doe.

## How to Control Tuber Moth



THE state council of defense sends out the following:

The attacks of the potato tuber moth may be reduced almost to a minimum by cultural methods to prevent infestation. Also, infested tubers may be treated so as to kill the insect and prevent further injury. Here are the chief preventive measures:

A thorough working of the soil to reduce clods and prevent the entrance of the moths into the ground to the tubers.

Deep planting, from five to six inches, and subsequent hilling to insure complete covering for the developing potatoes.

Early harvest, just as soon as possible. Ripe potatoes if left for any length of time almost invariably become infested before digging.

The immediate removal of all potatoes from the fields as soon as dug, to prevent infestation.

Marketing the crop as early as possible.

Storage in clean, tight bins or store-rooms.

Here are some remedial measures to use if the crop has already become infested at the time of digging or afterwards:

Carefully sort potatoes and place those apparently free from infestation in clean, tight bins for future treatment if necessary.

Inspect all potatoes before shipment and fumigate all if any evidences of the potato tuber moth are found.

Place all infested potatoes in tight bins or storerooms and fumigate with carbon bisulphid — two pounds to a thousand cubic feet of space for forty-eight hours. The fumigant may be poured into shallow containers and placed on the top of the potatoes. The liberated gas, being heavier than air, will find its way downward to all parts of the rooms. The carbon bisulphid is inflammable and explosive so that great care should be exercised to keep lights away from places of fumigation.

## Exterminating Ground Squirrels in National Forests

In line with the food conservation measures of the government the United States biological survey is waging a campaign of extermination against the ground squirrels on the national forests of California, according to the forest officers. Seven crews of squirrel poisoners, comprising about 30 men, are at work on the Sierra, California, Santa Barbara, and Sequoia forests. As funds become available the work will be extended to grazing areas in other forests. "The amount of grain and stock food destroyed by ground squirrels is almost incalculable," declares Wm. C. Jacobson, representing the bureau of biological survey for California. "The extermination of these rodents will ordinarily increase the stock carrying capacity of a range 10 to 25 per cent. This work, therefore, takes on more than ordinary importance at this time of shortage in food supplies."

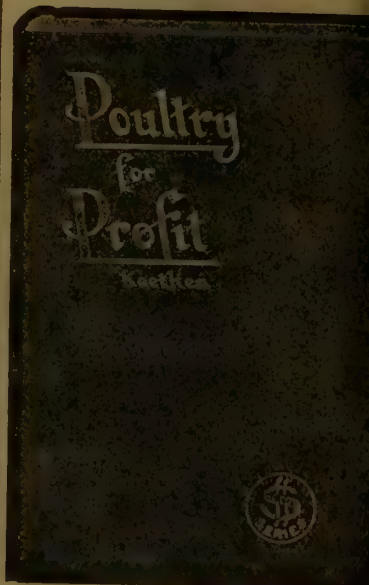
Poisoning the squirrels through the placing of grain impregnated with strychnine near the burrows and runways is the method commonly used. When this becomes ineffective, the squirrels are "gassed." An explosive poisonous vapor heavier than air is poured or pumped down the squirrel

holes. One application is usually sufficient. In wet weather, or when no danger of setting the forest afire is present, a match is touched to the mouth of the burrow and the gas exploded.

#### AT THE RIVERSIDE FAIR

The idea of food conservation and food production is paramount in the plans for the fifth annual Riverside County Fair, October 9-13. A special exhibit will be sent from Washington to portray the work of Food Administrator Hoover. There will be also displays and demonstrations by the great food manufacturers of the country. The alfalfa growers will have a special exhibit at the fair. Here they will serve delicious alfalfa sandwiches and salads. In the stock department will be the first show of goats in Southern California. Samples of goat milk and butter will be distributed. Exhibits of animal feed and vegetables will be housed in a large tent. Here demonstrations will be made. The demonstrators will answer questions pertaining to foodstuff production and explain up-to-date methods of planting and cultivating and advise how best to combat diseases.

# Poultry can be made to Pay



**T**HERE are two methods of gaining knowledge, necessary to make poultry a success; experience—which is a long, drawn out, expensive road and the one too commonly used. Another method is by the careful studying of books written by practical poultry people who have made mistakes and successes and are willing to give this information in order that you may take the short road to poultry success.

## Poultry for Profit

BY

**Jean A. Koethen**

Graduate of University of Calif.

Gives more practical knowledge of every branch of the poultry business in a more concise and simple manner than any similar book published. With the knowledge gained by a study of this work experience in the poultry business is not as necessary. Through its guidance obstacles are overcome before it is too late.

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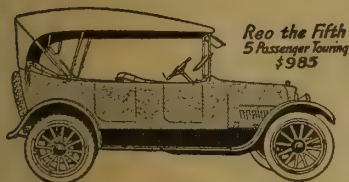


# REO

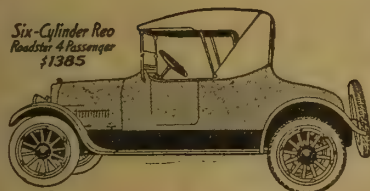
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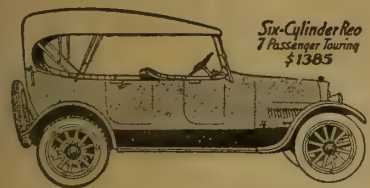
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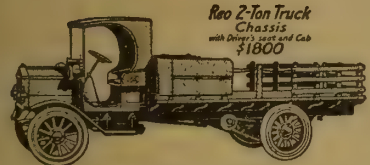
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WE SHOW HERE SIX Reo Models, comprising Fours in Touring and Roadster types; Sixes in Touring and Roadster; and the two Reo Commercial Vehicles—the 3/4-Ton "Speed Wagon" and 2-Ton "Heavy Duty" Truck.

IN THIS ADVERTISEMENT we have space only for a brief paragraph pertaining to each Model—lest you forget the line is so complete that you can find the car you desire, in the type you prefer, and in a Reo.

REO THE FIFTH, "The Incomparable Four," is America's most famous automobile. Standard in practically its present form for now eight seasons—"going on nine." At its present price, \$985, this car is verily "A gold dollar for ninety cents."

TO REO THE FIFTH more than to any other, is due the movement that is now so apparent—the return to the Four-cylinder type in all cars listing at less than \$1000.

THE FOUR IS THE ULTIMATE type in that price class. Economy of upkeep, as demonstrated by this Reo model, has done much to prove the superiority and ruggedness and economy of the Four in that class of car where the buyer must count the cost and yet demands the service and the roominess.

THE FOUR ROADSTER is the handsomest model of its type you'll see on the road—at any price. And, for the present, you can get it for \$985 and freight from the factory.

OF THE SIX ROADSTER the same is true, plus the extra luxury it affords the owner at the extra cost—\$1385 f. o. b. Lansing.

THESE TWO ROADSTERS are of similar design and identical construction, and are conceded to be the handsomest cars of the type—price aside.

FOR THE FAMILY that needs a car of greater capacity than five and yet of moderate upkeep, the Reo Six Touring Car—also \$1385 for the present—knows no equal.

NO MATTER WHAT YOU PAY you cannot obtain a 7-passenger car of better design; one that represents sounder engineering; more experience; better materials and workmanship than enter into the making of this Reo Six.

THAT'S A BROAD CLAIM, but we make it unhesitatingly—and you know that the word of Reo passes at par everywhere.

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BUT THAT IS TRUE of all Reo models, without exception.

THAT'S WHY WE SAY "Reo Quality is Uniform in all Reo Models," the uniform over demand for all Reo models justifies the statement.

ORDER NOW if you'd have your Reo soon. Present prices obtain only from day to day, and are subject to increase without notice.

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Established 1888. Twenty-eighth Year

**The California Cultivator**

A Journal of Horticulture, Agriculture and Live Stock

Rural Californian, Established 1877  
 Combined with California Cultivator 1914  
 Livestock and Dairy Journal, Established 1901, Combined with California Cultivator 1916

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Saturday, Sept. 1, 1917

## OUR ADVERTISERS RELIABLE

We guarantee our subscribers against loss through dishonesty of any advertiser in the Cultivator. We do not attempt, however, to adjust trifling differences between subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within 30 days from date of the transaction, and the subscriber must have mentioned the Cultivator when writing the advertiser.

## THIS WEEK'S COVER

A look in at some of California's monster warehouses at this harvest season gives an idea that California is a vital force in the world's munitioning. We have heard of the unbounded prosperity of the Eastern munition factory sections, but the prosperity comes westward slowly. When these great warehouses are emptied it will mean much for hungry Europe and much for California's prosperity. The state has responded nobly to the call to produce more, and preparations for the 1918 crop are being pushed at this early date with such vigor, that next year's production should be the greatest ever.

This warehouse is located near the city of Stockton in San Joaquin County.

## FARM LOAN APPRAISEMENT

Orchardists of Southern California are to meet this week in Pomona to discuss the matter of valuations of lands on which applications have been made to the farm loan bank for federal loans. An association is to be formed to look after the interests of the producers and secure a fair adjustment of this vexed question of valuation.

## FAIR NUMBER

Next issue will be state fair number. The state fair this year promises to be the biggest and best ever. Hence the Cultivator, to be a worthy number, must be the biggest and best ever. More, it will be, for already matter is in hand showing this issue to be the greatest in number of pages, and, we believe, in interest of any Cultivator ever issued. It will have to do with the coming fair. The issues of September 15 and 22 will have more regarding some of the good things which are expected.

## A GREAT PROJECT

The Pine Flat \$9,000,000 project is becoming more and more tangible. Permanent organization has been effected, with George C. Roeding as president, H. A. Ross as vice president and Louis C. Hill, a Los Angeles engineer, making investigations. It is to be hoped that great things will be done. The plan contemplates bringing together several existing irrigation organizations and the investing in addition of \$9,000,000 in dams and reservoirs in Eastern Fresno County. The waters will cover more than a million acres of lands.

## NEW INSECTARY

A wire from Sacramento announces that the governor, with the state board of control, has approved of the use of sufficient state funds to equip and start the work of the state insectary recently established by State Horticultural Commissioner Hecke in Los Angeles County. Citrus growers have been hoping for much of value from this insectary, and the appointment of Mr. Claussen of the United States department of agriculture to take up some special work in Southern California and to have charge of this insectary was considered a long step in advance. Later it was stated that Mr. Claussen contemplated service in the trenches. But it is now announced that he will remain with the work which will prove even more important, and will soon be in charge of the insectary work at Alhambra. Credit is due to the governor and the board of control for investigating the needs of the citrus growers and encouraging this important work.

## HOOVER AND THE FARMER

Herbert C. Hoover invited editors of farm papers to confer with him in Chicago last Saturday. Many editors of farm papers were present and learned from Mr. Hoover of his aims. He frankly stated that he wished the aid of the farm papers of the country to convey to producers a correct impression as to efforts of his commission. In the first place, he deprecated the use of the word "control" in reference to food conservation and marketing. His only effort is to secure as little waste in consumption and as great production of staple foods as possible. If the farmer felt that he was being urged to produce more in order to give the food speculators additional power and opportunities, or even to provide additional food for consumers, if his productions are to be priced arbitrarily, he would surely be justified in rebelling at food control. One farmer who had been "against Hoover" because of his fear that unjust price regulations might obtain found that impression was "all wrong; that the food administrator intended to protect the farmer against a lower price than was his due."

## ADVICE TO FARMERS

"It is doubtful if anyone has ever been so deluged with advice as the American farmer within the last half dozen years. His economic status was much in the world's eye just before the war. The outbreak of hostilities emphasized his importance anew, and with the entrance of the United States into the conflict our people began to realize as they never had before how necessary is his service to the common welfare. At once public speakers and newspapers be-

gan to urge him to do more than ever, and even to tell him how to do it.

"The ordinary man too often cherishes a notion that farming is within the reach of anyone who has a little land and will spend a modicum of sweat upon it. In point of fact, good farming is a highly skilled and occasionally a highly specialized calling. Almost any man can scratch the ground and plant seed, but the man who knows what his soil needs, how to meet that need, how and when to plant, to cultivate, to protect from enemies and to gather, preserve and market his harvest is in his way a really learned man. Industry is not enough. He must have experience, foresight and good judgment if he is to do those things so as to serve the common need, and at the same time keep his farm productive and win a modest competence from his labors. Moreover, he must do his work by means of forces that are largely beyond his control, and that may sometimes prove distinctly hostile. The man who knows the successful farmer best is the first, not only to do him honor, but to deprecate much of the advice in which he has been well nigh drowned."

This from the Youth's Companion states the case most admirably. Some of the farmers have been restive under this flood of advice, more have been too busy to pay much attention. However, let's open up to the best there is coming our way.

## WHEAT

Note the article on the third page of this issue; it refers to wheat conditions the world over. With a \$50,000,000 appropriation made by congress to be used in the purchase of wheat and in the stabilizing of prices, an opportunity is offered to the wheat grower such as seldom occurs. There is no gambling necessary on wheat for the next 18 months. Determination of a fair basic price to be paid for wheat by the government lies in the hands of a committee. It is expected by the food administration that this price, when agreed upon by the committee, will be maintained in private as well as in government transactions.

The wheat price committee, which will meet in Washington at once, consists of H. A. Garfield, president of Williams College, chairman; Charles J. Barrett, president Farmers' Union, Union City, Georgia; William N. Doak, vice president Brotherhood of Railroad Trainmen, Roanoke, Virginia; Eugene D. Funk, president National Corn Association, Bloomington, Illinois; Edward F. Ladd, president North Dakota Agricultural College, Fargo, N. D.; R. Goodwin Rhett, president Chamber of Commerce of the United States, Charleston, S. C.; J. W. Shorthill, secretary National Council of Farmers' Cooperative Associations, York, Neb.; James W. Sullivan, American Federation of Labor, Brooklyn, N. Y.; L. J. Tabor, master Ohio State Grange, Barnesville, O.; Frank W. Taussig, chairman Federal Tariff Commission, Washington, D. C.; Theo. N. Vail, president American Telephone and Telegraph Company, New York City; Henry J. Waters, president Kansas State Agricultural College, Manhattan, Kansas.

Allied wheat purchases in the United States, together with those of our own government, will be handled by the corporation. This will not only stabilize prices to the Allies, but will also protect the corporation against possible loss.

Decision of the food administration to require the Allies to purchase flour instead of wheat is of very great importance to agricultural and other interests of the United States. Through the exercise of this regulation the by-products of the wheat milling industry, which are sorely needed by livestock growers, will be kept at home.

## CROP CONDITIONS

By United States Department of Agriculture Weather Bureau

San Francisco, August 28.

Temperatures in California during the week ending August 28, 1917, averaged slightly below normal along the coast and from two to five degrees above normal in the interior of the state. No rain fell except a few showers near the end of the week in the foothills and mountains. Rain now badly needed for pastures, trees and late truck crops. Feeding the ranges is holding out well, but forage in the valleys is getting scarce and farmers have turned stock to the stubble fields whenever possible. Harvesting of small grain is practically finished and thrashing is advanced. Yields of barley and wheat continue good and in most places are better than expected. Corn making a good growth and the wheat and sorghum varieties are growing splendidly. Rice is beginning to ripen and the crop is everywhere reported as being in excellent condition. Beans are free of lice and picking has come general. Some farmers are planting their second crop of potatoes and in the southern counties corn is being planted for ensilage. Potato acreage is large, but the crop is not growing well on account of long continued dry weather. Reports on the condition of beans vary greatly. In some few places this crop is failing, while in other localities looks remarkably thrifty and promising. Complaints are made of more or less damage being done to fruit by birds, aphids, red spiders and mildew, but nowhere is the damage reported as having been serious. In some localities the pink beans are not setting well, but the lima and black-eyed varieties are maturing nicely, and harvesting of beans has become general. The tonnage of sugar beets not up to expectations, but the yield is high and the crop on the whole fairly satisfactory. Apples are maturing rapidly, and in Santa Clara County, where 51 per cent of apples in the state are raised, crop is unusually promising. In Pajaro Valley it is somewhat spotted but a full crop will be gathered. In the neighborhood of Felton and Big Bear conditions are most promising, but in Blackburn Gulch it is somewhat light. Throughout the county where care was taken the quality of apples is good, while elsewhere the quality is only fair. Codling moth damage less than usual. Apple drying will begin about September 1. The pear and peach harvest is well advanced and prune drying and the picking of raisin grapes have begun.

## REPORT OF SAN JOAQUIN CATTLE TESTING ASSOCIATION

The following are the five leading herds in milk production for the testing period of 31 days, first giving cows in herd, second average pounds milk: Gotshall & Magruder, 22, 1192; F. J. Kell, 22, 954; County Farm, 36, 914; J. Fiori, 29, 836; Gronner, 19, 788.

The following are the five leading herds in butter fat production for the last testing period of 31 days giving number of cows in herd, average pounds butter fat: Gotshall & Magruder, 22, 44.7; J. Fiori, 29, 34.5; F. J. Kell, 22, 33.1; County Farm, 36, 31.4; R. W. Fisher, 20, 31.2.

Instead of holding a fair farmers in Merced County plan an assembly taking of picnic features. It will be under the direction of the farm bureau.



# Agricultural News Notes of the Pacific Coast

## Northern California

Nevada County is shipping freely Bartlett pears.

There are 900 acres of strawberries in Sacramento County.

Hop growers have fixed on a one-cent per pound price for picking.

The Placer County farm bureau will hold its fair at Auburn September 3-6.

Sutter County's bean crop is valued at \$3,000,000. It was grown on about 8,000 acres.

Prof. Ralph Smith of the state university is investigating walnut growing conditions in Sutter County.

It is thought that California may lead all the states of the Union in the production of beans this year.

Outside capital is being interested in fruit lands of Shasta County, largely because of irrigation extension.

Native sons are planning for festival days at Sacramento the first three days of the state fair, September 8, 9, 10.

The Humboldt County Dairymen's Association is discussing labor shortage and endeavoring to secure help for its members.

California will take from her soils this year vastly more wealth than in the richest year of gold mining in the state's history.

The Arbuckle, Colusa County, almond festival committee has changed the date of its festival which will now be held September 7 to 9.

Sacramento claims that within a short distance of the state capital there are 66,890 acres in beans, which will produce a \$7,000,000 crop.

Movies have been taken of harvesting scenes in Sacramento County. One scene showed seven combined harvesters cutting a swath 175 feet wide.

Much interest is being manifested in the short courses to be conducted at the university farm school at Davis, Yolo County. The courses will begin in October.

A poisoning campaign launched against grasshoppers in the Esparto, Yolo County district, has succeeded and it is reported that the hoppers not poisoned have migrated.

Owing to burning of grain and injuring of live stock farmers of Butte County are leaguely together and planning a vigorous campaign of protection from the lawless element.

"Hops are still hopping" is the word passed in the hop fields, the price now reaching close up to 32 cents. Unfortunately many fields were contracted for at around a ten-cent price.

The rapid spreading of the disease of anthrax in the herds of the Sacramento Valley has caused the belief that there is a malicious movement on the part of organized forces to spread the infection.

The board of directors of the Anderson-Cottonwood irrigation district of Shasta County sits as an equalization board next Friday. The board of the Happy Valley irrigation district will act as equalization board on Saturday.

One grain field of about 25,000 acres in District 1000, between Vernon and Sacramento, is handled this year without sacks. The big combined poured into tank wagons, from which the grain was carried to the Sperry storage bins and handled on barges direct to the mills in bulk.

## Central California

Last week was squirrel week in Tulare County.

Raisins are being harvested and placed on the drying trays.

Tulare County dairymen received from the creameries last month \$138,250.

Tulare County has a cheese factory which turned out last month over 7000 pounds.

The Stanislaus County board of supervisors will aid the coming fair to the extent of \$2000.

Citrus people of Tulare County are planning construction of several new citrus packing houses.

Butterfat prices now being received by Kings County dairymen range from 42½ to 47 cents.

Two camps of Southern California high school boys have been installed in the vineyards near Dinuba, Tulare County.

Overripe cantaloupes shipped from Turlock, partly because of slow freight, arrived in Eastern markets in poor condition.

Jersey breeders of Stanislaus County are to hold a sale at the county fair, which will be held at Modesto September 17-22.

A large fruit packing house at Fresno was recently partially destroyed by fire which it was discovered was of incendiary origin.

The Valley Fruit Growers' Association is planning with various labor organizations for a supply of labor to handle raisins and other crops.

Horticultural Commissioners Howard of Kings County, Collins of Tulare and Roullard of Fresno are organizing a tri-county squirrel and rabbit campaign.

Lands near Terra Bella, Tulare County, are irrigated with water developed from wells. This development is progressing more rapidly than at any preceding period.

Many Merced County cattle which were thought to have died because of poisoning are now thought to have died because of eating Johnson grass in which Prussic acid was developed by the heat.

A Chowchilla bean grower has had success in poisoning rabbits which infested his bean fields, by using the arsenic, bran, molasses mixture; arsenic one pound, bran one gallon, molasses one quart, spread in rabbit runways as sun is going down.

Citrus fruit associations of Tulare County are trying experiments of economy of management. Four associations are to be brought under the management of one head. The one manager is to have entire charge of the crews in the four different houses.

The California Peach Growers' Association is experimenting to determine the amount of shrinkage of dried peaches in transit to market. Once this is determined the packages will be weighed so that guarantee of absolute net weight of every box may be made.

Laborers of the raisin drying sections have united in demanding five cents per small tray for picking Muscat grapes, one cent additional for large trays and four cents per tray for picking Thompsons and Sultanas. Where Sunday work is done a price and a half charge is demanded. The Growers' Association is insisting on a three cent price for Muscats in small trays.

## Southern California

The Chino sugar factory is running at full capacity.

The Riverside cannery is now running on tomatoes.

Orange County has produced this year about 1000 tons of dried apricots.

Apricot growers are disappointed at the low price prevailing up to this time.

Yucaipa Valley apple growers are planning for an apple show to be held this fall.

The Riverside Canning Company is packing its largest output of canned tomatoes.

The first car of apples out of the Beaumont section was sent out about the 15th.

Sugar beet fields of Chino, San Bernardino County, are suffering because of labor shortage.

Riverside County alfalfa growers are urged to make a campaign against the alfalfa caterpillar.

A 75 horse power engine is being installed in the new cotton gin at Blythe, Riverside County.

One hundred and forty tons of hay recently went up in smoke on the McEuen place near Riverside.

The Coachella Valley Date Growers' Association will make an exhibit of its dates at the Riverside fair.

There will be spent in San Diego County during the next year over \$14,000,000 in water development.

Almond harvesters in the vicinity of Paso Robles commenced this week. A 60 to 70 per cent crop is expected.

The Cooperative Cannery at Hemet, Riverside County, has sold most of this season's output at long prices.

Irrigators of the Victor Valley are conferring in the endeavor to materially increase supply of irrigation waters.

Imperial Valley is receiving at Hanlon heading 2125 cubic second feet, and danger of drouth for this season is past.

Land owners of the Cherry Valley near Beaumont, Riverside County, are discussing the matter of better irrigation supply.

In the campaign for farm labor Imperial County farmers have signed up 70,000 acres of cotton and 30,000 acres of grain sorghums.

An appraiser from the federal farm loan bank at Berkeley is investigating conditions in the Indio, Coachella Valley, section of Riverside County.

Almost daily shipments of beef cattle have been made from Lancaster the last few weeks to the beet fields around Anaheim for fattening.

Alfalfa hay shipments from Lancaster in the Antelope Valley to southern points this summer have exceeded any thing ever known in the valley before.

A \$250,000 corporation has been formed in Riverside for the purpose of establishing a dehydrating plant. It will handle potatoes, carrots, turnips, beets and other crops.

The Riverside Portland Cement company and the California Portland Cement Company are now fitted for saving from all the kilns the wastes from which potash is made. It is said that this means a saving of over \$300 per day.

## The Coast

Spokane Interstate Fair is to be held next week.

Freewater, Oregon, will ship about 150 cars of apples.

The state of Washington has adopted federal grain standards.

Southern Idaho's sugar beet crop will be above the average.

The round-up at Pendleton, Oregon, will be held September 20-22.

Klickitat sheep men are selling lambs at ten dollars per head.

Spokane's first car of '17 wheat sold at an even \$2.00 per bushel.

A horse and mule show will be held at Pendleton, Oregon, October 6.

More silos are being built in Idaho and Utah than any preceding year.

The Pacific International Live Stock Show will be held at Portland, November 19-24.

Cutworms are ruining thousands of acres of sugar beets in Fremont County, Idaho.

Deschutes County, Oregon, will have only a 40 per cent crop of wheat because of drouth.

The potato crop of Kootenai County, Idaho, will be 50 per cent of normal on account of drouth.

Lewiston, Idaho, reports the longest dry hot spell since crops have been grown in that section.

The Hood River Fruit Company is building a new packing house and warehouse at Hood River.

One fruit packing firm is building a number of new fireproof packing houses in the Yakima Valley.

It is estimated that the four Northwestern states will have an output of 23,500 cars of apples this season.

Agricultural Agent Paschall reports promise of greatly increased acreage in winter wheat in Cochise County, Arizona.

The Colorado cabbage acreage is 15 per cent larger than last year, while its celery crop will be about 20 per cent short.

Several canning clubs in Thurston County, Washington, are putting up under contract a commercial pack of fried chicken.

Stockmen of Jackson County, Oregon, are sending out much butcher stock before ready for market because of shortage of feed.

Labor troubles along the coast have driven many laboring people inland and Eastern Washington farmers report the labor situation easy.

Condensaries at Logan, Utah, paid 56 cents per pound for August butter fat. The state of Utah is shipping 24,000,000 pounds of condensed milk each month. This is an increase of over 1000 per cent since the beginning of the war.

Southern Idaho will produce this year 2200 cars of apples. The biggest apple producing center of the Northwest is the Yakima Valley of Washington. Its estimated output this season is 8500 cars. The Wenatchee district is a close second with 8000 cars.

Arizona is taking up an educational campaign against poisonous plants of the ranges which have caused the death of thousands of head of valuable live stock. A series of meetings will be followed by persistent campaign against water hemlock, lupines, milkweeds and larkspur.



## Drying Tomatoes, Green Peas and Corn

By W. V. Cruess



**T**OMATOES, peas, and corn may be successfully sun-dried on trays. They may be kept indefinitely in the dry state and when properly cooked they are wholesome, nutritious, and can be made into very palatable dishes.

### Peas

Select peas at the optimum stage for cooking fresh. If too ripe they will taste like ordinary split peas when dried, and if unripe they will dry too much. Shell and spread on trays. If wooden trays are not available paper, canvas or cloth may be used. Expose to the sun until dry. Unless thoroughly dry they will mold

when stored. Store the dried peas in such a way that insects can not reach them. It is a good plan to place them in a flour sack or similar bag and wrap the bag in heavy paper so that insects can not lay their eggs through the cloth. The dried peas may also be stored in ordinary glass jars. At the proper stage of ripeness it requires about 10 pounds of unshelled or 3½ pounds of shelled peas to make a pound of dry peas.

### Corn

The corn used for drying should not be too ripe. It should be tender and sweet. Remove the husks, place the corn on the cob in a wire basket or sheet of cheesecloth and immerse

in boiling water for about three to five minutes. Chill immediately in cold water and cut the corn from the cob. Spread on trays in the sun and allow to dry. The dried corn should be packed in bags or jars as recommended for peas.

### Tomatoes

Bright sunlight and dry weather are essential for sun-drying tomatoes. Cut the tomatoes in two at right angle to the stem. Large fruit may be cut into thick slices, spread on trays and allowed to dry in the sun. It may be necessary to turn the tomatoes several times to prevent molding. Dry them until they are tough and leathery in texture. They are then packed tight in barrels or boxes. A little salt should be sprinkled between the layers.

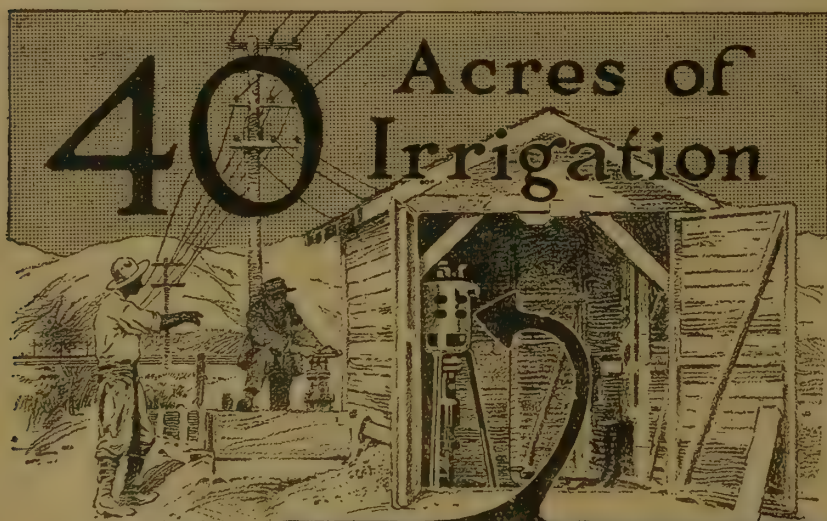
### Storage

The dried product should be pro-

tected from moisture and insect when stored. If placed in shallow pans and heated for five to ten minutes in a moderately hot oven before packing, all insect eggs will be destroyed. The same treatment will save the product if used when the attacks of molds or insects commence.

### Cooking

Corn should be soaked two to four hours, using two cups of water to one cup of corn. Peas should be soaked about twenty-four hours before cooking. A pinch of baking soda added to the water tends to soften the vegetables. Dried tomatoes will require at least twenty-four hours soaking or longer to soften and remove the excess of salt. After soaking, the vegetables are seasoned and cooked in the ordinary way. The drying process results in some loss of flavor and the dried products therefore require more seasoning than fresh vegetables.



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## Vegetable Planting Calendar for September

### Northern California

Written for California Cultivator By A. R. Gould



**W**E must devote most of our attention during this month to a general "clean up" and in our spare moments plan for the coming season

when it is hoped that we shall all increase the vegetable supply and plant still more than we did this past season. The food supply will be short no doubt as there will be large exportations to allied countries. In anticipation of early rains it will be necessary to clean up those plots in the garden which we intend to devote to early peas, onions, broad Windsor, or horse beans, and turnips.

Ample space should be reserved for these crops and the plots well prepared by being deeply dug and manured. Any weeds or refuse should be dug in without delay and the surface left clean and level, ready for the early plantings. Make a note of the last crop grown on the various plots so that good judgment may be used in following up with rotational crops, for instance a root crop such as beets or carrots should not be planted again on the same plot but should be followed by legumes such as peas or beans when possible, and wherever there is any sign or even suspicion of the crop being diseased it should not be grown again in the same place for several years as, whether insect or fungous disease, the spores of the latter and eggs or pupae of the former are lurking in the soil to attack again. Fungous diseases generally confine their attacks to the one crop. Certain rust diseases have certain genera marked out for preference and keep to those genera, hence by a careful study of these conditions we are able to starve them out, as it were, by changing the crop.

### Potatoes

If late varieties are matured they should be stored in the cellar. We have recently seen appeals in the press to the patriotic to plant potatoes at once to secure crops for the

coming winter. To those readers living in our northern section of the state we would advise caution as severe frosts may injure this crop late in the season.

### Tomatoes

See that the larger bunches of fruit are well supported on plants being grown on the single stem system as they are liable to break with the weight before ripening. Keep a close watch for any diseased fruits and promptly remove. There should be a good quantity of ripe fruits ready for present use and canning.

### Leeks

It will be necessary to feed these with liquid farm yard manure, and an occasional application of soot water will also prove of value. At this stage also they must be blanched and the method advised last month for celery should be adopted for the stems, or even thick cardboard is excellent for the purpose.

### Parsley

Make a sowing of the variety "Finest Curled." It will then become well established before the severe weather.

### Swiss Chard or Sea Kale Beet

A sowing of large ribbed white should be made for winter use. This is also used as a salad, but is very valuable to keep cutting from as a green vegetable.

### Collecting Beans Dry

Those beans which were left over too long to use in the green state may be now collected for seed and for use in the dry state. The tepary bean will now be ready in most sections and every seed should be collected. The soya bean will not be ready for a few weeks. If you have a considerable quantity of dry beans to collect, pull up the whole plant as it becomes yellow and place on a large sheet on the ground when the beans will soon fall out.

### Southern California

Written for California Cultivator By D. F. Reichard



**I**RRIGATION must still be depended on for moisture for plantings during this month; the same methods should be used as suggested for Aug-

ust. Although practically everything that was recommended for planting last month may be planted during September it is well to take one's local climatic and soil conditions into

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consideration. For as the days shorten and the average temperatures lower the scope for planting the more tender vegetables lessens. However, for planting the hardier varieties such as beets, carrots, parsnips, turnips and the cabbage family September is really better than August. Peas may be planted at this time but require ample water which must be supplied by irrigation until the rains set in. These will be ready for holiday use.

Now the pea seed—any variety will do well now, but Yorkshire Hero and Senator or Admiral are the leading ones for Southern California—in freshly opened damp furrows and cover one to two inches with moist soil, then harrow lengthwise of the rows to push loose dry dirt into the furrow to nearly fill it. This will bury the seed three to four inches. When the young peas are up so as to show the rows, furrow out between the rows and irrigate and cultivate about every ten days according to the nature of the soil.

Heavy plantings of cabbage and

cauliflower will be made this month in beds or thick in rows for transplanting into the field during November. Have the seed beds rich and handy to wet so that the young plants will not be checked at any time of their growth.

Plant early varieties of onions in seed beds to be transplanted later to the field or they may be planted directly in the field. Use Early White Queen or some variety of the Bernuda onion. These will mature in April or if something a little earlier is wanted use the onion sets of the same varieties if obtainable.

Potatoes may be planted in foothills and places where frosts do not come until late, but as a general thing they can not be recommended after the last of August. The same may be said of corn and bush string beans. In strictly frostless locations egg plant, peppers and tomato plants may be set out for very early crop.

It is too late to plant summer or winter squashes, pumpkins, melons, cucumbers or any of the tender varieties except in thoroughly frostless districts.

## Ornamental Planting Calendar for September

### Northern California

Written for California Cultivator By A. R. Gould

**D**URING this month we have to make plans for the coming spring and any alterations in garden arrangement should be carefully studied in every detail. It may be that we must put in a new lawn or extend our borders or change some portion of our existing perennial plants. Now is the time to make a survey. If it is intended to put in a new lawn the present one should be well spaded under, and if many deep rooted weeds such as dandelions, etc., are present the turf should be put under at least a foot and a half. The surface should be well dressed with bone meal and well watered to allow any weed seeds to germinate, which they will do in a few weeks. These can all be destroyed before the grass seed is sown. Never be in too much of a hurry to get the new lawn in, as you will have less weeding to do later on if careful attention is given to these details. Have the surface well graded and in good shape and have a fairly firm surface to plant in. We shall deal with grass seeds and lawn mixtures more fully next month.

### Southern California

Written for California Cultivator

**A**BUSY time in the ornamental garden is here. It is a time of dearth of flowers, to an extent at least, hence there is lack of inspiration in looking ahead until the spring months. But some of the earlier blooming spring bulbs should be planted this month, for example, Watsonias, while the earlier daffodils should at least be thought of sufficiently to get the ground ready. No more satisfactory returns are given for labor than by the various members of the narcissus family. And then one may begin this month planting hyacinths, tulips, anemones and many other of the Dutch bulbs.

Iris may be divided from the middle to the last of the month and the ground enriched. The "poor man's orchid" is worthy of more general attention. Later in the month ranun-

culi and anemones will be in order. These plants are a bit hard to get results from, but planting in rich, loamy soil two or three inches deep, with plenty of water, should give good returns. Both of these bulbous plants should receive liberal soaking before planting.

It is the ideal month for planting pansy seedlings, columbines, calendula, candytuft and forget-me-nots. The first planting of sweet peas may be made this month and ground made ready for another planting in early October.

Then there are a number of annuals: Canterbury bells, centaurea, gailardia, coreopsis, foxglove, sweet Williams and a number of others, inexpensive, yet giving a gorgeous showing of color, which may be given the first planting this month.

The lawn needs some attention, and



A tree in a blasted bed (at left) roots deeper, grows faster and bears earlier than a tree set in an ordinary dug hole (at right).

"The soil is the pasture in which the roots of the tree feed," says the Wyoming Experiment Station. "Blasting enlarges the root pasture, breaks up the hardpan and subsoil and permits the roots to go down and get plenty of food."

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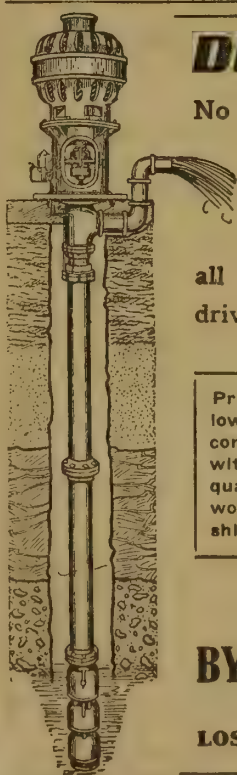
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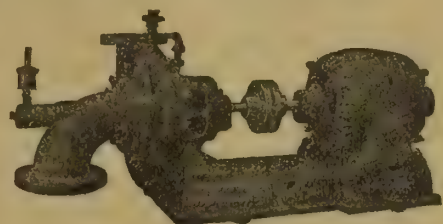


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# Jerseys

## That You Will Like

Have been consigned by leading breeders of Stanislaus County, California, to a sale to be held at

**Modesto, California**

**TUESDAY, SEPTEMBER 25, 1917**

Seventy-five HEAD will be sold at your own price. These will include the entire herd of Jno. A. Orr, Ceres, except a few head not in sale condition; all the great Register of Merit cows in the herd of W. J. Hackett, Ceres; six choice females that were permitted to pick from the herd of O. J. Ames, Oakdale; twelve head from Riverina Farms, Modesto; and some choice females from the herds of Fred B. Wulff and M. W. Brady, Modesto.

If you want foundation stock of the right sort, you will find it in this sale, and an important point is that a very large percentage of the females to be sold are fresh or heavy spring cows and heifers.

Every animal over six months has been tuberculin tested and certificate will be furnished, and further than that you have the privilege of tuberculin testing any animal you buy yourself, and if it reacts you don't take it.

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**Sale under management of**

**California Breeders Sales and Pedigree Co.**

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# Complete Dispersal Sale

of the

## Hembree Jerseys

**Orland, Cal., Feed Stable**

**OCTOBER 10, 1917**

I will have a complete show herd at the California State Fair, Sacramento, this fall, every head of which will go in my sale on October 10. Come to the fair and look them over. Send for catalogue.

**Hermosa Vista Stock Farm**

**C. P. Hembree, Owner**

**Monmouth, Oregon**

# Closing Out Sale of Live Stock at a Bargain

**An Opportunity to Secure a Choice Lot of Young Holstein Heifers Sired by Registered Bulls from Full Blood Unregistered Dams.**

30 Head of 15 to 18 months old Holstein heifers now being bred to Registered Holstein Bull.

4 Head of Grade heifers.

7 Head grade four and five year old cows.

1 Registered two year old Holstein Bull, Segis Paul Pontiac de Kol Burke.

1 Two year old Guernsey Bull, sired by May King of Fern Ridge, a bull that took third at the San Francisco Exhibition in 1915, Dam Imported Lady of the Forgettes.

Wish to sell in single lot and will make special price, on the above stock.

ALSO a choice lot of brood mares, Jacks and Jennets at a bargain price.

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**Los Angeles**

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If Bermuda is becoming pretty well established a thorough raking and the application of commercial fertilizers will encourage the bluegrass and give a surface which will not turn entirely brown when the frosts come. Bermuda makes a fair lawn in summer and will stand an enormous amount of wear, but it is coarse and has an unfortunate habit of turning brown as soon as the frost strikes it. It is comparatively easy to keep enough bluegrass mixed with it to maintain the green through the winter.

Prune heavily Cherokee and other spring blooming roses. Other roses which have been dried off this season, if pruned heavily late this month, will give liberal showing of holiday blooms. Prune back vigorously geraniums, heliotrope and other small plants. They will then give heavy fall bloom.

In any case, where there is a vacant space dig and fertilize and fit the ground for later use.

Chrysanthemums should be pushed from now to the blooming season, given an abundance of water and fertilizer. Fertilizer should be dis-

continued when color begins to show in the buds; otherwise they will turn black and fall. As to disbudding we give directions from Ernest Braunt's "Garden Beautiful" published by the Cultivator: "All buds below the top ones should be rubbed out as soon as they appear. This is easily accomplished as soon as the lower buds show by 'rubbing them' out with the finger tips, as they are very brittle. On some sorts a goodly crop of attenuated side branches break out well down on the main stem, and these should be kept off, or they will take part of the food and thereby weaken the main crop."

"Much care must be taken in top or flower disbudding as the stems are brittle. Hold the buds with one hand and take a small stick like a toothpick and crowd off the buds you wish to dispose of. If you should leave a leaf bud instead of a flower bud all is not lost. The leaf bud will make a branch which in a short time will present a terminal cluster like the one with which you have just dealt; then try again. This breaking out of buds must not be neglected for even a few days."

## Who's Who

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photographs and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Other sketches and portraits will appear in the next and following weeks.

Written for California Cultivator By F. F. Stonerod



INTIMATELY known to the rank and file of California beef cattle breeders are the name and achievements of C. N. Hawkins, of Hollister, San Benito County.

Mr. Hawkins is the proprietor of the Pacheco Cattle Company, president of the Grangers Union of Hollister, is interested in several banks, and is one of our foremost breeders of Shorthorn cattle.

His father was one of the pioneers who settled in San Benito County in 1869. After a thorough commercial and academic training in the schools the son graduated from college fully equipped to carry the weight of large affairs in after years.

He became interested in the mercantile business, and the Grangers Union Company of Hollister as it stands today is an example of his commercial ability. Completely destroyed in the earthquake in 1906, and again three years ago by fire, the first disaster a total loss, the old buildings have been replaced by a modern fireproof structure covering nearly a quarter block, in which a vast trade with the countryside is carried on.

But it is in the field of live stock that Mr. Hawkins has made notable accomplishment in a comparatively short space of time. On his 20 odd thousand acre ranch a short distance from Hollister he has grazed thousands of high grade beef cattle for nearly a generation. Always he has used the best pure bred bulls he could buy. A few years ago he established a breeding herd for the purpose of producing not only his own bulls for range duty but to supply the growing demand for bulls in the Coast market. By intelligent selection he has founded a herd of Shorthorn cattle which would be difficult to duplicate. Like all our most successful American breeders Mr. Hawkins bred his animals with a fixed purpose in view. He is an advocate of the utility type

of beef cattle, individuals that will make good under our peculiarly trying coast conditions. That he has made good is testified to by the range cattle men to whom he has sold bulls.

Mr. Hawkins believes in the stock show and fair as an educational institution. He showed less than a half dozen head at the San Francisco world's fair because his herd was not of large proportions at that time, but he won high honors nevertheless. This



C. N. Hawkins

year however he will exhibit a large string at Sacramento and planned to show at both Los Angeles and San Francisco had there been shows in those cities.

With the exception of one cow every one of the hundred breeding females and the herd bulls on the ranch are of his own breeding. This fact is indeed noteworthy and it is one thing which makes the Pacheco herd a credit both to the state and to the owner.

Asked what his hobby was Mr. Hawkins replied, "Shorthorns." He spends most of each week at his desk in the city, but as he expressed it,



"My heart is out there on the hills with my Shorthorns."

Mr. Hawkins is a comparatively young man, has a fine family, maintains a beautiful home in San Fran-

cisco as well as in Hollister, and is training one of his three sons, T. B. Hawkins, to handle the ranch business, and "Tom" is making good because his name is Hawkins and because he is his father's son.

## Breed Leaders

Every breed of live stock has its outstanding character the same as the human kind. A great dairy cow has proved her ability to produce anywhere up to 15 tons of milk annually; the trotting horse has secured his record around two minutes; the beefmaker has shown his ability to make the least amount of feed into the greatest amount of food; swine, sheep and others of the live stock family have shown themselves great characters. In addition—and here is where their worth is proven—these animals can transmit their productive power to their offspring.

Beginning with the issue of August 4 the Cultivator gave an account of Pietertje Bloom of the university farm dairy herd. Some things she has done and more that her daughters have done were chronicled. She was a most worthy leader in this series of articles. Others of her kind follow. More of the "handsome is as handsome does" type of animals will be given in the columns of the Cultivator during the next few months.

Written for California Cultivator by C. A. Briggs

**A**T the Sacramento State Fair in 1916 a fine junior two year old took the second prize. This was the bull belonging to J. W. Benoit of Modesto. The picture below shows him as he was at that time, good to look at.

Better than that his calves are com-

A. R. O. daughters, 25 daughters with 41 A. R. O. daughters. His grand sire, Colantha Johanna Lad, has 96 A. R. O. daughters, six above 30 pounds, 70 sons with 435 A. R. O. daughters, 35 daughters with 42 A. R. O. daughters. His sire, Colantha Sir Pontiac Aaggie, has eight A. R. O. daughters. His sire's dam, Aaggie Cornucopia Pauline



El Prado Wayne Colantha

ing along stamped with all of the sire's individuality.

He was born December 27, 1913, sired by Colantha Sir Pontiac Aaggie sired by Colantha Johanna Lad sired by Sarcastic Lad. His dam is Edith Mandel Wayne, a 30.09 pound cow with a 4.97 test. Her 30 day record is 111.95 pounds of butter, 2407.10 milk. Averages of his dam and sire's dam (at 4 years) show milk 415.50, butter 26.02, per cent of fat 5.01. His great grandsire, Sarcastic Lad, has 34 A. R. O. daughters, 36 sons with 514

3rd, made 21.96 pounds butter at four years, 346.30 pounds milk with a 5.07 test. His sire's dam's sire, Dutchland Sir Pontiac Rag Apple, has 24 A. R. O. daughters, 11 sons with 67 A. R. O. daughters, eight daughters with eight A. R. O. daughters. His sire's dam's dam, Aaggie Cornucopia Pauline, made 34.32 pounds butter in seven days and 137.62 pounds in 30 days at 4½ years. She has five A. R. O. daughters, three sons with 181 A. R. O. daughters, two daughters with seven A. R. O. daughters. "Johnny" Benoit may well be proud of El Prado Wayne Colantha.

## California Guernseys at National Dairy Show

Edgemoor Guernsey herd will exhibit at the National Dairy Show, Columbus, Ohio, in October. As far as we know this is the first time a California herd has been entered in this classic. That the Edgemoor entry will give a good account of itself is a foregone conclusion. If the Eastern breeders have anything in the aged bull or cow classes that can beat Imp. Itchen Wood Sorrel, or Imp. Itchen May King, we would like to see the animals. Coast fair goers are familiar with the snow yard performances of this great pair so they need no repetition here. But the calf herd, get of sire, etc., which Mr. Dupee will enter will be just as hard to beat as the aged stuff. We have never seen a better senior heifer calf than Wood Violet of Edgemoor, a daughter of Imp. Wood Sorrel. She is about as near perfect as they are made. As her sire is Imp Itchen May King too she is the daughter of two grand champions, so if she wins in her class it will not be an accident. Space does not permit going into detail about this show herd. It will have the keenest competition possible, for all reports have it that the 1917 show will surpass its predecessors both in the quantity and quality of its entries. The Dupee herd will be in charge of E. W. Major, and Happy Allen will lead them into the ring.

The original intention was to show

the herd at Sacramento before going East, but not only Itchen Wood Sorrel but several other show cows will not freshen in time for this show. The young herd would have been taken to Sacramento however had circumstances permitted. So in all probability the Dupee entry at the state fair will be scratched for the first time. There are some 20 cows on test at Edgemoor at the present time, and there is one heifer in the lot which will break the world's milk record for Guernsey cows in class C, (junior three year old). She is Donnington Goldie 5th, and at this writing she has made 16,034 pounds milk and 708 pounds butter fat, with six-weeks to go before her year is up.

# Public Auction

**100 Head Holsteins and Durhams 100 Head**

On the Dick Ranch on the Oakdale Road, 6½ miles Northeast of Modesto and 1½ miles Southwest of Riverbank on

**Tuesday, September 13**

we will sell the following live stock to the highest bidder for cash:

- 45 Cows
- 29 heifers
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- 1 Holstein bull 2 years old
- 4 brood sows
- 23 shoats
- 24 small pigs
- 2 colts
- 1 top buggy
- 2 mowers
- 1 rack
- 35 head of fresh cows
- 9 head of springing heifers

Can give test and weight of milk of each cow.

Dairymen, this a fine bunch of cattle and excellent producers. Don't fail to attend this sale, come early as the sale will begin promptly at 11 o'clock. No by-bidding, no boosting, no fake bidding, everything absolutely sells, lease has expired on ranch is the reason for selling. Free lunch. Don't forget the date, Thursday, September 13th.

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**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by imported Stallion Ibn are the choicest thoroughbred mares of Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahruss, world renowned imported "desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle Stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the very best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted Prince Geische Walker, and bulls from one World Record sow and two California State Record Cows. Write for details.

Correspondence Invited

**Anita M. Baldwin**

W. H. TAYLOR, Superintendent

Santa Anita, Cal.

## Shorthorn Bulls and Heifers



We have twenty bulls and ten heifers for sale at present. This is the best lot that we have ever had for sale. Mostly two year olds, registered, tuberculin tested and all reds in excellent condition and splendid individuals. Write for prices or better come and see them.

**H. L. & E. H. Murphy**

Six miles from Sacramento

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**Berkshire Hogs—Milking Shorthorns**

Breeding Stock For Sale

G. A. Murphy - Perkins, Cal.

Many Chinese who have crossed the boundary from Mexico have been arrested and may be deported.

## Extraordinary Holstein Sale

An event of outstanding importance to Holstein breeders and dairymen will take place at McClure Farm, Santa Ana, California, on Tuesday and Wednesday, October 16-17, 1917, when we will sell to the highest bidder

**150 REGISTERED HOLSTEIN-FRIESIAN FEMALES AND MALES**

This offering includes the absolute dispersal of the herds of Ernest Otto McClure, Santa Ana; P. H. Jarratt, Lancaster; and A. Satterberg, San Jacinto. Supplementing these offerings will be high class consignments from Santa Anita Rancho, Santa Anita; McAlister & Sons, Chino; R. Nadeau, Sagus; and Aro Farm, Buena Park.

A FEW FEATURES OF THE SALE WILL BE

King Pontiac Netherland Segis and 16 of his daughters; three daughters of Sir Skylark Ormsby Hengerveld; a granddaughter of Rag Apple Korndyke 8th, one of whose sons recently sold for \$53,200.00 at public auction in Massachusetts; a granddaughter of Tilly Alcartra, the world's greatest dairy cow; a son of the 36 pound California champion junior three year old. This is the highest record bull ever offered for sale in the West, and is the second highest record bull old enough for service in California; a son of a great 34 pound cow; some highly bred cows and heifers in calf to a 29 pound son of Colantha Johanna Lad.

Every animal sold is tuberculin tested. Write for catalog. Sale under management of

**California Breeders Sales and Pedigree Company,** C. L. Hughes, Sales Manager  
Auctioneer, Col. Ben A. Rhoades, Sacramento, California  
Clerk of Sale, H. A. Olsen, of the  
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## Field Notes from the Live Stock Men

Wm. Bernstein, Kings County breeder of big type Poland-Chinas, will take a wonderful lot of sows to Sacramento this year. Mr. Bernstein did not show last year, being unable to get his stock ready in time, but he will make up for lost time on this year's circuit.

Arlington Smith, Tulare County Berkshire breeder, will not be seen on the 1917 fair circuit with either his Berkshires or Ayrshires. He entered his stock but found it was absolutely impossible to leave his ranch just at the time when he is most needed. The Berkshire men will regret his absence as he not only has a splendid show herd but is very popular.

Tagus Ranch, Tulare County, is another that will not show animals of its breeding at the fairs. Labor conditions have worked havoc at Tagus as elsewhere. Mr. Merritt intended to show Holsteins, Percheron horses, and Duroc-Jersey hogs. While it was not the intention to show California Defender again, several of this great boar's get are prospective blue ribbon winners, and the Tagus sows are indeed a classy lot.

Allen Thompson, Tulare County Duroc breeder, expects to be at Sacramento with a full herd. Orions Golden Colonel heads the Thompson herd. He is the boar which won first money at Fresno last year. The futurity entries are an even bunch of youngsters of the usual Thompson quality.

R. H. Brittingham, Tulare County, is getting into the purebred Jersey business as fast as he can dispense with the few grades he has left. He bought several good ones at the McFarland sale last spring and in time will do official testing.

A. A. Jenkins, the young Tulare Jersey breeder who won so many prizes his first time out on the circuit last year, will be back again this year if nothing interferes at the last moment. In Gerties Golden Victor Mr. Jenkins has one of the coming show bulls of the country. He is bred in the purple too, having a 536 pound dam and a sire who at four years of age has given Mr. Jenkins a promising lot of heifers. This youngster has all the earmarks of a coming champion. He has a velvety hide, a perfect top line, large and well placed rudimentaries, and to complete his qualifications he has that stylish carriage in the ring which counts for a great deal. Mr. Jenkins has set a high standard of production for his herd and is working along the right lines. He is one of California's real Jersey enthusiasts.

J. K. Macomber's Poland-China boar, Chief Picture 2nd, is still on the job and looks better at four and a half years of age than as a yearling. Mark Bassett, who bred this boar and sold him to Mr. Macomber, admits he made a great mistake for he is the sire and grandsire of many of the Bassett champions. As a pig he was a trifle under size and at the time he was sold he was not in the best of shape, but he afterward developed into a remarkable sire. Whether it is his splendid breeding and individuality or the fact that he has never been fitted for the show ring which is responsible for the quality of his offspring is a matter for argument. Seeing is believing, and Chief Picture Poland-Chinas are usually headliners.

Peters, Lamson and Walker, are now located permanently at Devore. After moving their herd of Duroc-

Jersey hogs from Holtville to Fontana and assuming charge of the big Fontana herd of market and breeding stock, they decided to assemble their privately owned stock on their mountain ranch. Not since this partnership of breeders first established their business in this state a few years ago have they had such a high class lot of stuff. Golden Model and Ohio Chief breeding predominates. They are breeding for the "big type" kind, and are getting it. Moreover, they are Ames, Iowa, agricultural college graduates and know how to breed and feed. Mr. Walker and Mr. Lamson are both in the draft, and until they know whether or not they are accepted for military duty nothing will be done with the show herd. We predict that when this herd does get into the showyards this year, next year, or thereafter that it will take some mighty good stock to beat it.

G. W. Wilder's Hollow Hill Guernseys are coming along in fine shape despite the hot weather, labor troubles, etc. Cherry 3rd of the Effords, 43381, has made 509 pounds of butter fat from 12,017 pounds milk in 256 days in Class B. She led all the cows in the state competition in November with 1576 pounds milk and 77 pounds fat. Coras Beatrice, 24808, has been on test 110 days and has made 253 pounds of fat. This cow is a half sister of Caroline of Chilmark, 24842, who just finished her year's test with a record of 723 pounds butter fat. Imp. Brittleware Mistletoe, 48510, in class B has made 530 pounds fat in 243 days and 14,649 pounds milk. This is one of the most promising Guernsey cows in the country, for if she maintains this gait she will be among the five leading cows of the breed in her class. All three of these young cows will be continued right through the year on official test in addition several others when they freshen.

W. H. Rough, Riverside County Poland-China breeder, the man who owns Superba, world's fair champion boar, is practically sold out of surplus stock and will make no effort to either show or buy new stock until his crops are harvested. Mr. Rough is fitting up his new farm with modern improvements and has added a herd of Jerseys to keep company with the Poland-Chinas.

Alex Whaley, Tulare, is getting some remarkably fine calves from his young sire, Segis Pontiac De Kol Burke Luit. He will probably take a young herd to either Fresno or Bakersfield. Like the majority of the Holstein breeders Mr. Whaley has not been doing any testing during the abnormally hot weather. He has some sure 30 pound prospects however and will have something to report later.

Llano Vista Hampshire herd of hogs will probably not be seen at Sacramento this year. After selecting and fitting one of the best herds they ever showed the Llano Vista people are compelled to forego the 1917 shows because their herdsman quit the job last week and left Mr. Langdon just at a time when he needed him most. This herd of Hampshires seems to be getting better all the time. World's fair goers will recall the sensational winnings of these hogs. One of the outstanding winners was Sioux Queen, grand champion sow. She is champion in deed as well as in name too. Never had less than 13 pigs and never raised less than eight to the litter. If that is

not a record to be proud of we would like to know why. Another great sow in this herd is Lady Favorite, 41692. She has had two large litters in 11 months, one of 13 and the other of 11. She is exceptionally deep, fine spring of rib and strong back with a fashionable belt. Prince, a March 1916 pig sired by the grand champion boar General Tipton Again, and Harvester Again, a son of The Harvester, are two of the best looking Hampshire boars we have seen anywhere.

W. J. Higdon, Tulare, is concentrating on Holsteins now that he has disposed of his fine herd of Guernseys. Together they were a little too much for W. J. although he always got results. His only difficulty was in trying to convince the Holstein men he was not a Guernsey breeder and vice versa. With Prince Riverside Walker as his herd sire, a wonderful bunch of young cows that are sure to make high records, (one of them made better than 30 pounds butter in seven days just a few months ago), and an experienced herdsman taking charge of the test cows shortly, Mr. Higdon will be heard from. He plans to take a few good ones up to Fresno again this year.

If the labor problem gets much worse on our California stock farms, particularly the dairies, the government may be called upon to save the industry. Many dairymen are offering as much as \$75.00 per month and board for ordinary milkers and cannot get them at that price. Every line of agricultural work is feeling the pinch of labor conditions. Add to this the drafting into the army of many of our young breeders, the exorbitant price



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LOS ANGELES.



of foodstuffs, the condemnation of hundreds of milk cows under the state law, and the answer to 50 cent butter fat is plain.

Frank Guerin, proprietor of Sunny-side Farm, is congratulating himself that he has a large family of boys to help out during these trying times. With a big string of heavy producing Holsteins to look after twice a day, silage to cut, etc., etc., Frank needs twice the number of men he has and cannot get them. He has not had a chance to put a single cow on test for months but will have a few ready shortly. This year's crop of silage corn is a wonder. It will go more than 20 tons to the acre and will be rich in grain. Nordica Queen, the Guerin cow which holds the county record for milk production both for one day and seven days, will be tested again when she freshens. It is not likely that the Guerin herd will be seen at the fall fairs for reasons given above.

A visit to "Maurice" Rucker is al-

the same question from the Standard Record, determines:

"These results show that the big type Poland-Chinas are more prolific than the medium type. It would appear that there is a correlation between size of hog, length of body and prolificacy. One probable reason for the lack of prolificacy in the medium type is that they are not so growthy as the big type, fatten more readily, and are probably more often over-fat when bred."

The breeding of more horses is to be encouraged by the army service through its refusal to buy mares for the army. Horse breeders, however, take exception to this position, maintaining that many mares not fitted for breeding still give excellent army service. The British are now paying from \$200 to \$250 for heavy stock and \$175 for artillery stock.

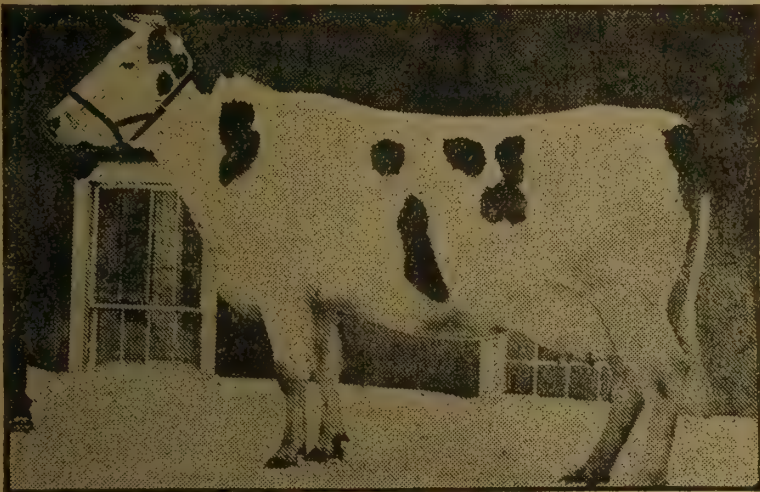
The Shorthorn Association will distribute about \$50,000 in cash premiums at various fairs this season.

Sheep breeders are urging that a

B. A. Wonder was primarily to cross him on Model Major sows, thereby combining championship breeding on both sides. This boar will weigh close to 1000 pounds at Sacramento and is in fine condition. Fairgoers last year will remember the sensational Model Major, "the boar with the great back" on the circuit. He has been Mr. Marsh's money sack ever since he brought him out from the East to head his herd. His pigs are of uniform excellence, carrying the enormous bone, arched back and carriage of their sire.

Add to these animals above mentioned the bunch of stuff Mr. Marsh bought from A. M. Henry recently, including Smooth Orphan, and it will be seen that this Stanislaus County breeder has laid the foundation for a herd second to none in the country.

He will occupy 12 pens at the state fair this year as he is fitting a large number of animals, and while competition will be exceptionally keen in the ring he has every reason to believe that his entries will share honors with the best Poland-Chinas at the show.



K. K. S. V. Topsy, a Holstein who as a senior three-year-old produced in seven-day full official test 40.38 pounds of butter from 568.7 pounds of milk, the butter fat test being 5.68.

Her sire is King Korndyke Sadie Vale and she is out of King Segis De Kol Korndyke Topsy. The dam's record was 33.10 pounds butter in seven days as a senior four-year-old. A proof of the power of the breeder.

ways a treat to red hog men. His Duroc-Jerseys are always worth looking at. His Trailblazer, by Pathfinder, has half brothers that have sold as high as \$1000. This stock is going strong in the East. Trailblazer is long, high, has straight legs and big bone. Kings Col de Luxe, by Kings Col, another good one, is the pick of a litter farrowed on Sept. 16. He weighs nearly 500 pounds. Among the good ones at the Rucker place is a Taxpayers 13 sow sired by the P. P. I. E. grand champion boar.

The National Dairy Show will be held at Columbus, Ohio, October 18-27.

The forest service of the United States department of agriculture is conducting an experiment on 200,000 acres of New Mexico grazing land in which various feeding tests with young beef cattle are being made. There are over 5000 high grade Herefords used in the experimental work.

Alabama is devoting less attention to cotton and more to dairying. Jerseys are the favorites. One reason given for the present advancement of dairying is that the campaign against Texas fever tick has been so successful.

In tests made at the Kansas experiment station in which 1000 litters of big type and 1100 litters of medium type Poland-Chinas were used it was shown that there was no great difference in prolificacy of the two types. The Iowa state college, investigating

federal tax be placed on all dogs as one means of increasing war revenue.

The Great Lakes Wool Conference will be held at the Chicago stock yards, September 11 and 12.

New England milk consumers have had prices advanced until they are generally paying around 12 cents per quart. Producers are receiving \$3.25 per hundred. Producers near Cleveland, Ohio, are receiving around \$3.00 per hundred.

The Indiana State Dairy Association is organizing a campaign to free the state from tuberculosis. It contemplates the campaign will require many years.

The American Dairy Science Association has just launched the Journal of Dairy Science as the official organ of the association. It is to give place for technical papers on dairying subjects.

#### MARSH PURCHASES I. B. A. WONDER

Written for California Cultivator  
By F. F. Stonerod



WITH the acquisition of Young's I. B. A. Wonder, Miss Giantess, Miss Big Knox, Knox Alice, three boars and a sow sired by I. B. A. Wonder, Hale Marsh now has one of the largest and finest herds of big type Poland-China hogs in California. The motive which prompted Mr. Marsh to pay a long price for I.

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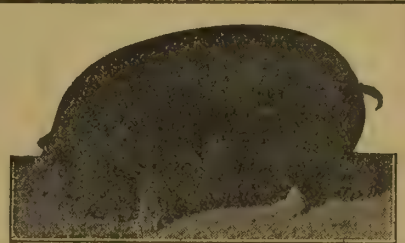
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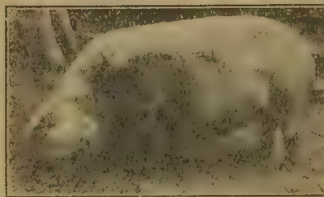


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## Veterinary

Answers in this column by Dr. Wm. Petrie, 2714 South Harvard Blvd., Los Angeles, are without charge. For immediate mail answer remit \$1.00. In writing questions give full symptoms or particulars of injury of animal. Unsigned communications receive no attention.

### Itch in Horses

My horses have what seems to be the itch and I would like to know what will cure it. It is mostly around their necks and shoulders. At first little pimples appear that look like fly bites and later they turn to scabs that itch terribly. — Subscriber, Porterville.

It is due to a small mite that burrows in the skin. Use zenoleum, one pint to five gallons of warm water and with a sponge apply the solution until the skin is saturated with it. Repeat this once a week until three or four applications have been made. To make sure of reaching them all the horse should be wet all over with the solution and have a thorough grooming once a day in the meantime.

### Indigestion in Sheep

Please advise me what is wrong with my sheep and what the remedy is for the trouble. He eats his food and then vomits it up. — Subscriber, Copperopolis.

It is quite uncommon for a sheep to vomit but they do in some forms of indigestion. It is caused by the food fermenting in the stomach. Take one dram of aloin, one dram of powdered nux vomica, two ounces of turpentine and one quart of raw linseed oil. Mix it well and divide into five doses. Give one dose once a day but if it physics the sheep very much skip two or three days before giving the next dose.

### Pigs Paralyzed

My three months old pigs seem to be paralyzed in their hind legs. They are on alfalfa pasture and have all the sour milk they can eat twice a day. They are fat and eat well but can walk only a few steps and then their hind legs drop. Can you tell what is wrong and how it can be cured? — Subscriber, Chowchilla.

This trouble affects a few hogs all over the country but the cause is not well understood. The United States board of agriculture recommends firing them by puncturing the skin over the loins in several places with a red hot iron. Prepare several pieces of wire about the size of hay wire and a foot or more long so you can handle them easily with a holder or pinchers. Heat them until they are red hot on one end, then using one at a time puncture the skin in six or eight places on each side of the spine over the hips and loins. Do not hesitate to push the hot iron half an inch or more into the fat under the skin. Put the iron back into the fire when taking a fresh one for each puncture. These places will heal quickly and usually cure the trouble. It would be well to add some rolled barley to the sour milk and stir the milk often while souring to get as much of the air out of it as you can.

### Mare not Breeding

Will you kindly inform me what I must give a mare to get her in heat? — Subscriber, Victorville.

The old fashioned way—and it was not a bad way either—was to bleed them, taking about three gallons of blood from the jugular vein. Usually in two or three weeks they would come in heat all right and by being bred would get with foal. Mares show their disposition to breed less than most other animals and remain in heat only about 24 hours. They should be taken to the stallion every few days until they show by their actions that they are in season. The owners of stallions usually know the signs and can advise you what to do. Breed only to a horse from which the owner will guarantee a foal or ask no pay for the services.

The annual meeting of the California Avocado Association will be held at Riverside, October 26-27.

### TRACTOR DEMONSTRATION

The tractor demonstration which was held at Fremont from August 4 to August 10 was a triumphant victory for the tractor and tractor-drawn implements. Thousands of ranchers and growers west of the Rockies were deeply interested but were unable to attend this meeting. Now there is to be a similar exhibit and demonstration much nearer home, September 18-22, at the Vail property on Telegraph Road, Los Angeles. The demonstration is to be held under the auspices of the Traction Engine and Implement Dealers' Association of Southern California. The railroads are offering summer rates of a fare and one-third for the round trip from all points in California, Nevada and Arizona.

Old farming methods are doomed. The war with its demands for increased food and grain production has given great opportunity. The whole system of farming must be speeded up. The tractor is each year becoming more nearly standardized, and time is rapidly eliminating the "freak" type, just as it did in the automobile. At this demonstration only tractors whose merits and abilities have been proven by actual service will be shown.

For those who may be in doubt as to just what a tractor demonstration is: A tractor demonstration is an occasion where visitors may see, under actual working conditions, tractors and tractor-drawn implements belonging to all companies who care to expose their products to open comparison and criticism. All operations are conducted in the same field, so that it will be very easy for the onlooker to take plentiful notes on the different characteristics of each in action. There are to be no prizes or public awards of any sort; it rests solely with the observers to make their own decisions. Every afternoon there will be public demonstrations by all entries, while for those who are not satisfied with this general view, each exhibitor will give extensive private showings.

Running a close second to the demonstration in interest is the large exhibit. This will hold the interest of the farmer and his wife and daughters. There will be splendid displays from the various oil companies, as well as from the principal automobile and motor truck dealers, motor accessories, food products (which will be demonstrated daily), electrical motors and appliances, furniture and pianos, and numerous other articles.

This demonstration and exhibit should appeal to all ranchers and growers as a most profitable opportunity and pleasant way of spending a week. There will be a thoroughly equipped cafe on the grounds, where the visitors may procure excellent meals at a moderate price. The comfort of the women and children has been looked after in that there are to be fully equipped rest rooms.

The benefits to be derived from attending an affair of this kind cannot be too greatly estimated. In the first place one is given the chance of seeing the latest models of all tractors and tractor-drawn implements under the most critical working conditions. Then one is also able to get firsthand information from many farmers who are now employing tractors on their ranches, and conversation with these men is bound to bring up many points of interest that may be thoroughly discussed.

### CREAMERY CONVENTION AT PETALUMA

President Hopkins of the California Creamery Operators' Association, has been working very hard on the program for the annual convention which will be held in Petaluma October 4-6. A number of notable men in the creamery and dairy industry have accepted invitations to participate. Dean Van Norman of the university farm, C. F. Frevert, creamery specialist, and C. F. Doane, cheese specialist, both of the dairy division, United States department of agriculture, as well as a number of other experts, will be upon the program.

In order to add interest to the sessions and encourage discussion of the problems that confront creamery men a question box has been established. The box will be opened at a stated time at every session, the questions read and discussion encouraged. A great deal of attention has been

given to the social side of the convention. An auto ride through the hills and orchards of Sonoma County, including a visit to the home of Jack London and lunch at Carpenter Woods is one of the main attractions. It is hoped that there will be a liberal attendance of ladies.

### JERSEY SALE

An event of considerable importance in Jersey circles will occur this fall in the complete dispersal sale at Orland, California, Feed Stables of the Hermosa Vista Jersey herd owned by C. P. Hembree of Monmouth, Oregon. This herd is well known all over the West both for its high production and show ring winnings. For several years Mr. Hembree has won the lion's share of the ribbons at the California State Fair and his winnings at the P. P. I. E. are well remembered by California Jersey breeders.

A complete show herd will be shown by Mr. Hembree at Sacramento Fair next week and all will then get an opportunity to see the quality of the sale offering. The entire show herd will go in the sale which will occur at Orland on October 10. Further announcements concerning this sale will be made in the columns of this paper.

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Four Thousand Eureka Lemons, six thousand Valencia, five hundred seedless Grapefruit, two years old; good stock. For sale or trade. What have you? Smith & Lane, Glendora, Cal.

For Sale—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. Randall Bros. Nursery Co., Whittier, Calif.

Citrus Trees—All kinds, any quantity. Butler's Morning Side Nursery, Laramanda Park, Cal.

Sour Orange Seedlings.—About 10,000 fine plants about 2 1/2 years old. Ready now for immediate planting; \$20 per thousand, fine root. McMillan Citrus Nurseries, Puente, Cal.

Citrus Nurseries, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

WANTED

Wanted—Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' work to right parties. Address J. H. Yetter, Sales Department, 810 Santa Marina Building, 112 Market St. San Francisco, Cal.

Experienced Orchardist understands pruning and caring for trees, can give good references. Wants position handling orchard work. Address P. O. Box 171, Victorville.

Wanted Position as Foreman or superintendent of orchard or general farming. Eleven years good California experience. Address W. S., care Cultivator.

We Buy Weed Seeds—Mustard, rape, anise, bitter clover, etc. Send samples. Write us, stating quantity and price. Globe Mills, Los Angeles.

One of the Most perplexing problems to farmers and ranchers is that of help. A small liner ad in California Cultivator is the quickest and easiest means of securing farm help.

FARM LANDS FOR SALE

NO PAYMENT DOWN FARMERS ARE MAKING GOOD IN THE "PROJECT OF NO REGRETS" AT ORLAND, CAL. WATER FURNISHED BY UNCLE SAM. WE SUPPLY THE LAND AND ASK NO PAYMENT UNTIL YOU CAN MAKE SAME FROM CROPS. NO BETTER SOIL FOR ALFALFA, ALMONDS, OLIVES, ORANGES, LEMONS, ETC. WRITE US FOR U. S. GOVERNMENT REPORT AND BOOKLET "ORLAND FARMS." F. D. BURR CO. 253 RUSS BLDG., 235 MONTGOMERY STREET, SAN FRANCISCO.

Oregon, California Government Lands. Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

POULTRY

Day Old Chix—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Calif.

Poultry Wanted — We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

200-290 Egg Leghorn, Wyandottes, Rocks, Reds, Anconas, Orpington Pullets, Cockerels. Breeders. Hatching eggs, chicks for high-priced broilers. C. Beeson, Pasadena, Cal.

"Eastman's Bred-to-Lay" Barred Plymouth Rocks, August chicks and eggs. Fairmead Poultry Farm, Fairmead, Cal.

SEEDS AND PLANTS

ORDER YOUR SEEDS NOW \*\* If you are going to need any seeds for next season now is the time to render your orders. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbuckle, Cal.

ALFALFA SEED OUR SPECIALTY \*\* Alfalfa Seed—Common variety, hairy and smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. E. F. Sanguinetti, Yuma, Arizona.

Alfalfa Planters fill your fall requirements NOW with GREENE-GOLD seed. Best quality, low prices. Write for samples and prices to Bomberger Seed Company, Modesto, Cal.

20,000 Yellow Calla, Elliottiana; Pink Calla, Rhemannii. Spotted Leaf White Calla. William Richard Nursery, Santa Cruz, Cal.

New Crop Alfalfa Seed now ready. Not the lowest in price, but high in quality. Leo. Turner, Yuma, Arizona.

LUMBER

Lumber—Sash — Doors — Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A.R.W. Shingles 50c per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.

HOGS

Chester Whites, the Billiken Brand.—Your duty is to raise more hogs and increase the meat supply. The demand for pork exceeds the production. Get started with some of these Chesters; 3 bred sows farrowed in April, 1916, due to farrow in September, and October; 18 October gilts bred to farrow in October; 3 October boars ready for service. All first class in every respect and good enough to fit and show at the different Fairs this fall. All are cholera immune and will be registered free. Write for price list and booklet. C. B. Cunningham, Box C, Mills, California.

Grape-Wild Farm Berkshires — World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

Large Yorkshires — Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

Wanted—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

Poland-Chinas—A number of magnificent young boars for sale, just ready for service. Don't overlook my offering of splendid sows at the Poland-China sale on October 17 at Hanford. Will Bernstein, Hanford, California.

Rancho Rubio Durocs.—Nothing to sell at present. A fine bunch of gilts and a few extra good service boars for this fall. Elmer Lamb, Ceres, Cal.

Big Type Durocs. Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

Cholera Immune Duroc-Jerseys. Big type. Weaned boars and gilts from 500 to 700-pound sows. Prize winning stock. Derryfield Farm, I.O.O.F. Temple, Sacramento.

Most Money in Duroc-Jerseys. Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

Duroc Jersey—The breed's largest and easiest feeders are Golden Models. Peters, Lamson & Walker, Devore, San Bernardino County, Cal.

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.

Large Type Poland Chinas are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Calif.

Large Type Poland-Chinas—Very best stock. Prices reasonable. Weanlings my specialty. C. R. Hanna, Riverside, Cal.

Model Herd Berkshires bred for size and quality. Weanlings and gilts. J. L. Gish, Laws, Calif.

Carruthers' Farm Berkshire Hogs. Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

For Sale Poland-Chinas—Big type choice bred gilts from registered stock. G. E. Shefford, Healdsburg, Cal.

Poland-Chinas — A few good breeding boars. S. F. Williams, Orland, Cal.

MISCELLANEOUS

Farmers and Orchardists Attention!—"Making the Farm Pay" is a book every farmer should read and profit by. Book is cloth bound, 300 pages. Price only \$1.00. Supply is limited. Satisfaction guaranteed or money refunded on return of book. Order today. Send P. O. order or your personal check, payable to G. W. Schweinhart, 223 Grosse Building, Los Angeles.

Save 20 Per Cent on Six Cyl. Auto—If you live outside of Los Angeles County will give you dealer's price on high grade car built by one of most substantial makers. Investigate. P. O. Box 696, Los Angeles.

Famous Hairy Peruvian Alfalfa Seed—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.

Slacked Lime—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road Pasadena.

Make Money writing short stories or articles. Good pay. Send for free information. United Press Syndicate, Los Angeles.

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

For Sale, Small Hotel—On account of poor health. A bargain. H. W. Luhrs, Chino, Cal.

LIVE STOCK

Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

For Sale, Good Work Stock—Prices right. Also Holt Caterpillar and farm utensils. Workman Ranch, Owensmouth, Cal. Registered Shires — Blackhawk Stock Ranch, Importers and Breeders. Easton & Ward, Burlingame, Cal.

CATTLE

Big Auction of Dairy Cattle on the old CARVER RANCH, five miles north of Modesto, three miles east of Salida on the Salida-Sonora highway, on Tuesday, September 4, 1917.

On the above date I will sell to the highest bidder for cash 100 head of dairy cows and heifers. Holsteins and Durhams, consisting of 69 cows, 30 heifers and 1 registered bull.

These cows are young and good producers, milking 16 cans per day at present from 45 head that are now milking. Several fresh, several heavy springers. The heifers are yearlings and two 10-springers.

Eight head of horses, 1 good saddle and driving horse; all young horses but one. Horses to be sold before lunch. Olvera & Co. are the parties that had the 175 tons of hay destroyed by fire a few weeks ago, hence this sale.

No bye-bidding, no boosting. Sale begins at 10 a. m. sharp. Free lunch. J. J. Olvera Co., owners. Col. Cy N. Clark, Modesto, Auctioneer.

D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.

Registered Holsteins out of ARO Dams. Grandsons of Pieterje Maid Ormsby. 35.55 pounds average 5.31. Geo. Kounias, Modesto Farms, Modesto, Cal.

Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

Veramont Stock Farm Pure Bred Herefords. Location Plumas County. Ideal for stamina and vigor. Bulls for sale. Address H. M. Barngrover, San Jose, Cal.

Registered Holstein Bulls from high producing dams for sale at reasonable prices. Also a few choice females. McAlister Sons, Chino, Cal.

Thirty high-grade Holstein Cows and one registered Holstein bull. Chas. Hubbard, Riverdale, Calif.

Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Calif.

N. H. Locke Co., Lockeford, Cal.—Choice young Jersey bulls for sale. Holstein Bulls from record cows. Prices right. A. M. Bibens, Modesto, Calif.

MACHINERY

WHY BUY NEW? SAVE HALF Material guaranteed. It's second hand after used few times, but not worn out. Key engine snaps: new 1 1/2 h. Olds, cost \$75, for \$38; 6 Stearns, \$89; 4 h. p. nearly new Stearns, \$85; 3 Stover, \$15.

NEW USED WOOD GALV. TANKS All sizes, used heavy 1500 gal. galv. with metal covers, cost new \$75, for \$28; 2000 extra heavy nearly new galv., \$55; 100 gal. galv., \$7.50; 10,000 redwood, \$75. Pine, heavy 10,000 galvanized, \$135; 16,000 corrugated galv., \$250. Galv. 4x4x4 tank, \$15. SWELDEST, LARGEST tank in city, 100,000 gal. 3-inch redwood with round lug hoops, cost \$1200, our price \$400.

WINDMILLS, SPECIALLY PRICED 8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel; 12-ft. aermotor and swell steel tower, \$88; 16-ft. aermotor and tower, \$135. Many other snaps.

PUMPS, CYLINDERS, PIPE 2 1/2-in. two-runner hor. centrifugal pump, \$50; 2-in. rotary, \$22; 5-in. two-stage Byron Jackson hor. cent. pump, \$150; 8-in. hor. cent. \$150, pumps 200 in. water. 7 vert. cent. Krough, deep well double-acting No. 2 Ames, \$145. Large Bulldozer jacks, \$68. Plunger pumps, \$2 up. 5x6 air compressor, \$29. 90 ft. 7-in. irrigating pipe, 32c. All kinds brass pump cylinders, rods, big pipe fittings of every description.

RANCH MACHINERY Walking plows \$2.75 up; harrows and cultivators, \$2.50 up 4 and 5-ft. Fresno, \$9 to \$12; wheel barrows, \$2.50 up; 350 ft. 3/4-in. cable, 6c; water troughs, \$4; bone grinder, \$6.50; feed mill; sprayer; mowers, buck rake, \$20; belting, all sizes; sundries too numerous to advertise. Material guaranteed as represented or money refunded. Down town office DEMMITT CO., UPSTAIRS 120 N. Main. Yards, 816 Yale, Los Angeles, Phone 15191; Bdwy. 1984.

Gasoline Engines, the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles.

Several new and slightly used engines at a bargain. Best makes 1 to 35 h.p. Arnott & Company, Wholesale Machinery and Implements, 112 South Los Angeles St., Los Angeles, Cal.

For Sale—Yuba Tractor No. 12 in A-1 condition. Plow and cultivator if wanted. Satisfactory reason given for selling. P. O. Box 306, Colton.

AGRICULTURAL IMPLEMENTS

Large Assortment slightly used and agents' sample plows, harrows, cultivators, wagons, Cal and see them before buying. Save 50 per cent on some Four floors. Largest stock. Arnott & Company Ranchers' Supply House, 112 to 118 South Los Angeles St., Los Angeles.

Bean Threshers Attention—The best and cheapest source of power for small threshing outfit is a Little Bull Tractor. Will haul your outfit anywhere and give ample power at the belt at very low cost. Several of these tractors have been used for this purpose two seasons with great success. Terms if desired. Low prices. See P. J. Weisel & Co., Anaheim, Cal.

RABBITS

Raise Rabbits For Us—We sell you foundation stock and buy back what you raise, paying \$1.75 and \$2.00 each for them. Send 25c for our proposition, our book on rabbit culture and our supply catalog. Gilmore's Rabbit Farm, Dept. C, Santa Barbara, Cal. (The rabbit farm of international reputation.)

HORTICULTURAL PRINTING

Catalogues — Good Printing. Specialists in preparing nursery, seed, poultry and live stock catalogues and all kinds of commercial printing. For prices and information address WOLFER PRINTING Co., 424 Wall St., Los Angeles.

PATENT ATTORNEYS

Patents that protect are secured through The PACIFIC COAST PATENT AGENCY, INC., Savings & Loan Building, Stockton, California; send for our little booklet on "PATENTS."

PIGEONS

For Sale—CARNEAUX, mostly red pigeons. 54 pairs, pure stock, fine. Chas. F. Mulford, 190 West 7th St., Pomona, Cal.

PRICES FOR 1917 WHEAT

Continued from Page 195

able profit to farmers on the average, and an incentive to make it worth while for wheat growers to produce wheat in such quantities as may be needed by the United States and our Allies.

The fair price commission desires a frank statement as to his actual costs from every farmer who produces wheat. The method of preparing this statement will be announced and given general publicity within a short time.

How Food Administration Will Operate

The food administration will then buy this wheat and resell it to American users and to the Allies. The food administration will regulate the margin of profits throughout the chain of distribution within this nation, so as to protect the interests of all essential factors concerned.

The food administration will immediately license all grain elevators and storage houses that come within the provisions of the act. In this way the government will protect the interests of the American people against any unusual break in prices.

Protection for 1918

The act constituting the food control specifically provides a minimum price for farmers of two dollars per bushel on number one northern spring wheat, or its equivalent, as the basis of sales at the principal interior primary markets, subject to such rules and regulations as may be laid down by the President.

Consequently, American farmers need have no fear that there will be any unexpected heavy slump in prices for the years 1917-18. They may, therefore, in all confidence plant increased wheat acreages in accordance with the recommendations recently made for each district by the United States department of agriculture.

PONY TRACTOR

The Pony Tractor is announced. It is an auto attachment for Ford or other models, selling for the remarkably low price of \$100. This will enable car owners to greatly increase their farm power at small expense and to save expense of feeding horses, as the Pony auto tractor does the work of four horses with two-horse implements. Demonstrations have been given almost daily in Los Angeles with plow, harrow, cultivator and other implements and the results have been highly successful.

In making the Pony Mr. C. L. Meecham, the inventor, found that additional weight was not necessary for traction, hence light small rear wheels were used. Another big outstanding feature of the Pony lies in the fact that one person can operate the auto and the implement, and this while riding in comfort in the driver's seat. Young boys and girls capable of driving a car, or a man too old for vigorous farm work, can operate the Pony just as well as an able bodied man.

An item of only \$100 for transforming pleasure power into valuable working power is worthy of careful attention. The quick change from auto to tractor requiring only five minutes is one of the accomplished features of this Pony Auto Tractor



## The Cultivator Patterns



8068—Ladies' Shirt-Waist. Cut in sizes 36 to 42 inches bust measure. Linen, madras or crepe de Chine can be used for this pretty waist.

8328—Children's Suspender Dress. Cut in sizes 4 to 12 years. The guimpe closes at the front and the skirt is cut in one piece.

7619—Ladies' Apron. Cut in sizes 34 to 44 inches bust measure. Linen, gingham or calico can be used to make this apron.

8355—Ladies' Sport Blouse. Cut in sizes 34 to 42 inches bust measure. The blouse has drop shoulders and long or short sleeves.

8349—Boys' Russian Suit. Cut in sizes 2, 4 and 6 years. Long or short sleeves may be used.

8348—Ladies' Dress. Cut in sizes 36 to 42 inches bust measure. The dress has a three piece skirt.

7877—Ladies' Skirt. Cut in sizes 24 to 32 inches waist measure. The skirt is cut in four gores.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

### HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send ten cents in coin or (1 or 2c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department  
California Cultivator  
Los Angeles

## Household Department

### THE PARADE

I watch the regiments swinging by  
In a shimmer of polished steel,  
With guns that glisten, and flags that fly,  
And bronzed young faces, and heads held high,  
And the glint of the bayonet finds reply  
In the answering flash of the soldier's eye  
As the endless chains unreel.

I hear the throb of the big bass drum;  
'Tis the heart of the army beats  
In its loud tattoo, and my pulses thrum,  
And the swelling veins in my temples hum,  
And my sight grows dim, and my lips are dumb,  
As I stand on tiptoe to see it come  
Through the crowded and cheering streets.

I see the regiments tramping by  
To the lit of a martial air,  
Clean young fellows, alert and spry,  
Ready and eager to do and die  
For humanity under an alien sky,  
And a proud old woman this day am I,  
For my son is marching there!  
—Minna Irving in New York Sun.

### WOODROW WILSON PRESIDENT?

Written for California Cultivator  
By Florence Gamble, Amsterdam

**D**URING the fall of 1913 when the presidential campaign was at its height my father, who is an ardent Democrat, did some electioneering for his candidate, Champ Clark. Whenever opportunity arose I would argue with him and try to induce him to vote for my favorite, Woodrow Wilson. In November Wilson was elected and then his inaugural took place in March. I was very proud to think the man I had been boosting was elected; so when on the eleventh of April a thoroughbred black horse colt was born I named him Woodrow Wilson.

Woodrow is now four years old and a very pretty and well mannered horse. He was given to me as a present when very young and is now my riding horse. As I live on a large ranch there is a great deal of riding to do and my sister and I do it all.

Near our barn is a large pasture about two miles long. In order to let my horse have the benefit of the growing feed I often turn him in here. When I wish to ride him I go out and call "Wood-row" as loud as I can, and no matter if he is grazing or not, as soon as he hears my call he starts to me on the run. After I saddle and bridle him I let him follow me to the yard gate and there he waits while I prepare for my ride.

When I wish to mount I say, "Kneel Woodrow, kneel," and he does so and I get on. As for driving cattle there is no horse that can beat him, and he can hold a steer much larger than himself.

Besides being a good riding horse he is very well mannered and will, when introduced to some one, either bow or shake hands and answer all questions which are answerable by the nod or shake of the head.

I have told his good qualities, and now I am going to confess. He has his faults. He can open all the gates and doors on the ranch so is often a great nuisance. One morning my father went to the cellar and there at the bin stood Woodrow calmly eating sweet potatoes. To get into the cellar he had to push open the door and go down seven steps.

Another time when I went to get him I couldn't find him. I called and he whinnied from the granary. I went

over and, sure enough, there he was, eating grain from a sack. He had tried to back out and then closed the door and was trapped. Luckily he had not been in long so suffered no ill effects from his greediness.

Although he is a nuisance in some ways I am sure we could hardly run the ranch without him and I know that money could not buy him.

### THE PUSSY-CAT PARTY

Written for California Cultivator  
By Mary Ohmsted Lotspeich

**D**ICK—who was Dick? Why, he lived in the big house of the mayor of the town, the one with the vines trained from the telegraph poles in front of the house, clear up to the front door.

He was the pet cat of the daughter of the house, Nellie, and though she was a "grown-up," not a little girl, she made a party for Dick, and I was there. This is a true story, if it did happen years ago when there were pink roses in my cheeks instead of the yellow ones which are there now.

It was on a Saturday afternoon and Dick, the great, splendid tiger-cat, looked fine, with a bright cherry-colored ribbon tied around his neck.

The first one who came was pretty little Mrs. Nancy Kent, carrying a fancy basket, all trimmed up, and in it were her two plump white kittens, Jimmie Blaine and Jimmie Garfield, one with a pink, the other a blue ribbon on its neck. They were what the boys and girls of today would call a "dandy pair."

For a few minutes the doorbell kept ringing and ladies came bringing their kittycats, decked out in new ribbons or shiny bells that jingled as they walked. They all looked as though soap and water had not been spared, and they must have been well rubbed and brushed to make their furry coats look as bright and shiny as silk. Even cats look better when they are clean and shiny!

Some of the cats were black, some Maltese, some spotted, some striped, but for me Dick was king of the feast, for there was was a feast, really. Not ice cream and cake, but what was just as dear to their cat hearts—or I'd better say, stomachs. There was nice sweet milk in some of the saucers, and in others big pieces of liver. As I told you, I liked Dick, but I was ashamed of him when he would growl and strike at some of his guests if they left their dishes and came to his. I am sorry to have to tell this, but as it is a true story I must tell it as it really happened. There were spoons and strings for the kitties to play with, and their mistresses would have them show off with their best "stunts," jumping over their hands and doing other cunning things.

I must not forget to tell you about "Tricksy," Helen Gardner's pet cat, with glossy black fur and great golden balls for eyes. It frisked around in such a lively fashion that the blue ribbon bow twisted clear around under one ear, but it didn't care for that while it was having such a good time. I think I'll have to call Tricksy the heroine and Dick the hero of the party, and others thought so too, for the prize of the afternoon, a pretty, shiny bell, was fastened to the blue neck-ribbon, which seemed to make both Helen and Tricksy very proud and happy. When it was time to go home the kitties did not say "thank

you for a pleasant afternoon," as polite children do, but they purred contentedly and arched their proud backs and showed by all their actions that they were as glad as I to be at a real, "sure enough" cat party.

### BUSTER

Written for California Cultivator  
By Jennie E. Brancher

**F**OR six years we've had a little, black dog of whom we are very fond. He was only a little fellow when we got him, about a year old. Buster is his name. He is a small black dog with a few white chin whiskers. He is fat, just roly-poly fat.

He is ever ready to sit on his haunches and shake hands with any company we have. And yet he is always ready to give a warning bark when he hears a strange step.

We are never bothered by having the chickens hanging around the doorstep, for when we see a chicken all we have to do is to say, "Sic 'em, Buster," and away the chickens go running and flying for their lives.

One time papa went hunting and took Buster along with him. But at the first report of the gun, away went Buster as fast as he could hike it. We did not see Buster for several days. But one evening we children were at the stairway, ready to go to bed, when something came pitter-patter through the doorway, and to be sure there was our beloved Buster. We were sure somebody had tied him, because he had a rope around his neck. Always after that when papa would take the gun out Buster wasn't around.



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The Slevest Oil Burner burns distillate costing only 5 1/2 cents per gallon in cook stoves, heaters, furnaces, pasteurizers, boilers, etc. Absolutely safe, odorless, very convenient and low priced. MAKES HEAT AT HALF WHAT WOOD AND COAL COSTS. Install it yourself. Write for circular and prices on different sizes, address Slevest Oil Burner Co., 710 North Main St., Los Angeles.

**Dr. Isaac Thompson's EYE WATER**  
strengthens weak, inflamed eyes, and is an ideal eye wash. Good since 1785. Keep your eyes well and they will help keep you.  
25c At All Druggists or Sent by Mail Upon Receipt of Price  
Write for our Booklet. It is FREE  
JOHN L. THOMPSON SONS & CO.  
150 River St., Troy, N. Y.



The other day the boys found a tunnel under the wood pile and called Buster, for they thought some wild animal had dug it for a nest. But the wild animal proved to be our Buster. After we had investigated further we found he had a den in there, and at the end of the long tunnel it branched off, one branch going east and the other one west. It was large enough for him to turn around in.

Buster never snaps at us children, and he will stand a lot of teasing without getting cross. He will let baby pull his ears till he cries and he will not snap.

I don't know what we will do when Buster dies, but we are hoping that he won't die for a long time.

POODLE

Written for California Cultivator  
By Mrs. Olive Glasgow, Nipomo

**O**UR pet is a dog, a pit bull, christened John L. Sullivan, but nicknamed Poodle, and we think he is very smart. He rides a horse bareback or with a saddle. He knows everything we say to him. He tries his best to talk, opens his mouth and makes the queerest noises. He is very fond of our horses and will travel under the pole just between the horses for hours at a time.

He is a fine dog to hunt ducks with. He will go in the water as often as we shoot. My husband hunted with him for two winters in the Imperial valley along the canals and New River. He can send him anywhere by just motioning with his hand. Poodle would go in the smaller ditches when the farmers were irrigating and catch a humpback sucker, a fish that runs out in the small ditches from the main canals.

I can send Poodle a half mile out in the fields with a bucket of water or anything else that I want to send to my husband. I just give it to him and say "Take this to Daddy," and away he goes; or I say to him, "Bring Daddy in for dinner" and he goes after him and jumps and barks around him till he bends down, then Poodle takes his hat and brings it to me. He won't come back without it. He knows several tricks. He will lie down and roll over, will bring a washpan and sit down alongside of it and put both front feet in it when we tell him to wash his hands, will gape whenever told to "gape big." When I spell h-a-t my husband sits down and Poodle will go and take his hat off his head and bring it to me. Then I say "Go back and pull Daddy's hair." My! how he loves to do that. He is very rough about it sometimes. When we tell him to "dig like a Dago" he stands up on his hind legs and then comes down with both front feet, tries to dig with both feet at the same time. He will carry wood to the house. We have a kitten that we got before it was weaned, so it adopted Poodle for its mother and the neighbors are amazed to see a cat nursing a bulldog. But he likes best of all to hunt wild hogs. We hunted them in Humboldt County. He caught a large one up there three years ago. My! how he enjoyed that, and we did too.

WARLIKE

A little girl was a regular attendant at the Billy Sunday revival meetings and heard often that popular song, "Brighten the Corner Where You Are," but evidently failed to get the words correctly, for one day she was heard singing, "Fight in the Corner Where You Are."

A FARM PET

Written for California Cultivator  
By Georgie Palla, Linne

**B**ABY is an orphan. Her mother died when she was about two hours old. We all felt sad. Baby's mother was a family pet.

Baby was very cute and pretty, a sorrel color. She walked about the yard trying to find her mother. We concluded to try to raise her on cow's milk. This she liked and was always hungry. But it was too rich and did not agree with her. After a few days she got rheumatism and we had to help her up. We reduced her feed to half milk, half water and a lump of sugar. This was better but not entirely satisfactory, so we made tea from green alfalfa and gave her a feed of this in her milk once a day. She had learned to drink from the pail, but she did not like the tea, so we coaxed her to drink it by giving her the tips of our fingers. Always after this when Baby had her tea, or anything she did not know, she wanted the tips of our fingers to help her.

She thrived now and grew healthy and strong. Next she learned to eat rolled oats, then a little hay cut in it.

Baby considered me her mother. She would follow me around the pasture like a dog, and whinny when I went away from her. If she got frightened she would run behind me. She will eat apples, prunes, and is very fond of sugar and candy. She will be standing as if she was asleep and if I say "Baby, do you like sugar" she arouses and begins to lick her mouth with her tongue. She comes any time I call her.

She has learned to run with the other horses now. She has turned from a sorrel colt to an iron grey and looks very much like her mother. She was named after her mother but she will always be Baby, I guess. She is past two years now and will be ready for work next spring, and looks as if she would be a fine big work horse.

BIOGRAPHY OF A DOG

Written for California Cultivator  
By Riverside Subscriber

**H**IS coming to us was not considered of sufficient importance to have the date recorded on the family record.

Suffice it to say he had been left by the family to whom he had been given while they spent a vacation at the beach. The little fellow, not yet three months old, started out to find a home for himself. He found a boy especially fond of animals and wagged his tail as if to say "Don't you want me?" and he immediately won his way to the heart of the boy and then to the hearts of the whole family.

He was not a pure-bred, but seemed to be a cross between an English coach and a spitz, having hair something like the spitz and great numbers of black spots on his white body. He had a beautifully marked face and head and, contrary to generally accepted theories, he inherited the best qualities of each breed.

He was remarkably playful, a quality that stayed until mature life. He was also an excellent watch dog, always giving notice of the approach of undesirable people, and had to be told to keep quiet or he would make them uncomfortable; while nice people, especially ladies and children, would be very welcome. Sometimes he was almost too profuse in his attention. He ran races with the boys, they riding bicycles. He would play with

oranges, catch them in his mouth, bring one from under the trees when he wished to play. If the oranges were broken he would eat them.

Any new arrival on the farm, like a new calf, or even chickens, had to be introduced to him. He would bark furiously at them until this was done, when he would give them a few laps with his tongue in token of friendliness.

He always found the evening paper and delivered it at the door, no matter how dark the night. When sorrow came into the home he sorrowed too, went about with drooping head and very quiet.

CORN DRIED IN THE OVEN

Written for California Cultivator  
By Helen White

**U**SE sweet corn that is in prime condition. Cut off the tops of the rows, and then with the knife scrape off all of the corn that is good. Where grains are long, two slicings

may be made to advantage before the scraping is done. Place in shallow pans or plates and put into moderately heated oven to scald. As the corn dries, stir it often, and turn the flame lower to prevent scorching.

When the corn has passed the "sticky" stage it will have assumed a golden brown color, and is then ready to be placed in cloth sacks and laid in the sun to finish drying. It may then be stored away in tin cans or fruit jars—any container which may be tightly covered. Cracked jars unfit for fruit canning may be used for this purpose.

Sweet corn dried in this manner retains all of its flavor and does not require the length of time, or the fight with the flies that the old method of sun drying had for the housewife.

When it comes to escaping the unwelcome attentions of the tax collector and assessor, the car owner has about the same chance a sick oyster on crutches would have to kick a hole in a superdreadnaught. — American Motorist.



Snap-Shots from Home.

Give cheer to the boys in camp and on shipboard by sending them pictures from home. There are likely to be some tedious, homesick days and a little cheer-up in the way of photographs of the home folks and the home doings will do them a lot of good.

And some day when you want to give something a little more substantial, send along a Vest Pocket KODAK and ask your Soldier or Sailor Boy to send pictures to you.

Vest Pocket Autographic Kodak, \$6.00

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# The Farm Woman's Hens

Written for California Cultivator By Jean A. Koethen



LOT of good advice is handed to the farm woman these days. She must economize; she must conserve; she is told how to prepare a meal out of nothing in particular and how to dress her children stylishly in garments made out of odds and ends. Far be it from me to add to this perfect avalanche of advice. I have always aspired and am still aspiring to be a farm woman, because I know no city woman, tied to an unceasing round of shallow social duties and stupid pleasures has any such opportunity for usefulness or self development. To make two blades of grass grow where one grew before, or an apple tree bloom where a jimson weed had thought it was fixed till the end of time is not a small matter, and it is one that is growing steadily bigger.

The farm woman has enough to do, in all conscience, why should she bother with hens? Well, for one reason, she always did and always will. We speak glibly of the poultry producer as "he" but "she" would be nearer the truth. I know so many women who are partners with their husbands in the poultry business, so many who are breeders themselves on a large or small scale, and so very, very many who "keep hens" just for the love of it, that I have begun to wonder if poultry keeping isn't essentially a woman's business. Certainly it thrives best as a side line, and where can fowls be as profitably kept "on the side" as on a farm?

Because I have not the skill to wind gently into my subject at this point and show how inevitable it is that the farm woman, who conserves everything else on the farm, should be the conservator of fine poultry as well, I am going to jump right into the middle of it with the declaration that poultry on the farm isn't kept as it should be, that it isn't made as profitable as it ought to be, and that it is up to the farm woman, the wife of the farmer or his daughter or both, to make it what it ought to be.

We must face the situation: the outlook for poultry specialists, those who give their whole time to poultry work, is not encouraging. No use pretending it is. The longer we pretend the slower we shall be in getting anywhere at all. As Dr. Woods says, poultrymen the country over are just hanging on by their back teeth. How can it be otherwise with wheat, corn, milo, kafir, and who knows what else costing \$4 and up a hundred? What can a poultryman who is obliged to buy his grain do but hang on by his teeth or his toenails?

The farmer doesn't have to pay \$4 a hundred for his grain. He can raise it, if he has land enough, and

his wife can feed it to her hens and put the price of the eggs in her pocket.

I believe we shall see here in California the next few years a revival of general farming. Horticulturists, dairymen, poultrymen and all the rest are learning that it doesn't pay to put all your eggs in one basket. One year the oranges fail. The next year it is the walnuts. Again the potato crop is poor or an early frost kills the garden truck. I can't remember that I ever heard of the alfalfa crop failing. That is one reason why livestock and poultry are such a safe investment on the farm. Some alfalfa fed to cows, some more fed to hens and turkeys, a "family" orchard—not too much of any one kind of fruit—, grain for the stock, vegetables for the family, such a farm insures a living no matter what particular crop is having its bad year.

Three specific charges may, I think, be made against the ordinary farm flock as it is seen almost anywhere, east and west; poor stock; poor housing; indifferent care. The farm woman, if she turns her mind to it, can easily and quickly remedy all three and make the hen yard the most profitable part of the farm.

The farm woman's hens are most often of no particular breed. The flock consists of a few Reds hatched from eggs procured from one neighbor, a few Leghorns from eggs from another neighbor, an Orpington or so, several Minorcas and a mixture of cross breeds. As more chicks are hatched or new breeds added, the male birds are allowed to run with the general flock, breeding more new and curious mongrels. In a couple of years the stock, whatever it was in the beginning, has gone to pieces, and there isn't a decent fowl of any kind to be seen. When good, pure-bred stock is as cheap as it is, and shows at which one may come in touch with breeders are held in every town of any size, there is no excuse for not having pure bred stock of some one breed. Pure bred stock lays more eggs and bigger ones; the young stock grows faster and makes better table poultry. In fact, there is nothing whatever, from any standpoint to be said for mongrels. Good stock judiciously mated improves from year to year. Poor stock grows steadily worse. One good male bird, such as can be bought for \$5, not exhibition stock but a good utility bird, mated to half a dozen two year old hens of uniform size and color, makes a good foundation for a successful farm flock. Never mind about number. Begin with six hens and increase as fast as you can add good birds and give them proper care, no faster. The breed doesn't matter. All breeds are good if they are well cared for and well mated.

The housing of farm hens need not be as bad as it too often is. The old fashioned chicken house was built for the sole purpose of keeping the chickens in and marauders out. If the

fowls had sufficient air it was by no fault of the builder. We know now that chickens need air and sunshine and lots of it. The simplest shed which admits these two essentials is better than the most elaborate house without them.

The style of house used depends entirely on the purse of the owner. For most of the year a simple shed coop, three feet high in front, sloping to two at the back, five feet long and three feet deep, is ample house room for from 12 to 15 hens. Such a coop can be built of 1x2 and covered with either shakes or tar paper. It is a good plan to cover the roof and back alike, leaving the ends open in summer and covering them when necessary with burlap. Such a house in a shady yard is sufficient protection from May to October, perhaps longer, but during the rainy season the birds need a real house, not large but with sufficient room for scratching litter, and with open front so that the air may always be fresh. If the house fronts south or east it will itself be protection from the north wind, and a curtain or overhanging roof keeps out the infrequent rain. Any one who wishes to build an up-to-date hen house need only visit the nearest breeder and he will get ideas galore.

Such a coop as that described above is especially suitable for the farm because it is portable and can be moved from orchard to cornfield or garden or the edge of the alfalfa field as desired. It may be accompanied by a portable run of chicken wire and light posts so that the hens can always be confined if necessary.

If there is one thing the farm woman needs more than another it is to study up and learn the underlying principles of the care and feeding of poultry; learn to know the causes and symptoms of disease; the reasons for a balanced ration and how to balance it; most important of all, learn to cull and breed intelligently. The country is flooded with poultry literature. There are books at all prices, bulletins to be had for nothing or a few cents; poultry correspondence courses. Our own state university is trying very hard by means of bulletins, the correspondence course, and the special short courses at Davis in the fall to increase all kinds of agricultural knowledge among farmers. The poultryman has only to ask for information and it is poured out for her. This does not take the place of study or of practice, but the three together, cemented by an earnest desire to make the poultry yard a real asset to the farm, will sooner or later make an expert out of the veriest novice.

## AFTER THE CHASE

"You naughty boy! You've torn your clothes again. Why did you try to crawl through the barb wire fence?"

"Well, you see, Mr. Smith's big dog kind of acted like he wanted me to."  
—Pittsburgh Press.



### The Best Feed on the Market

Has the highest protein at the lowest price, \$2.90 per 30-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or

The Globe Mills, Los Angeles



## Science Says Buttermilk



Bulletin 162, just issued by the Department of Agriculture, states that Buttermilk is the only preventative of White Diarrhoea. It has been proven that many birds apparently in perfect health have these germs in their system and that they are transmittable to their progeny. Science has discovered that the Lactic Acid Bacilli of Buttermilk kills these poison germs. Write to Berkeley for this important bulletin, free.

The Dry Buttermilk in GLOBE A-1 BUTTERMILK MASH contains 10,000 live Lactic Acid Bacteria to the cubic centimeter.

Globe A-1 Buttermilk Mash is a high protein feed, free from any filler.

Globe A-1 Buttermilk Mash will prevent bowel troubles, keep your flock in glowing health, produce more eggs to market, better eggs to hatch.

Costs no more than non-buttermilk mash.

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Write at once for valuable feeding information and sample, free.



## The California Poultry Company

—Incorporated 1905—

Exclusive "CASH" Dealers in Poultry  
—BROWN EGGS—

We want them—  
For Hatching purposes at our Country Plant at Benicia, Cal.

We pay a premium for Heavy Breed Eggs.  
Write us what you have to offer.

Come and see us

Visiting hours  
1 to 5 P. M.

313-315 Washington St.  
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Solicited



Los Angeles Market

Los Angeles, August 29, 1917.

**BUTTER**

Rcts. wk. ending Aug. 28, 369,650 lbs.  
Produce Exc. Quotations.  
Price to trade 4c higher.  
California extra creamery.....42  
Extr. Cry. Exch. past wk.  
Aug. 22 23 24 25 27 28  
'17 42 42 42 42 42 42

**CHEESE**

Brokers' prices:  
California fresh, lb.....24½@25  
Oregon Longhorn.....27@27½  
Tillamook Trip.....26  
Domestic Swiss.....32

**EGGS**

Rcts. wk. ending Aug. 28, 863 cs.  
Exchange quotations. Prices include  
cases and fillers valued at 35c.  
Fresh extras.....43½  
Case count.....40  
Pullet.....37½  
Fresh Ranch Exch. past wk.  
Aug. 22 23 24 25 27 28  
'17 43½ 43½ 43½ 43½ 43½ 43½

**POULTRY**

We quote to producers:

Broilers, 1¼ lbs. and up, 20; small.....18  
Fryers, 2¼ lbs. and up.....22  
Hens—Leghorns, 13@17; Heavy Col'd. 21  
Roasters, 3 lbs. and up.....22  
Ducks, lb.....15@17  
Squabs, doz.....2.00@3.00  
Rooster, old.....10  
Turkeys.....21@24  
Geese.....20

**LIVE STOCK**

We quote cwt. f.o.b. L. A.  
Corrected Wednesday morning, August  
29 by the Cudahy Company.

Cattle—  
Beef steers, av. 1000 to 1100 lbs. 8.50@9.00  
Helfers, good.....6.50@7.00  
Cows, good.....5.50@6.50  
Fair.....5.00@5.50

HOGS—  
Av. 125 lbs.....12.50  
Av. 150 lbs.....13.50  
Av. 175-200 lbs.....14.00  
Rough, docked 20 lbs.; piggy sows, 40  
lbs., stags, 40 per cent.....9.50@10.00  
Prime wethers.....9.00@9.50  
Ewes.....13.50  
Lambs.....10.00@10.50  
Yearlings.....10.00@10.50

**POTATOES**

Wholesale selling price:  
New cwt. 3.10@3.40; lug.....1.00@1.10  
Sweets, lb.....4@4½

**ONIONS**

Wholesale selling price:  
Brown, cwt., 1.65; white.....1.65  
Garlic.....3

**VEGETABLES**

Wholesale prices:  
Artichokes, doz.....50@90  
Beets, sk.....1.00  
Beans—Wax.....4½@5  
Limas, lb.....4@5  
Ky. Wonder.....4½@5  
Beets, sk.....1.00  
Cabbage, lb.....1¼  
Carrots, sk.....50@55  
Cauliflower, doz.....1.25  
Celery, doz......65  
Corn, lug.....50@55  
Cucumbers, lug.....30@40  
Egg Plant, lb.....4@5  
Horseradish, rt. lb.....15  
Lettuce, doz.....85  
Leeks, doz.....30  
Mint.....40  
Onions, green, doz.....25  
Okra, lb.....10@12  
Peas, lb., Telephone.....8@8½  
Peppers, Chili, lb., 4@4½; Bell.....4@4½  
Parsnips, doz.....40  
Parsley, doz.....20  
Radishes, doz.....20  
Rhubarb—Strawberry.....1.10  
Romaine, doz.....40  
Spinach, doz.....17½@20  
Squash, Summer, cr.....34@40  
Crocket.....35  
Hubbard, lb.....3  
Tomatoes, cr., 25@50; lug.....25@50  
Turnips, doz.....30

**FRUITS**

Wholesale prices:  
Apples—Crabapples, lug.....1.30@1.35  
Alexanders.....1.75  
Skinner's Seedling.....1.50@1.75  
Bellflowers.....1.50  
Avocados, doz.....7.00@8.50  
Apricots, lb.....3¾@4  
Bananas, lb.....1.50  
Cantaloupes—Standard.....1.50  
Tip Top.....65@1.65  
Ponies.....1.25  
Casabas, lb.....2  
Figs, box.....1.50@1.75  
Grapes, Seedless, cr., 80@85; Malagas 1.35  
Concord, cr.....1.10  
Black.....1.00  
Muscats, cr.....1.35  
Nectarines, lug.....1.25  
Peaches, lug.....50@1.25  
Pears, Bartlett, lug.....1.25  
Pineapples.....1.25  
Plums, lug.....65@1.35  
Quinces, lug.....70@75  
Watermelon, lb.....1½@1¾

**CITRUS**

Lemons, 6.00@7.50; juice.....2.50  
Grapefruit.....3.00@3.50  
Limes, basket.....1.00  
Valencias.....3.25@3.50

**HONEY**

Wholesale prices:  
Extr. White, lb.....11½@12½  
W. W., lb.....12@14  
Comb., case W.....3.75  
W. W. case.....4.25@4.50

**NUTS**

Peanuts, raw.....12  
Pine Nuts.....20  
Pecans.....19

**RICE**

Wholesale quotations:  
Cal.....6.25  
Broken.....4.75@5.00

**BEANS**

Wholesale Prices:  
Lady Washington.....13.50

Limas.....13.50  
Pinks.....10.00  
Manchurian Reds.....10.50  
Baby Mex.....9.00  
Garbanzos.....9.00@10.00  
Small White.....13.50  
Blackeyes.....8.00  
Tepary.....7.00  
Lentils.....18.00

**HAY**

Quotations by Nichols-Loomis Com-  
pany. Wholesale prices to grower f.o.b.  
L. A. carlots.

Tame Oat.....19.00@21.00  
Volunteer Oat.....14.00@16.00  
Wheat.....15.00@18.00  
Barley.....16.00@19.00  
Alfalfa.....15.00@18.00  
Straw.....7.00

The Alfalfa Growers' Association of  
Southern California quotes: No. 1 Cow  
alfalfa hay \$22.50 f. o. b. Los Angeles,  
and Southern California points. No. 1  
horse alfalfa hay \$21.50 f. o. b. Los An-  
geles and Southern California points.  
Market has been good and demand has  
been exceeding the supply.

**GRAIN AND FEEDSTUFFS**

Wholesale cwt. f.o.b. L. A.

Alfalfa Meal.....1.75  
Alfalfa Molasses.....1.80  
Barley, Rolled.....2.75  
Barley, Recleaned, Whole.....2.80  
Barley, Hulled.....3.35  
Beet Pulp.....1.80  
Bran, Heavy.....2.50  
Cocoanut Meal.....2.30  
Cottonseed Meal.....2.75  
Corn, Yellow.....4.60  
Corn, White.....4.70  
Corn, Cracked.....4.65  
Corn, Feed Meal.....4.70  
Corn, Egyptian.....4.45  
Middlings.....3.10  
Milo.....4.45  
Oat Chop.....1.90  
Oats, White.....3.30  
Oats, Rolled White.....3.35  
Oats, Hulled.....5.20  
Oats, Rolled Chicken Groats.....5.30  
Oatmeal.....3.40  
Wheat, No. 1.....4.10@4.15  
Wheat, Cracked, No. 1.....4.50  
Rye.....4.10  
Blood Meal.....5.10@5.20  
Bone, Green.....2.85@2.95  
Bone, Dry.....3.05@3.15  
Charcoal, 50-lb. sk.....2.70@2.80  
Clam Shell.....70@80  
Grit, Granite.....65@75  
Oyster Shell.....1.25@1.35  
Sunflower Seed.....4.10@4.20  
Soya Bean Meal.....3.20@3.30  
Scratch Feed.....4.10@4.20  
Gritless.....4.30@4.40  
Rice Bran, ton.....40.00  
Middlings, ton.....45.00  
Rice Polish, ton.....49.00

Grapefruit.....2.00@3.00  
Limes, Mex.....4.50@5.50  
Valencias.....2.65@3.25

**FRESH FRUIT**

Wholesale selling price:

Apples—  
Bellflowers.....1.00@1.25  
Red Astrachan.....50@1.00  
White Astrachan.....75@1.25  
Gravenstein, box.....1.25@1.75  
Alexander.....75@1.00  
Crabapples, small box.....60@75  
Bananas, lb......5  
Cantaloupes, Delta, lug.....50@1.00  
Turlock, cr., Standard.....1.00@1.50  
Pony, 75@1.25; Flats.....50@60  
Casabas, cr. 75@85; Flats.....50@65  
Persian Melons, cr.....85@1.00  
Honey Dew, Flat.....40@60  
Figs, Blk. box, double layer.....75@1.00  
White, single.....50@65  
Grapes—Tokays, cr.....75@1.25  
Seedless, sm. lug.....75@1.00  
Muscat, cr.....1.25@1.50  
Blk., cr.....60@75  
Malaga, cr.....1.00@1.25  
Nectarines, cr.....75@1.00  
Peaches, sm. lug.....40@65  
Santa Clara, lug.....65@75  
Strawberry, Freestone, box.....40@60  
Mountain Freestone.....40@60  
Pears—Bartlett, No. 1, box.....1.50@2.00  
Ton, 50; cull, ton.....10.00@12.00  
Pineapples, doz.....4.00@5.00  
Plums—Burbank.....75@1.00  
Green Gage, ton.....40.00@50.00  
Damson, ton.....55.00@60.00  
Prunes, lug.....50@85  
Blackberries, chest.....3.50@4.50  
Strawberries, chest.....5.00@6.00  
Raspberries, chest.....8.00@10.00  
Watermelons, lb.....1@1¼

**DRIED FRUITS**

Raisins—The California Associated  
Raisin Company announced on August 22  
new 1917 crop prices effective at once:

Muscats, Package Seedless, cs. of 48 lbs,  
\$4@4.20; cs. 36 lbs Sun-Maid and Fy.  
\$3.15, Ch. \$3.00; cs. of 45 lbs, Fy. \$3.25,  
Ch. \$3.10. Bulk Seedless, 25 lb. bx. Baker's  
Sun-Maid \$1.75, Fy. \$1.90, Ch. \$1.75. Loose  
Muscats, 50 lb. cs. 1 cr. Recleaned and  
Floated, \$4.15, 2 cr. \$3.40, 3 cr. \$3.65, 4  
cr. \$3.90. Layers and Clusters, 20 lb. bx.  
3 cr. London Layer \$1.60, 4 cr. \$1.85, 6  
cr. Imperial Cluster \$2.70.

Thompson's Seedless, Package, cs. of  
47 lbs, Sun-Maid Seedless \$4.65, other  
brands, cs. of 48 lbs, \$4.75, cs. of 50  
lbs, \$4.00. Bulk Recleaned Baker's, 50  
lb. cs. \$4.90.

Sultanas, Package, 48 lbs \$4.75, 50 lbs  
\$4.00. Bulk Recleaned, 50 lb. cs. \$4.50.

Bleached Thompson Seedless, Northern,  
50 lb. cs. Ex. Fy. \$5.37½, Fy. \$5.12½,  
Ch. \$4.87½, Soda Dipped, \$4.75; San Joa-  
quin Ex. Fy. \$5.50; Fy. \$5.25, Ch. \$5.00.

Regular California dried fruit contract,  
Pacific coast rail shipping points prices  
on all but bleached and dipped raisins,  
guaranteed against our decline (sales to  
United States government excepted) to  
January 1, 1918.

All Muscates, October-November, seller's  
option; also November or December,  
buyer's option.

Thompsons and Sultanas, September-  
October, seller's option; also November  
or December, buyer's option.

No rebate allowed on export sales.  
Prices subject to change without notice.

**APPLES**—In 50-pound boxes, per lb.:  
Fancy, 13¼c; extra choice, 12¼c; choice,  
12c.

**PEARS**—Bulk basis, per lb.: Fancy,  
11¼c; extra choice, 9¼c; choice, 8c;  
standard, 6c.

**HONEY**

Comb. W. W., lb.....13@15  
Lt. A., 11@12; A.....8@10  
Extr. W., lb., 13; Lt. A.....11  
Beeswax, lb.....38

**BEANS**

Jobbers' prices, cwt. recleaned:  
Limas.....12.00@12.75  
Bayous.....8.50@9.00  
Garbanzos.....6.00@6.50  
Small Whites.....12.50@14.00  
Mexican Red.....9.00@9.50  
Large White.....12.00@13.00  
Pinks.....9.00@9.25  
Black Eyes.....8.00@8.50  
Cranberry.....10.00@10.50

**RICE**

Price to growers:  
Cal. Rough, cwt.....3.00@3.25  
Lower Grades.....2.00@2.75

**HOPS**

Sacramento, 1917, 30@31; Sonoma-  
Mendocino, 1917, 32@32½.

**HAY**

Under date of August 25, Scott, Magner  
& Miller say:  
Receipts past week 3353 tons, last week  
2800 tons, the preceding week 3152 tons.  
Receipts have been readily absorbed from  
day to day with the result that the trade  
as well as the large consumers have not  
been able to accumulate any great  
amount of stock in warehouses. The  
crop in the country has changed hands  
at higher prices than ever known before  
in the trade. This in itself would indi-  
cate higher prices as soon as hay has  
been removed from the fields and is  
drawn from the warehouses. At the  
same time, the winter will have a great  
deal to do with this condition, for if  
there is an open winter with plenty of  
grass a very small quantity of hay will  
answer all requirements in the cities.  
Almost all receipts are from No. 1 to  
choice in quality this year. Stock hay is  
extremely scarce and selling out of pro-  
portion to other grades. Alfalfa is firm-  
ly held with a good demand.

We quote today wholesale prices in  
carload lots as appear from dealers'  
transfers upon the market. For prices  
to consumers charges of cartage, com-  
mission and handling expenses must be  
added.

Fancy Wheat Hay (light 5 wire  
bale, ton.....22.00@23.00  
No. 1 Wheat or Wheat and  
Oat Hay.....19.00@21.00  
No. 2 Wheat or Wheat and  
Oat Hay.....16.00@18.00  
Choice Tame Oat Hay.....19.00@21.00  
Other Tame Oat Hay.....16.00@18.50  
Wild Oat Hay.....16.00@19.00  
Barley Hay.....16.00@19.00  
Alfalfa.....16.00@19.00  
Stock Hay.....14.00@16.50  
No. 1 Barley Straw, bale.....50@90

**GRAIN**

Grain Exchange prices, cti.

Wheat, Northern Bluestem.....4.35@4.50  
Corn, California Yellow.....3.75@4.00  
Oats, Red Feed, 2.75@2.90; seed 3.00@3.25  
Barley, Feed.....2.30@2.35

**FEEDSTUFF**

Wholesale prices per ton:

Bran.....41.00@42.00  
Cornmeal.....83.00@84.00  
Cracked Corn.....83.00@84.00  
Middlings.....51.00@53.00  
Alfalfa Meal.....28.00@30.00  
Cocoanut Meal.....32.00@40.00  
Shorts.....42.00@44.00  
Rolled Barley.....49.00@50.00

**SEEDS**

Prices in round lots, lb.:

Millet, recleaned.....4½@5  
Alfalfa.....20@21  
Flax.....6@6½

Citrus Fruit Market

Los Angeles, Aug. 29, 1917.

The cool weather has cut down demand  
in all Eastern markets for both lemons  
and Valencias. Lemons, however, have  
been picking up, especially in the Boston  
market, but prices are nowhere near the  
high level of the recent hot spell. Ship-  
ments have been cut down to correspond  
to light demand so that if another hot  
wave strikes the East prices will prob-  
ably soar again. Some growers who have  
been going through their Navel orchards  
carefully report that more fruit is show-  
ing up, especially inside the trees where it  
was protected from excessive heat.

**Shipments**

Shipments of oranges from Southern  
California since November 1, 1916, 36,970  
cars; lemons, 7304; total, 44,274. To same  
date last season: Oranges, 29,050; lemons,  
6328; total, 35,378.

From Central California to date this  
season: Oranges, 5044; lemons, 164; total,  
5208. To same date last season: Oranges,  
5398; lemons, 146; total, 5544.

From Northern California to date this  
season: Oranges, 845 cars; to same date  
last season: Oranges, 610; lemons, 1.

**FROM THE AUCTIONS**

August 22  
New York: Val., \$2.10@3.70; lemons,  
\$4.30@5.35.  
Cleveland: Four cars, Val., \$2.10@4.00;  
lemons, \$5.45.

**WEATHER CONDITION**

San Francisco, Cal., August 25, 1917.

	Wk.	Season.	Norm.	Temp.	Max.	Mta.
Eureka	.00	.02	.15	64	48	
Red Bluff	.00	.00	.00	104	66	
Sacramento	.00	.00	.00	98	58	
San Francisco	.00	.00	.01	68	52	
San Jose	.00	.00	.03	84	52	
Fresno	.00	.00	.00	104	66	
San Luis Obispo	.00	.01	.03	80	52	
Los Angeles	.00	.00	.00	82	58	
San Diego	.00	.00	.00	72	60	

**Free Tickets**

**California State Fair**

For those who apply now free  
tickets entitling the holder from  
Sept. 8th to 15th to a free sight  
seeing ride through the City of  
Sacramento to and over the  
Natomas Lands via the Natomas  
Boulevard, the \$150,000 concrete  
highway. The most wonderful  
scenic ride of its kind in the state.  
You owe it to yourself to see the  
wonderful Natomas Lands. Ten  
years in preparation, millions  
spent in improvements. 15,000  
acres planted to beans, vegetables,  
alfalfa and corn. There is no  
charge or obligation.

**O. C. Stine & Co.**

23 Montgomery St.  
SAN FRANCISCO

610 Capitol National Bank Bldg.  
SACRAMENTO

San Francisco Markets

San Francisco, August 28, 1917.

**BUTTER**

Rcts. wk. ending Aug. 27, 320,800 lbs.  
Dairy Exchange quotations, lb.:

Fresh extras.....42  
Prime firsts.....41  
Extr. Cry. Exch. past wk. and yr. ago.  
Aug. 21 22 23 24 25 27  
'17 41½ 41½ 41½ 41½ 42 42  
'16 26½ 27 27 27 .. ..

**CHEESE**

Dairy Exchange quotations:  
Cal. Flats.....13@22½ Y. Am. ....22@25  
Jack Cheese, full cream.....21@20

**EGGS**

Fresh Ranch Exc. past wk. and yr. ago:  
Rcts. wk. ending Aug. 27, 900,456 cs.  
Aug. 21 22 23 24 25 27  
'17 43½ 43 43½ 43½ 43 43½  
'16 33½ 33 33½ 33½ .. ..

Dairy Exchange quotations:  
Fresh extras.....43½  
Firsts.....42½  
Select Pullets.....42  
Firsts.....41

**POULTRY**

We quote from producers, lb.:

Hens, large, 23@24; Leghorns, ..16@18  
Small colored.....18@20  
Broilers.....26@30  
Roosters.....29@30  
Squabs, doz.....2.00@3.50  
Ducks.....12@16  
Geese.....19@20  
Belgian Hares, live, 11@13; dr. ....15@16

**LIVE STOCK**

Prices gross weight:  
Cattle: The following prices are for  
grass fed stock. Hay fed bring ½ to ¾c  
more.

Steers, lb., 6½@9; cows and heifers,  
4@7¼; calves, 7¼@9c.  
Sheep: Wethers, 10@10½; ewes, 8@8½;  
lambs, lb., 11½@12.

HOGS—Hard grain-fed, weighing 100  
to 150 lbs., 13½@14; 150 to 300 lbs., 14½  
@15; 300 to 400 lbs., 14½@14½.

**POTATOES**

Wholesale selling prices at wharf:  
New, cwt.....2.25@2.50  
Salinas Burbank, cwt.....2.60@2.80  
Sweets.....3½@4

**ONIONS**

Wholesale selling price on wharf:  
Australian Brown.....1.00@1.10  
Green, bx.....50@60  
Garlic, lb., new.....3@4

**VEGETABLES**

Wholesale selling price:  
Beans, string, lb., 4@5; sk. ....75@1.00  
Fy. Garden, 3@5; Lima.....5@6  
Celery, San Pedro, cr.....3.00@4.00  
Corn, Green, sk.....1.50@2.50  
Cucumbers, lug, 20@30; pickling, 50@65  
Egg Plant, lug.....50@75  
Okra, 10-lb. box.....75@85  
Peas, Halfmoon, sk., 1.25@3.00; lb., 6@7  
Peppers, Bell, lug.....40@65  
Chili, lug.....25@50  
Squash, summer, lug.....25@30  
Italian, lug.....50@60  
Tomatoes, lug.....50@1.25  
Bay, lug.....1.00@1.25

**CITRUS FRUIT**

Lemons.....2.00@7.50  
Lemonettes.....3.50@4.00

**Alfalfa Land for Dairying**

Land already checked, leveled and in good stand of alfalfa. For sale on  
easy terms in tracts of 20 acres and up. Also first-class orchard and bean land.

**BRENTWOOD IRRIGATED FARMS**

Sixty-three miles from San Francisco in Contra Costa County. For prices,  
etc., address  
**BALFOUR, GUTHRIE & CO.,** Land Dept., 350 California Street, San Francisco.





# SPERRY SURELAY

## for EGGS

### for the Incubator or Market

Nature provides each laying hen with just so many eggs in embryo.

If it is left to the hen she will take about six years to produce her quota of eggs, and her feed and keep will eat up all the profits. But why leave it to the hen?

## Feed Sperry Surelay

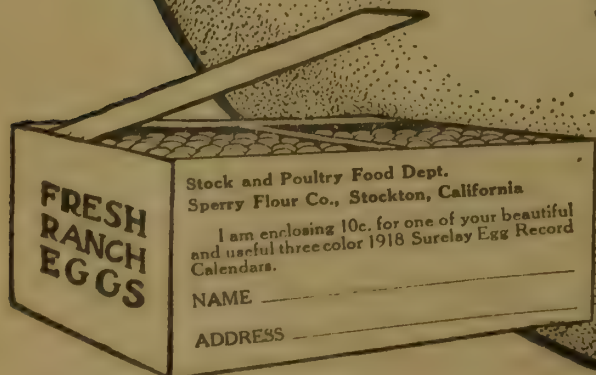
and make her produce her full supply of eggs in two years. You save four years care and feeding, and still have a marketable fowl.

SPERRY SURELAY is a profit maker for the poultryman anyway you look at it. Besides making hens lay it keeps them in perfect condition. It contains just the right amount of protein, just the right amount of fat, just the right amount of ash, just the right amount of fibre. In short, SURELAY is a perfect balanced ration—a ration you can depend upon to produce results every time.

Your dealer sells SURELAY, in the Yellow Striped Sack, and each sack is guaranteed to be just like every other sack.

It's easy to keep an accurate monthly account of your poultry business—the number of eggs your hens lay, the cost of feeding them, etc., and to know that you are making a profit—with our 1918 Surelay Egg Record Calendar. Send for this useful and serviceable calendar by enclosing 10c. with your name and address on the egg crate.

**SPERRY FLOUR CO.**





# CALIFORNIA CULTIVATOR

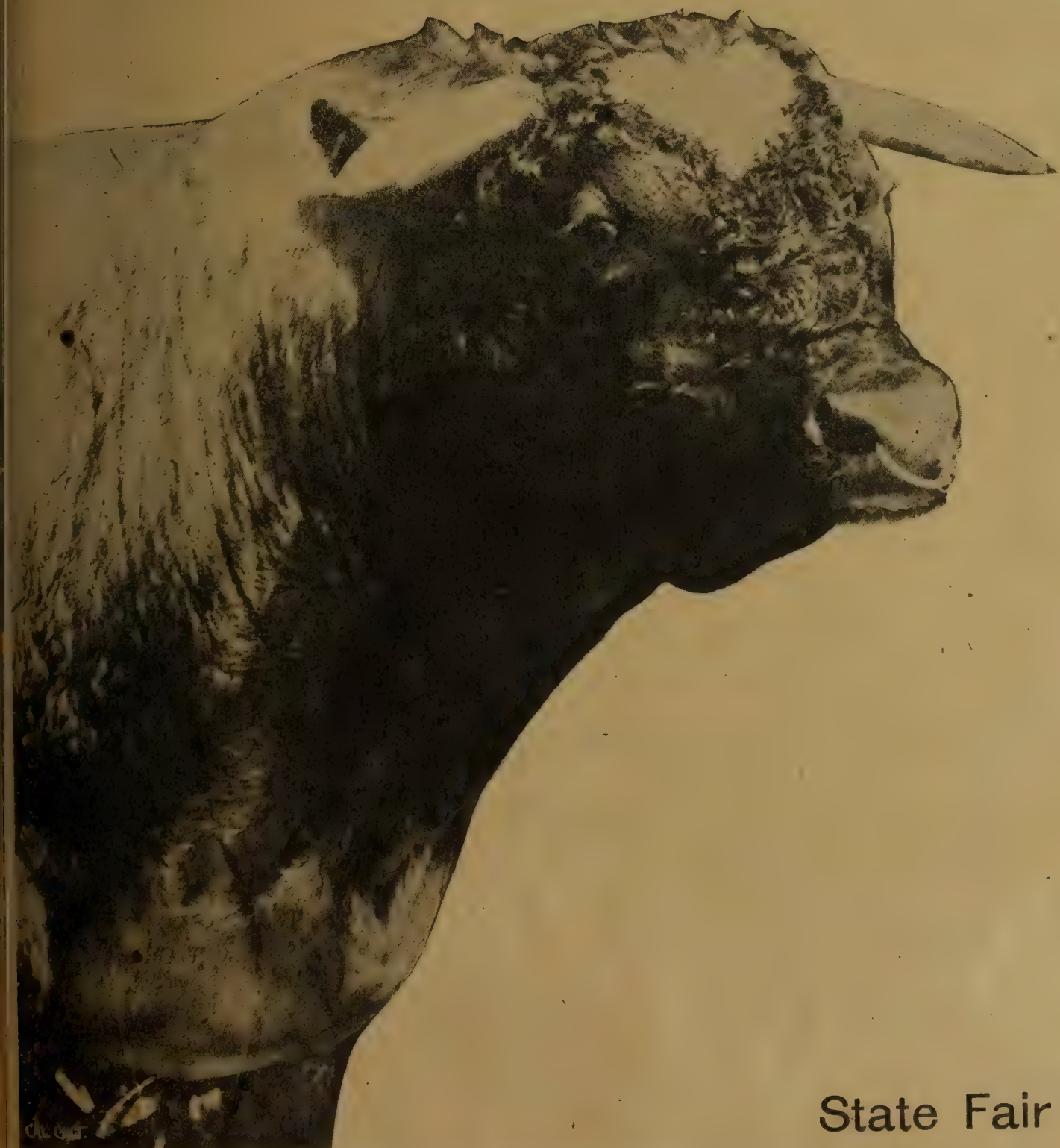
*THE LIVESTOCK* *Combined* *CALIFORNIA*  
*and DAIRY JOURNAL* *with* *CULTIVATOR*

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

September 8, 1917

SAN FRANCISCO



State Fair Number



# Remco

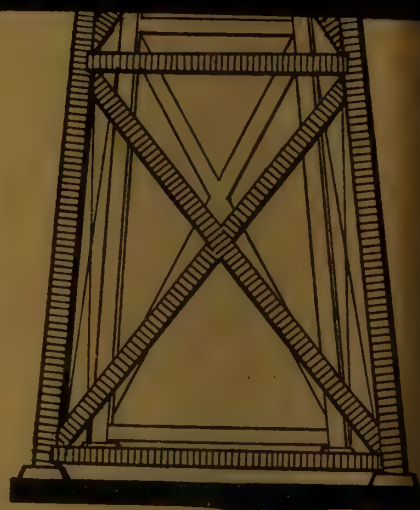
**AIR  
DRIED Redwood**



## PIPE, TANKS AND SILOS

### Pipe

For Irrigation---Water Supply---  
Power---Drainage. Costs less than  
any other pipe of equal capacity,  
efficiency and endurance. Not af-  
fected by worms, gophers or roots, acid or  
alkaline soils.



### Tanks

For water, wine, vinegar, oil,  
acids, solutions. In all sizes--  
500 gals. to 500,000 gals.  
Cheaper and longer lived than metal tanks.

### Silos

For dairymen, stockmen, feeders. The  
most profitable addition to any farm equip-  
ment. Sizes 25 tons to 300 tons.

All Remco Products are manufactured to your order entirely from clear, air-dried Redwood, selected from our stock of fifty million feet. They are correctly designed out of our thirty years' experience, and built by skilled mechanics in our completely equipped electrically driven factory. Their outstanding features are highest grade materials—mechanical perfection—superior efficiency and maximum durability.

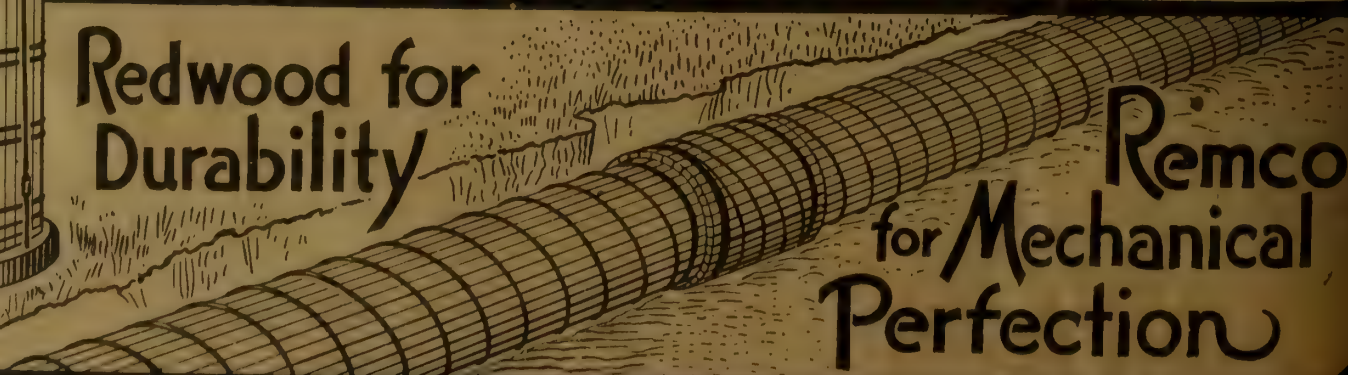
Catalogs and prices of any of them sent upon request.

## REDWOOD MANUFACTURERS CO.

1604 HOBART BLD'G. SAN FRANCISCO, CAL.

Redwood for  
Durability

Remco  
for Mechanical  
Perfection





# California Cultivator

XLIX No. 10

LOS ANGELES: September 8, 1917

One Dollar Yearly

## California State Fairs

Guy D. Loomis Writes for Cultivator Readers of the History of Former State Fairs, the First of Which was Held in San Francisco in 1854. Since '59 They Have Been Held in Sacramento. Some Features of this Year's Fair Which Promises to be the Greatest Ever.

CALIFORNIA'S 1917 state fair, opening at Sacramento September 8 and closing September 15, is a complete epitome of California's agricultural, horticultural, livestock and industrial resources. It is the most massive display of California's wealth possible in a limited area, a state show in every sense of the word. It is a visual portrayal of the immense strides of the past and an accurate guide to the great accomplishments of the future. And because of these things it is a vital factor in the continued prosperity of the state's population.

California state fairs is due, more than to any other influence, its position for the commanding position which California has attained among the cultural and stock raising states, to the 1917 California state fair, presenting as it does the cumulative result of 63 years of striving, will be much of the advance sure to be in the future. Hundreds of new things, adding incalculably to the state's resources, will be worked out and put into operation as a direct result of the education diffused at this year's fair. Hundreds of farmers and workmen will gain inspiration and knowledge of vast benefit to themselves and to the country at large through observing the wonderful accomplishments of others.

The first California state fair was held in San Francisco October 4 to 12, only four years after the admission of the state to the Union. The general departments of agricultural products and animal husbandry were established at that time, but the areas now both are located on the same grounds and the one is coordinated with the other, then the agricultural products were exhibited in the old Music Hall in San Francisco, and the livestock show was held on the Pioneer race course. Probably, however, this was due to lack of available space, rather than failure to recognize the close relationship existing between the two.

Because of the relative insignificance of the state's agricultural resources in 1854 as against its mining interests, the first fair was a puny affair if taken in comparison with the enterprise of the present day. It was of far reaching importance, this, that it marked the beginning of a policy of state aid and encouragement of California's agricultural industry, a policy which has never wavered through the many changes of administration; and that it pointed the way to a ready means of greatly stimulating competition, thereby increasing production.

With the single exception of 1915, when the fair was omitted because of the Panama-Pacific International Exposition at San Francisco, each year has witnessed a state fair greater and more truly state wide charac-

FIRST PHOTO OF THIS YEAR'S FAIR



HERE is a novelty, a photograph of one of the buildings on the fair grounds taken 500 miles from the grounds. This building, which occupies a prominent place on the fair grounds this year, was constructed in sections in the city of Los Angeles, set up there inside of the state exposition building at exposition park, filled with its exhibits just as they appear in Sacramento, and photographed by the Cultivator camera. The building may be constructed without the driving of a single nail. Bolts and pins only are needed. Electric fixtures are all installed and at the different section joints plugs are located so as to make complete connection almost automatic. The building covers only about 750 square feet but the ingenious arrangement of shelving, niches and tables makes a large exhibit possible, as may be noted in the photo. The side doors swing out from the top and leave exposed many of the exhibits from the outside of the building. The doors as they swing out and up form a shade or protection over all of the exhibits.

One feature not yet in place when the Cultivator photo was taken is the striped canvas roof. This is in place as now erected on the fair grounds. The erection required two hours time by two men and but a short time longer for the installation of the attractive exhibits. The exhibits are from practically all counties of California and are made up from the permanent exhibit now maintained in the city of Los Angeles.

This ingeniously constructed building is the work of F. B. Davison, manager of the permanent exposition and grounds in Los Angeles. Mr. Davison's life has been spent in exposition work, and this little building which he has invented, and which others have suggested should be patented, will be studied by fair and exposition people who are now gathered at Sacramento.

than that of the preceding year. From every angle, attendance, number of exhibits and exhibitors, value of premiums, variety of features and extent of influence upon the agricultural advance of the state, the growth has never stopped.

Since 1859 all of the state fairs have been held at Sacramento, the four previous ones beside the first one at San Francisco being located at Sacramento in 1855, San Jose in 1856, Stockton in 1857 and Marysville in 1858. In the early days, in fact up to 1907, the fairs were located on various sites of limited ground space bought or leased by the state. Ten years ago this order of affairs was done away with and the state purchased the present spacious grounds of approximately 100 acres.

Various permanent buildings have been erected from time to time, and it has now become the settled policy of the state to add to these improvements as rapidly as the growth of the fair institution and available funds permit. The sweeping character of this policy is indicated by the fact that the last legislature appropriated \$300,000 for construction of a fire-

proof horticulture building to replace the one destroyed by last year's fire.

The increase in attendance has corresponded with the general growth of the fair. Where hundreds saw the sights of the earlier fairs, thousands now attend. Sixty thousand persons went through the gates last year in a single day. This year the biggest day is expected to bring 100,000. And so it is with all else in connection with the fair. Exhibitors and the 20 departments of exhibits fill the pages of an increasingly bulky catalogue; premiums to be awarded this year total \$44,521 as against \$4660 at the first fair, and educational and recreative features entirely apart from the exhibits for premiums are now provided in almost endless variety. Where the early fairs rose little above the dignity of a country fair, the 1917 fair is not only of state but of national importance.

Food conservation and increased food production, the biggest issues in the world when a whole world is at war, will be handled at this year's fair by the United States government. Food experts, paid by the federal government and controlled by government officials, will explain and demonstrate every phase of this movement. While the fair has made both issues its chief purpose and in further-

ance of that purpose will use every resource at its command to drive it home, the government will go into the movement to an extent hardly possible by a state organization.

But while the fair's chief purpose is educational and a mighty impulse toward stronger financial, commercial and industrial conditions, it affords recreative features of unparalleled magnitude as compared with previous fairs. Probably 25 per cent of those attending a state fair come principally for the amusement and general good time, although even these cannot go away without having absorbed a certain amount of good along educational lines which later may easily prove of lasting benefit to themselves and to the community. But even the other 75 per cent, the serious minded ones, the ones who come to learn and profit, require the relaxation gained from wholesome and attractive forms of recreation. And it is therefore to the entire 100 per cent of the attendance that the fair presents its program of entertainment.

Aviation will be featured. Four professional aviators of country wide reputation and a dozen or more aviation students of advanced classes will participate in the aviation program. A cross-country aeroplane race will be held on one day, sham battles between aviators and 200 American blue-jackets on two or three other days and exhibition flying every day. Bomb dropping contest, aerial relay and pursuit races, landing contests and balloon breaking are among the many exhibition stunts programmed.

Horse racing—both running and harness—a prominent feature of California state fairs since 1873, this year is more attractive than ever. Prizes aggregating \$27,000 are offered in the sulky events alone. Approximately 200 trotting, pacing and running horses are now stabled on the grounds and are being worked out daily in preparation for the fair meet. Two harness races—three heats to the race—and three running races are carded daily affording the most ardent track follower abundant opportunity to see the stars of the game in action every day of the fair.

A head-on collision between two locomotives, running at a speed of 45 or 50 miles an hour, the big spectacular feature of last year's fair, will be staged again this year for the last time.

On Sunday, September 9, from 40 to 60 bands, most of them of 35 or 40 pieces, will compete in the annual band contest for prizes totaling \$3000. Most of the best bands in California will take part, the list being greatly increased this year through the entry of 30 to 40 Native Sons' bands, a marine band of 40 pieces, several school bands and an Indian band from the Sherman Indian School at Riverside, besides a dozen or more bands of first rating which were in last year's contest.

A hippodrome show with chariot races, standing Roman races, bucking horses and bulls and other features, will be still another great out-of-door free attraction.

An elaborate entertainment will be given by the Native Sons on the fair grounds, to which the order with true California hospitality will bid the world.

All of these big amusement features are in addition to dancing, a "49 Show," and a hundred and one Midway attractions, claimed by the advance men to be the best ever. If anyone lacks for amusement and entertainment at the state fair this year it won't be the management's fault.



# Tractor Tests

Conducted at Fremont, Neb.

July 26 to August 2, 1917, by the Agricultural Engineering Department of the University of Nebraska

Prof. L. W. Chase in Charge

A series of interesting tractor tests have just been made. Every farmer may now know facts.

The object of the experiments was to determine under actual farm conditions the amount of fuel required and the rate of doing various field operations, and to study the quality of the work done. Also the effect of different depths of plowing in the same field.

The tests were not of a competitive nature, but were made with the object in view of observing tractors in actual farm work so that all farmers might have actual figures.

The tests were made with Case tractors operating standard farm equipment, under the auspices of the Department of Agricultural Engineering of the University of Nebraska, directed by Prof. L. W. Chase, assisted by Prof. O. W. Sjogren, Mr. Louis Runnels and Mr. Ray W. Carpenter.

## For Free Distribution

A bulletin has just been published covering twelve tests. This is the first authoritative statement of its kind.

It shows the equipment used, the kind of fields, the different operations. Of chief interest to all farmers is the fuel consumption and cost per acre. Much of this information has hitherto been speculative. Now it is down in black and white. It shows the advantages of Case tractors.

## Some of the Data

Each test is complete. Different size tractors are used. Some tests are for plowing at different depths. Some are for spike-tooth harrowing and disking, drilling, etc.

Kerosene was used, and based on a cost of 8½ cents per gallon, the cost per acre for plowing under different conditions and depths is shown. These are exact figures—not estimates. The temperature was 100 degrees in the shade—but the heat, however, had no effect on the operation of the tractors in any way.

## Send for Your Copy

This bulletin created a sensation at the Fremont Tractor Demonstration. All farmers have been waiting for conclusive figures. Case, the leader for 76 years in power farming, now sets a new pace. No farmer should fail to get this bulletin.

Copies are free. Merely send us your name and address, asking for "The Tractor Tests Bulletin," and a copy will be forwarded at once—without charge. The first edition is just off the press. So don't delay—write today.

J. I. Case Threshing Machine Company, Inc.

FOUNDED 1842

606 Erie Street, Racine, Wis.

# CASE

### JUST LIKE BALL BEARINGS!

It's the combination of the highest-grade petroleum grease and powdered mica—special process. Better lubrication—cooler bearings—and the grease lasts twice as long.

STANDARD OIL COMPANY  
(California)

# MICA AXLE GREASE

## At the Former Fairs

The Cultivator Camera has always been busy at California State Fair will be busy this year showing livestock, machinery and other scenes. Give below some of the photos taken by the Cultivator staff at other fairs during the past few years. They show better than words the work the State Fair is doing.



Waiting for the Thrill on "Head-On" Collision Day



Some Fancy Gaited Horses Always Exhibited



The big fellow is Capt. Cleary, who for 21 years was in charge of the police of the State Fair.



Forti, leader of the band, who always plays the dead march when beef classes parade.



A thrill is occasionally given by a big four-in-hand.

Demonstration day. The field adjoining the fair grounds on the south is often given over to demonstrations of tractors and implements.



At the main entrance, 60,000 people have passed these turnstiles in a day.

Approach to former horticulture building destroyed by fire last year.



The Guaranteed  
**HARDMAN JUNIOR**  
will give you  
**TIRE SATISFACTION**  
on your Ford



**Hardman Grip, Seldom Slip**  
THOROUGHLY MADE DEPEND-  
ABLE TIRE FOR FORD CARS  
Getting the greatest amount of WEAR  
and DURABILITY in a tire has been  
successfully solved by the

**HARDMAN JUNIOR**  
and its performance is so uniformly sat-  
isfactory that we sell each tire under our  
regular warranty adjustment.  
If your dealer can not supply you write  
or descriptive circular stating what car  
you have. Orders by express or parcel  
post promptly filled, accompanied by  
warranty.

**Hoffman Hardware Co.**  
29 So. Los Angeles St. Los Angeles

## Built Right

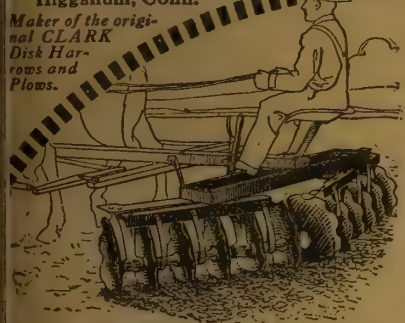
in material and construction. No weight  
or team to carry. You get perfect results  
and long wear with a

**Cutaway Single Action**  
**(CLARK) Disk Harrow**

Disks are forged sharp; has reversible gangs,  
separate levers, dust-proof oil-soaked hardwood  
bearings. Sizes for one to four horses. Also  
with extension head. Weight boxes built in. No  
tongue truck necessary. Perfect balance, light draft.  
Write for new catalog and free book "The Soil  
and Its Tillage;" also for name of nearest dealer.

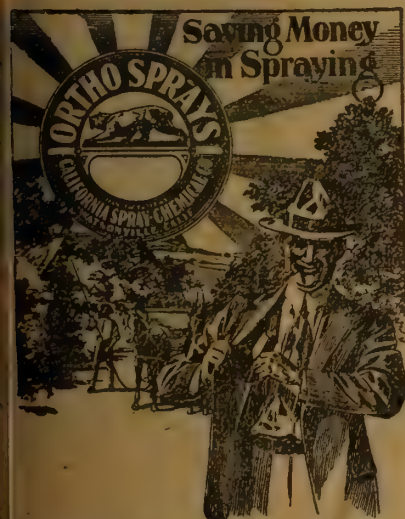
**The Cutaway Harrow Company**

706 Main Street  
Higganum, Conn.



**P. BOSBY SHELL CO.**

General Agents  
**Clark's Harrows**  
Dealer in Farm Implements, Vehicles  
and Road Grading Machinery  
25-127 North Los Angeles Street Los Angeles



**MACHINERY**  
OF EVERY DESCRIPTION  
**BOUGHT and SOLD**  
**BUTTRESS & McCLELLAN**  
205-7 N. Los Angeles St. A-5473 Bdy. 8098



Watching the captive balloon going  
up. Fair ground water tower in the  
background.



Ed Smith, with megaphone, an-  
nouncer for many years.



Driving the hogs in for judgment



Among the horses



Another demonstrator on the job

# THE ORIGINAL 2-WHEEL TRACTOR That Does All Farm Work WITHOUT HORSES

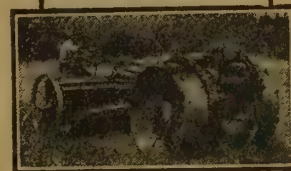
WHEN you begin to consider the purchase of a tractor, whether  
for a farm of 80 acres or more, there are a number of questions you will need  
to ask yourself before you buy. Here are some of them:

—Will it CULTIVATE as well as plow? Will it do ALL my farm work without horses? Will it work  
on plowed ground without packing the soil? Will it do the work quicker, easier, and save on hired  
help? Is it really a ONE-MAN tractor? Will it handle as easily as a team of horses, rather than  
be too heavy, clumsy and inconvenient? Do I ride on the tool where I can see the work I am doing,  
or will I have to have someone run the tractor while I am operating the farm implement?

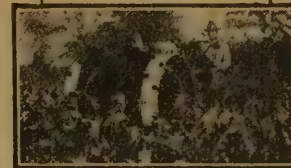
Here is the tractor that answers these and all other farm power problems of the  
average farm most practically and profitably. A tractor that is heavy enough to do  
all farm work that horses will do, yet light enough to be handy and work on plowed  
ground without packing your soil.



DISCING



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CULTIVATING



(16) HARVESTING

**MOLINE** ORIGINAL 2 WHEEL

## UNIVERSAL TRACTOR

This is the original Two-Wheel Farm Tractor. It  
pulls two 14-in. plows; will disc, harrow, plant, CUL-  
TIVATE all hill and row crops, pull mower, binder,  
manure spreader, fill your silo—and do all belt work on the  
average farm. In fact, it will do anything you can do with  
horses; do it quicker, easier, and with less hired help. It  
weighs only 2800 lbs., but all its weight being on its two wheels  
—all its weight is traction weight. The tool you hitch it to  
forms the rear wheels and you do not have to pull around a  
ton of needless weight. It will back up with tools attached  
easier than a team will back. You can turn around in a small  
space; get close to the rows and the fences.

Write for Catalog Folder and read how farmers everywhere  
are solving the power and hired help problems on their farms.

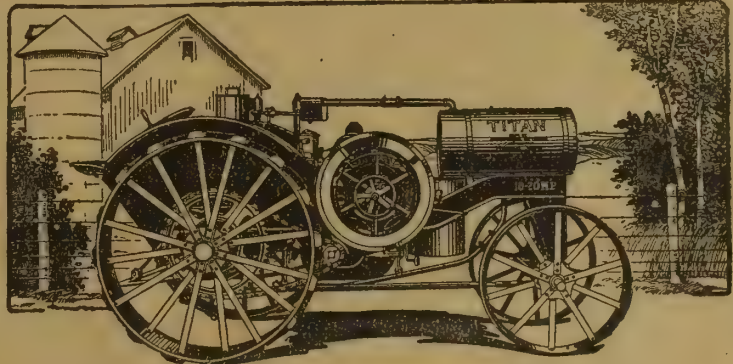
**MOLINE PLOW CO.** Dept. 49  
Moline, Illinois

The Moline Line includes: Corn Planters, Cotton Planters, Cultivators,  
Corn Binders, Grain Binders, Grain Drills, Harrows, Hay Loaders,  
Hay Rakes, Lime Spreaders, Mowers, Manure Spreaders, Plows,  
(Chilled and Steel), Scales, Seeders, Stalk Cut-  
ters, Farm Trucks, Vehicles, Wagons.

Also STEPHENS SIX  
Automobiles



PLOWING



## The Titan Tractor Record

A TITAN tractor is a safe machine to buy.  
The present models have been at work  
steadily on average American farms for more than  
two years. Their standing is established.

Ninety-six per cent of Titan owners say they are perfectly  
satisfied with the amount and quality of work the machines  
do, and with their fuel economy.

Every Titan tractor operates successfully on kerosene.  
You can always get a plentiful supply of kerosene or dis-  
tillate, at a reasonable price.

There are two sizes—10-20 and 15-30 H. P. The 10-20  
size is the one recommended for average farms. It is a three-  
plow outfit with two plowing speeds, 1.85 and 2.50 miles per  
hour, turning from 7 to 10 acres a day. You can use it for  
all kinds of belt work up to 20-H. P. and for hauling.

Both sizes give the same steady, reliable service. Both  
operate successfully on kerosene. They reduce labor costs.  
By getting the work done in the right way and at the right  
time, they increase yields.

A Titan tractor is a safe, profitable machine to buy.

To have a Titan tractor delivered in time for the harvest  
and the fall plowing, your order should be placed soon.  
Write us for catalogs.

**International Harvester Company of America**  
(Incorporated)



Crawford, Neb. Denver, Colo. Helena, Mont. Los Angeles, Cal.  
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## FEDERAL TIRES

DOUBLE CABLE BASE

This is the tire for our car hereafter.

See that strong gripping tread. It wears remarkably well and acts the same as the strips on the wheel of a tractor.

Another good thing about Federal Tires is their stay-on security. They can't leave the rim even on the roughest and toughest roads. Yet they slip off easily when necessary.

Built into the base of each Federal Tire are four strong steel cables which anchor the tire securely to the rim against the hardest service strains. It is an added strength and safety feature found only in Federal Tires.

Made in white Rugged and black Traffik non-skid treads. For sale by leading dealers.

**The Federal Rubber Company**  
of Illinois  
Factories, Cudahy, Wis.

Manufacturers of Automobile Tires, Tubes and Sundries; Motorcycle, Bicycle and Carriage Tires; Rubber Heels, Fibre Soles, Horse Shoe Pads, Rubber Matting and Mechanical Rubber Goods.

(5)



We Manufacture Levelers for Any Power From 6 Horses to a 75 H. P. Tractor

## A Schmeiser Leveler of the "Giant" Type Will Work Wonders on Your Farm



Moving immense amounts of dirt daily, and working on ground too tough for horses and Fresno to tackle, SCHMEISER POWER LAND LEVELERS are now being used with utmost success by a great many ranchers, large and small—also by contractors—saving their owners time, labor and money.

**WE SEND THEM ON THREE DAYS' TRIAL**

So extremely simple, a child could operate one as a simple twist of the wrist raises and lowers the bucket or holds it stationary, as the case may require.

Send today for full information and our latest catalog of earth moving machines.

**Schmeiser Manufacturing Company**  
22 Mechanic Street - Davis, Cal.

Manufacturers of Sure Pop Almond Huller and Separator, 3 sizes; McGarvin Fruit and Olive Graders, any size; Schandoney & Harrington Equalizing Hitches, any size; Diamond Special Harrows, Baker Clips, Clevises; Martin Farm Ditcher and Road Grader, and Schmeiser Portable Automatic Hay Derricks.

## Sour Orange Seedlings

We have about 20,000 fine one year old excess stock that we will not need for our planting. Plant now and act quickly if you want these. Also 10,000 two year olds.

**McMILLAN-GRAFFEN NURSERIES**

PUENTE, CALIFORNIA

Extra parts are always available without delay for standard advertised machinery. This class always found in the California Cultivator.

## Green Manure Crops

Written for California Cultivator By R. S. Vaile, Riverside



THE most important orchard operation for consideration at this time of year is the planting of a green manure crop. There are numerous values to be expected from such a practice; namely; first, the prevention of soil washing; second, the holding of certain available fertilizers now in the surface of the ground which might otherwise be leached deeply with the winter rains; third, the addition of certain amounts of nitrogen from the air by the bacteria working on the plant roots; fourth, the incorporation next spring of a considerable amount of organic material which will serve to improve the physical condition of the soil.

A well grown leguminous crop contains at the time of inverting in the spring enough nitrogen in its tops to be equivalent to about 300 pounds of dried blood per acre. Part of this nitrogen is gathered from the air and part of it from the surface soil. It is safe to say that under conditions of clean cultivation during the winter practically none of this nitrogen would be available for tree feeding the next spring. With the covercrop, however, it may be inverted into the tree root zone just at the time when

not be undertaken unless there is ample labor assured for the harvesting of the crop. A pea such as the Telephone or the Yorkshire Her should be very nearly as good from the standpoint of green manure as anything that might be grown, and where market conditions and labor conditions are right, considerable profit may be realized from this side line.

In a general way each of these crops should be planted alone, without any sort of a nurse crop, unless perhaps in the case of a very young orchard where it is desired to get a crop of leguminous hay which may be harvested. In such cases a small amount, (five to eight pounds) of barley may be planted with the legume crop.

The time to plant is just at hand. Usually the irrigations in citrus groves come at intervals of about 30 days. In a general way that irrigation falling between September 15 and October 15 is the most desirable time for planting the green manure crop. The amount of seed to use to the solid acre of ground is given as follows: Melilotus indica, 20 pounds; vetch, 50 pounds; horse beans, 15 pounds; peas, 50 pounds. The amount



Melilotus indica

An annual and a winter grower. Taken in May

most needed, and experience has demonstrated that it becomes available as plant food within a very short time after plowing down. At the present time with the excessively high cost of fertilizing material and the increasing need of economy along all lines it would seem particularly desirable to use this method of obtaining nitrogen.

Among the crops which may be suggested for use, listed in their probable order of importance, are Melilotus indica, common vetch, horse beans, and Canadian field peas. For the past two seasons Melilotus has been very generally used on all types of soil and has given better satisfaction in the main than any other crop, over as wide a range of conditions. On the other hand, there are certain of our very light soils where it is difficult to obtain a stand with so small seeded a crop. There are also places where the Melilotus does not develop rapidly enough to permit the turning under of a satisfactory crop early enough in the spring to make this a desirable plant to use. Then again, for the present season, there is apt to be a slight shortage in Melilotus seed, due in a large measure to the excessively dry weather late last spring. Common vetch is, of course, an old standby and there appears to be a large supply of very good seed on the market. This crop has in the past been very seriously injured by aphids and has never been as generally satisfactory as Melilotus. The Windsor, or horse bean, is receiving considerable attention. It is a very practical crop in the light sandy soil because it is extremely easy to get a stand with it. It is also the most rapid growing of any of the crops now available. If planted in late September or early October it should be ready to invert by the middle of February. Canadian field peas have frequently been used, and in season when the mildew does not seriously injure them they are very satisfactory. It is even possible to raise certain of the wrinkled peas and harvest the product in individual cases. This, however, should

to plant per orchard acre must be determined according to the amount of land actually sown. Melilotus may best be planted before irrigation, sowing the seed with a hand broadcaster, covering it lightly with a pegtooth harrow or brush drag and furrowing out with shallow furrows close together. These furrows may be left open for subsequent irrigation. Vetch, horse beans and peas may best be planted as soon after an irrigation as the ground may be worked. It seems desirable to plant as deeply as possible with the drill and to furrow out for subsequent irrigations with furrows close together but shallower than the depth of planting. If drills are not available any of these crops may be sown broadcast and disked. In this case ten per cent to 25 per cent more seed should be allowed.

It is very desirable, particularly in the case of Melilotus, to give one extra irrigation two weeks after planting. This, however, applies to the usual case where the interval of irrigation is around 30 days. In many cases it will be found that this extra irrigation will cost practically the same as the difference in cost between Melilotus seed and the seed for the other crops.

It seems quite evident that the labor which is saved in winter cultivation will entirely cover the cost of planting the green manure crop and the values that may be derived are therefore clear profit. In view of this fact and in view of the present fertilizer situation every irrigated orchard in Southern California should raise a green manure crop this winter.

The secretary of the United States department of agriculture has just issued Circular 75. "Food Needs for 1918." It touches generally upon wheat and the necessity for producing more, but grains, beans, hay and other crops are also discussed. The circular will be sent upon request.



## Farm Loan Valuations

Fruit Growers Gathered at Pomona and Discussed Valuations of Appraisers from the Federal Farm Loan Bank. Orchardists Feel That They Are Not Given Justice

**T**HE federal farm loan bank has many problems, not only within its own directorate, but in its operations in different sections of the country. It has just observed its first anniversary, the members of the national body having been sworn in at Washington on August 17, 1916. On its anniversary it sent out a statement of some things accomplished during the first year, and perhaps in consideration of the radical change from any financial movement ever undertaken in this country the advancement has been great. This statement makes the assertion that loans to farmers are now being approved at the rate of nearly \$1,000,000 daily, and that 25 farm loan associations are being chartered daily. Each association represents about \$50,000 in loans. During its first year it has divided the country into 12 federal land bank districts. The banks have been established, appraisers have been named and a few of the lands have been valued by these appraisers. And this matter of appraisal—there is the

"Any smaller valuation would be prohibitive to the orchard industry to obtain the privileges and benefits of the federal farm loan act upon which they have so strongly relied and counted."

Further, that a committee be appointed, which committee reported at this meeting, as indicated above.

The chairman of the meeting was L. W. Cushman of Ontario and the secretary was J. K. Brown of Anaheim. The committee appointed to secure consideration of the matter by the board of officials of the federal farm loan bank and to notify them to observe orchard conditions in the southern part of the state was made up of L. W. Cushman, Ontario; S. S. Stahl, Fontana; J. W. Deupree, Lankershim; J. A. Adamson, Pomona; E. C. Cramer, Claremont; Ed F. Walker, Glendora; J. K. Brown, Anaheim; M. Seeley, Covina; W. J. Newsum, Garden Grove.

Orchardists of California are complaining of the long time required to secure action from the Berkeley bank and the uncertainty of the valuations. The appraisers of the bank were discussing the matter of orchard valuations when the recent unpleasantness in the management of the bank at Berkeley occurred and so far as can be learned from the outside all loans were delayed. In any case, applications made nearly six months ago to the Berkeley bank are still unnoticed other than formal notification that the application was received and would be given attention.

Orchardists of Southern California who are members of local federal farm loan boards hope that by gathering together and discussing these perplexing questions they can bring their grievances to the attention of the Berkeley board so as to receive more attention than if each member acted individually. To further this end they gathered at Pomona last week. There were representatives present from farm loan boards at Pomona, Ontario, Claremont, San Dimas, Fullerton, Garden Grove, Anaheim, Glendora, Fontana, La Verne, Covina, Whittier, La Habra, Baldwin Park, Upland, Riverside, Chino and Dominguez.

This meeting was really the outcome of a former meeting held also in Pomona on July 14. At that time, which was before the change in administration at Berkeley, the matter was discussed and a series of resolutions adopted. Amongst the points raised are:

"Lands cultivated and improved, especially with orchards, are of many times greater value than raw, unimproved land, or land cultivated to other products, because of their fixity, endurance and the income from such improvements.

"The importance of the orchard industry is vast, not only to the section of the country in which such industry is carried on, but as well to the nation, and by reason thereof merits a very favorable and early consideration of the applications of the various persons engaged in such industry for loans from the said bank.

"It is understood that loans have already been granted by said bank to applicants not engaged in the orchard industry, and those who are located in other sections of said bank's district than that of Southern California.

"It has been learned that an appraiser for said bank who has been authorized to estimate the value of lands aforementioned has intimated that the orchard lands of Southern California will be appraised at a figure very much less than productive value per acre.

"Such lands are easily of the value of from \$800 to \$3000 per acre, according to the age and variety of the trees, and first class security at such valuation, and so considered by local banks which are in touch with their true values.

## Seed for Cover Crops

Vetch

Burr Clover

and

Melilotus Indica (Yellow Sour Clover).

Melilotus Alba (White Sweet Clover).

Our Sweet and Sour Clovers are scarified, insuring high germination.

WRITE FOR PRICES

## ALFALFA SEED

New Crop. Extra Fancy. Dodder Free.

Send for Samples and Prices.

## Valley Seed Company

5th and J Sts.

Sacramento, Cal.

When writing advertisers, mention The Cultivator.



## POWER-FARMING Machinery

"The farmers of the Nation should do everything in their power, as I am sure they will, to improve the efficiency of their farming operations and to extend them wherever it is practicable to do so."

WOODROW WILSON.

"I heartily endorse the suggestion that farmers plant the largest possible crops."

THEODORE ROOSEVELT.

Greater production and better efficiency on the farm means an increased use of tractors and tractor implements. Horses aren't equal to the emergency; labor is scarce. The modern power-farming outfit displaces from two to eighty horses, does their work with less trouble and less expense, requires only one or two men to operate it, works day and night when necessary, reduces costs, increases efficiency. Now is the time, more than ever before, to investigate and adopt power-farming methods.

## At the California State Fair

SACRAMENTO, SEPT. 8-15

In a big joint exhibit in the Tractor Tent you will find the most complete showing of tractors and implements ever made at the State Fair. There will be more than twenty separate exhibits, covering 25,000 square feet of floor space. You will have the opportunity to see and compare, and to select the equipment best suited to your needs. Don't fail to take advantage of this real educational opportunity. Here are the concerns ready to assist you to more efficient farming:

Baker and Hamilton  
Bean Spray Pump Co.  
C. L. Best Gas Traction Co.  
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Cleveland Tractor Co.  
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Samson Sledge-Grip Tractor Co.  
Shell Oil Co.  
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Union Oil Co.  
Yuba Mfg. Co.

## California Tractor and Implement Association]



Make Intelligent Comparisons.

**SAMSON**  
**SIEVE-GRIP**

Reg. & Pat. U. S. & Foreign Countries

**TRACTORS**

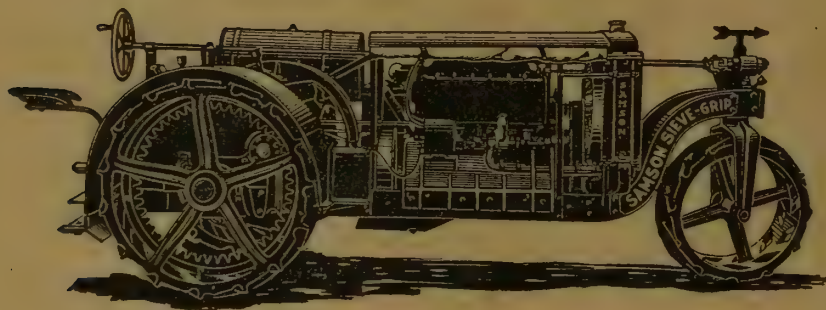
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**TRACTOR AND POWER TOOL EXHIBIT**

**CALIFORNIA STATE FAIR**

**SACRAMENTO**

SEPT. 8th TO 15th



Model S-25

**THINKING FARMERS WILL APPRECIATE**

The TRACTION SURE, directly driven SIEVE-GRIP WHEELS (patented) Lubricated Roller Pignons (patented) reducing friction and wear to minimum. Nodust Moiso-Rizer, (patented) clarifies air, and keeps dust and dirt out of working parts of motor; Positive Worm gear steering device; Durable radiator, and the Low, Compact construction, suitable for field or orchard service. Dull gray in color, it resembles a battleship, and is built like one. Dependable, Powerful, Always ready to give Service Plus.

**PLAN TO ATTEND THIS GREAT FARMING EVENT.**

Study these tractor features, make your own comparisons. SAMSON SIEVE-GRIP TRACTORS have stood the rigid investigation of the General Motors Company engineers. A hundred Sieve-Grip dealers in Pacific Coast territory are ready to render you prompt sales and and field service. Write for the name of your nearest one.

**SAMSON SIEVE-GRIP TRACTOR CO.**

(Division, General Motors Company)

**STOCKTON, CALIFORNIA**

**ECONOMY**

Red Crown's continuous chain of boiling points insures complete combustion. Every drop gives full power.

Standard Oil Company  
(California)



*The Gasoline of Quality*

## Small Dipping Outfit for Prune and Other Fruits

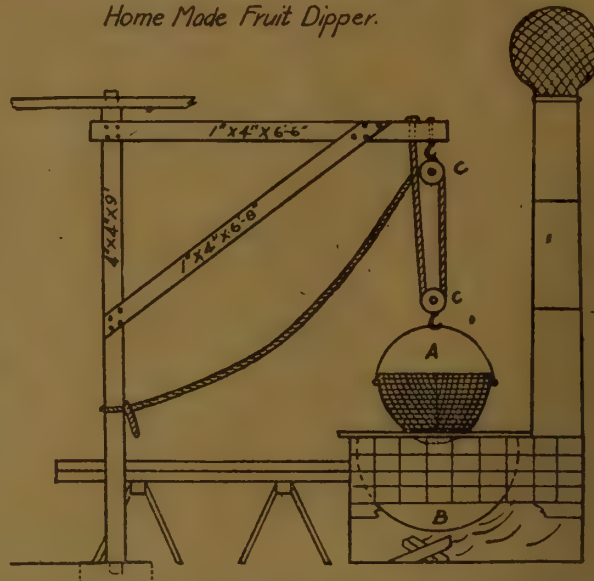
By R. Schmidt



IN the drying of prunes and other fruits it is often necessary or desirable to dip the product in a hot liquid. A convenient dipping outfit that has been fully tested and found

The main upright piece shown the figure is set in a pivot at top a bottom, so that it easily revolves, the carrying the fruit from boxes to a dron for dipping and afterward to trays to be spread out for drying.

Home Made Fruit Dipper.



A - Wire basket  
B - Caldron encased in brick fire box  
C - Iron Pulleys

### Specifications

34 ft. of Lumber	70
280 Stock Brick	4 20
20 ft. 1/2" Hemlock	.80
7 ft. Stove Pipe	1.40
2 Iron Pulleys	1.20
12 Bolts 1/2" x 6"	.25
1/2 bbl. Lime	7.00
1 Hook	.20
Labor	4.00
Basket - 16"	2.45
Caldron - 40 gal.	9.45
Total	\$25.85

to be efficient and economical of labor is figured above. The main essentials are a 40 gallon caldron which is built into a brick firebox, a 16-inch heavy wire basket for containing the fruit to be dipped, and a lifting device for moving the basket.

secure rigidity the upper pivot should be attached to a tree or building. Caldrons and wire baskets are manufactured by makers of packers' and dealers' machinery and should be procurable through hardware dealers. Larger, patented outfits are also on sale.

## Teach Apple Packers How



REALIZING the problem all farmers are having in the matter of incompetent help the food administration at Washington gives us the following hints as to instructing apple pickers:

Each grower should now get in touch with the chamber of commerce, or some other representative business organization in his nearest town, tell how many pickers he will need, when he will need them, for how long, and what arrangements he can make for housing or boarding them.

When his crew of volunteer pickers reports for duty he must open a little school for a day or two and give them practical instruction in their new work. Many of them perhaps have never seen an apple tree, and even those who have may not understand that apple picking is a kind of work that requires as much delicacy as gathering eggs.

Let the grower tell his pickers how the skin of an apple, or any other kind of fruit or vegetable, is like the tin that protects canned goods. As the tin that encloses a can of tomatoes guards the sterilized contents from the air, and as even a slight pin hole in this tin would allow the air to enter and carry germs of decay, so the skin of an apple protects its flesh, which is perfectly sterile, and the least cut, even a dent made by a finger nail, allows germs to enter and start decay. A cut so tiny that it can only be detected under the microscope at picking time will, nevertheless start a germ invasion which will show up later when the apple is packed and put into storage.

For this reason great care must be taken in picking fruit. The grower should show the pickers how to grasp an apple and give it the skillful twist that separates it from the tree. He must caution them against dropping the apples carelessly in the boxes and baskets, and see that they have picking baskets and field boxes which are free from splinters and nails.

This year's crop will have to be managed along somewhat different lines in many sections. With a crew of trained pickers and packers it is customary to grade and pack much of the fruit as fast as it comes from the trees. There will probably be a shortage of packers, and many growers will have to devote all their ef-

forts to picking the crop and getting it into temporary storage first, and then packing it later.

More good apples are spoiled every year by carelessness between the time they are picked and the time they are packed than in any other way. Fall nights are cool, but fall days are apt to be warm. Apples are left in the orchard several days and alternately cool and heat with the change in temperature until their quality deteriorates. The proper way to care for apples is to put them into common storage as soon as they come from the tree. Almost any good tight building will answer for the temporary storage needed between picking and packing.

When fruit leaves the tree it contains vegetable heat just as an animal has animal heat, and as the carcass of an animal will spoil after killing unless it is properly cooled, so fruit will spoil unless cooled. With a tight shed, into which fruit can be carried direct from the orchard, the grower can use the cool nights of autumn to take the heat out of his fruit. Doors and windows of the temporary storage shed should be opened at night to admit plentiful currents of cool air and when the sun comes up and the outside air grows warm again the storage place should be closed to exclude warm outer air as much as possible and keep the fruit nicely cooled. If apples are handled in this simple and sensible way they will have prime keeping quality and the work of grading and packing can be postponed for several weeks.

There is a fairly large apple crop throughout the country this year. It amounts to about two bushels for every man, woman and child in the United States. From the consumer's standpoint it is important to have as much of this fruit as possible go to market in first class condition, so that it may help us conserve wheat, meat, fats and other staple foods for our Allies. From the producers' standpoint it is just as important to harvest the crop in the best condition because the size of our apple crop this year is such that only the best fruit will bring good prices.

Surveys on the All-American Canal which will carry water to about 200,000 acres of lands of the Imperial Valley were started last week.



## Jimson Culture

Written for California Cultivator By Martha L. Baker

**J**IMSON culture, which was begun this year in Tulare County with Porterville as the center of the industry, bids fair to become another successful agricultural venture in that part of the San Joaquin Valley which already boasts of a diversity of industries, and will no doubt lead to culture in other parts of the state.

should be planted to a hill or spot and it should be planted from four to six inches deep. Less than a pound of seed is required to plant an acre. It is irrigated similarly to corn, potatoes and the like.

Watch must be kept of the plants to keep them free of insects, the most common to be found on the jimson being the ordinary tobacco worm and



Jimson Weed Growing in Tulare County

The accompanying photograph was a bit of the prize jimson crop growing in the Porterville district. A jimson is eight feet tall and will yield from two to three tons to the acre. The average crop, however, will yield over half or less than half that amount.

The soil and climatic conditions of the district seem particularly adapted to the culture of jimson which grows best in a sandy loam. The industry is new in the state and Porterville is at present the center of the industry. Over 300 acres are being grown in that section. There is a small acreage at Escondido. Jimson is shipped to St. Paul, where it is manufactured into medicine for asthma, catarrh, consumption and other diseases.

The latter part of March and the first of April is the best time to plant, which will allow of the several harrowings and full time for the maturity of the seed pods before frost. The ground should be thoroughly wet before planting, which is done with a plow. The furrows should be several feet apart to allow of cultivation, and plantings are made from three to four feet apart instead of in a furrow. The ground can be cultivated in both directions. Only six or seven seed

### GLENN COUNTY FARM BUREAU

W. H. Heilemann, Farm Adviser, is giving to the series of meetings and special conferences during the month of September the regular farm bureau meeting schedule for the month will be suspended.

September 10-11 there will be held at Sacramento a state conference, including representatives of the state council of defense, farm bureaus, farm advisers and representatives of the agricultural college. This will be an important conference and our arrangements for same should be made at our next directors' meeting.

On September 15 the annual meeting of the Glenn County farm bureau will be held, when officers will be elected for the coming year. The future success of the farm bureau will depend upon the careful selection of members for its government.

September 26-29 inclusive the first county fair will be held at Orland. Directors are urged to interest their centers in this fair and make every effort to assure the display of products from various parts of the county. This fair is of great importance and will merit the unreserved support of every farmer in the county.

The extension division of the state college of agriculture will have an exhibit at the county fair and the home economics division will give a series of lectures and canning demonstrations during the fair period. The farm adviser will have an office at the fair

small fleas of several colors. These are combatted by spraying with arsenate of lead or a solution of nicotine, both of which can be procured of a druggist with directions for use.

## Visit Our Booth

AT THE

## State Fair

Horticulture Building

and get acquainted with the unseen forms of life by using our

## MICROSCOPES

### Western Soil Bacteria Company

Breeders of pure culture bacteria for soil improvement

LOS ANGELES

631 So. Spring St.

SAN FRANCISCO

442 Sansome St.

## LIME

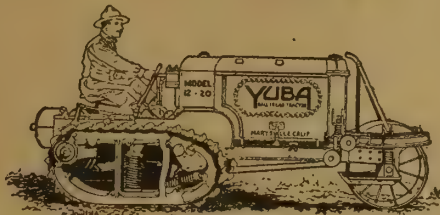
Our Ground Limestone Will Increase Your Soil Production. Write for Booklet.

RIVERSIDE-PORTLAND CEMENT CO.  
640 Title Insurance Bldg.  
LOS ANGELES, CAL.

"Fertilizer Dept."

At the bottom of your letter to advertisers just say "California Cultivator" and prompt reply is assured.

## How Many Acres Have You?



YUBA TRACTOR 12-20

In citrus orchards, when continuous cultivation is demanded, 60 acres warrant investment in a YUBA.

For 60 to 100 acres of orchard, the YUBA is right in height and power.

It's the right width for 20-inch beets, 7-foot asparagus, and 7-foot vineyards.

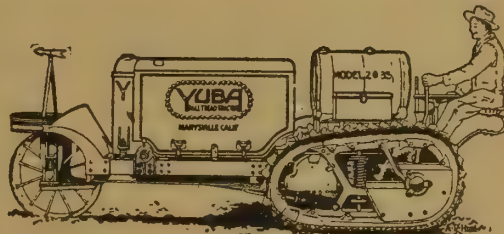
On small farms one is enough. Large companies buy two or three.

With the Yuba All-Around Plow, it's a one-man outfit—a profit maker.

### Yuba Manufacturing Company

433 California Street, San Francisco

Factories at Marysville and Benicia, Cal.



YUBA TRACTOR 20-35

For the grain grower and biggest fields—for heavy work:


- plows 15 to 20 acres a shift
- discs 35 to 40 acres a day
- hauls 20 tons on high speed
- operates a 32-inch separator
- pulls combined harvester with 20-foot cut.

The ideal machine for the wheat farmer, the rice grower, the bean raiser, and the contractor.

Yuba Manufacturing Company		Dept. B-6
433 California St., San Francisco, California		
Gentlemen: Kindly send me catalog and prices on the Yuba Ball Tread Tractor.		
I am interested in Model 12-20 _____		Model 20-35 _____
Name _____		
Town _____		State _____
P.O. Box _____		Size of farm _____
[ Check main crop raised ]		
___ Fruit	___ Rice	___ Grain
___ Grapes	___ Hops	___ Alfalfa

Also there are the Yuba Pump Catalog and the Tracover Plan Book—if interested in either, send for it.





"There is a REX for every orchard trouble."

**REX SPRAYS** are the development of 20 years of Scientific Investigation and Development

**LIME and SULPHUR SOLUTION**  
The Most Generally Used Spray

**ARSENATE OF LEAD**  
An Arsenical Poison for Killing Leaf Eating Insects, Codlin Moth, Etc.

**SUL-PASTE**  
A Product of Finely Divided Sulphur for the Control of Scab, Mildew and other Fungus Troubles. Also Red Spider and Other Insects.

**BORDEAUX--OILS--SOAPS**

**California Rex Spray Co.**  
BENICIA, CAL.

**REX**

**REX SPRAYS - The Standard for 20 years**

## Three Holstein Herds at Dispersal Sale

The big two day sale of registered Holsteins at Santa Ana, will include the absolute dispersal of three herds, those of Ernest Otto McClure, Santa Ana; A. Satterberg, San Jacinto; and P. H. Jarrett, Lancaster, and this splendid offering will be supplemented by choice consignments from McAllister & Sons, Chino; Santa Anita Rancho, Santa Anita; R. Nadeau, Sagus; and Aro Farm, Buena Park.

This sale will be a feast for those who want some of the highest record blood and some of the finest individuals ever offered in the state. Among the females will be,

- 16 Granddaughters of King of the Pontiacs.
- 3 Daughters of Sir Skyland Ormsby Hengerveld.
- A Granddaughter of Rag Apple Korndyke 8th, one of whose sons recently sold for \$53,200.00 at public auction in Massachusetts.
- A Granddaughter of Tilly Alcartra, the world's greatest dairy cow.
- A Daughter of De Kol Hengerveld Burke.
- Highly bred cows and heifers in calf to a son of Colantha Sir Aaggie.

### Among the bulls sold will be

- KING PONTIAC NETHERLAND SEGIS, son of King of the Pontiacs and out of a great daughter of King Segis Pontiac.
  - KING KORNDYKE PONTIAC 20TH, whose dam is the California State Record cow of all ages, with an official record of 36.80 pounds butter in 7 days as a junior three year old, and she is a daughter of the great young sire Prince Gelsche Walker.
  - KING MORCO ALCARTRA 3D, son of King Morco Alcartra, whose dam is Tilly Alcartra.
  - DUKE CORNUCOPIA SARCASTIC, whose dam is the great 34 pound cow Alba Sadie Cornucopia Creeta.
- And there will be other splendidly bred bulls to meet the most exacting requirements of breeder and dairyman.

### Place of Sale

**McCLURE FARM, SANTA ANA, CALIFORNIA**  
(On Artesia Street, just at edge of city)

**Tuesday and Wednesday, October 16 17, 1917**

Write for catalog. Sale under management of

**CALIFORNIA BREEDERS SALES AND PEDIGREE COMPANY**

C. L. HUGHES, Sales Manager  
Sacramento, California

Auctioneer  
Col. Ben A. Rhoades

Clerk of Sale, H. A. Olsen, Orange County Trust & Savings Bank.

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**Sheep Manure, Horse Manure,  
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**PACIFIC MANURE & FERTILIZER CO.**

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**FANNING MILLS**

Our Fanning Mills are reliable and best makes. Guaranteed to clean beans, peas, all grains. Three sizes, with and without bagger. Write us today for interesting information and prices.

**ARNOTT & CO., Inc., 112-18 So. Los Angeles St., Los Angeles**

and the Boys' Agricultural Club also will make a display of their work. The college of agriculture is making a special effort to encourage the work of county fairs, and it seems extreme-

ly desirable that our farm bureau should do its part toward making the fair a success. This success can be attained by bringing in of exhibits to show the resources of the county.

## Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

### Soft Soap

Kindly advise through your columns how to make the old-fashioned Eastern soft soap, the kind our grandmothers used to make. I understand it is made out of wood ashes, tallow or something else, but don't know the proportions. Have been told that a similar soft soap can be had at the drug stores but do not believe its chemical analysis would be the same as that of grandmother's soap.—Subscriber, Whittier.

The writer well recalls the erecting of the old leach, dumping in the ashes and helping at soap making time, but as we remember, and so far as we can learn upon inquiry, the operations were conducted under the rule of thumb. However, here are some hints from memory and we will ask our subscribers who have had experience in soft soap making to describe or give other points in this operation: In grandmother's days we do not think canned lye was available. Then a barrel or sometimes a square leach was erected. If a barrel it was on an inclined waterproof bottom with strips nailed or channels gouged in it to conduct the water which leached through the ashes to the big kettle or crock which was set under its edge. The bottom of the barrel was filled with clean new ashes at starting. The ashes were filled in and the water poured on top. As it leached through it came out a straw color and its strength was tested by the use of a fresh egg. If the egg floated, good; if not, the lye was poured back through the ashes again. The quantity of lye and soap greases, so far as we remember, was entirely a matter of experience. After boiling in a big cauldron the surplus lye and the bones settled to the bottom, and if the soap was too thin and watery it was thickened by adding water. We recall that this soft soap was rather caustic or had an excess of lye. We note the following in the Britannica as to soft soap: "Soft soaps are made with potash lyes, although in practice a small quantity of soda is also used to give the soap some consistence. There is no separation of underlies in potash soap, consequently the product contains the whole constituents of the oils used, as the operation of salting out is quite impracticable owing to the double decomposition which results from the action of salt, producing thereby a hard, principally soda, soap with formation of potassium chloride. Owing to this circumstance it is impossible to 'fit' or in any way purify soft soap, and all impurities which go into the pan of necessity enter into the finished product. The making of soft soap, although thus a much less complex process than hard soap making, is one that demands much skill and experience for its success. From the conditions of the manufacture care must be taken to regulate the amount and strength of the alkali in proportion to the oil used, and the degree of concentration to which the boiling ought to be continued has to be determined by close observation."

### Dipping Figs

Should figs be dipped before drying?—Subscriber, Placer County.

No, but they are usually dipped after drying in a boiling salt water, this for the purpose of destroying any form of insect or fungous life. After exposing to hot sun for a few minutes they may be packed away. Some varieties are sulphured. See Mr. Condit's article on Page 196.

### Sorghum Poisoning

I recently lost two cows which had broken from the field into one of

Egyptian corn and other sorghums. The veterinarian says their death was caused by sorghum poisoning. Is it safe for me now to cut this sorghum and haul it to the field and feed cattle or will it poison them?—Subscriber, Lanare.

Woll's "Productive Feeding of Farm Animals" says: "Serious trouble, and even death, has at times resulted from cattle or horses eating second growth sorghum. This generally occurs after periods of frost or extreme drouth when the plants have been stunted in their growth and afterwards begin to grow. It is due to the formation of a glucoside in the new shoots which sets free prussic acid through the action of a ferment. Accidents usually have happened when pastures were short and cattle get into a field of sorghum, eating considerable of it on empty stomachs. They should, therefore, be given some feed before being let into fields of such sorghum, since no trouble will occur when second growth sorghum is made into hay or silage. The safer method is to use it for one or the other of these purposes."

### Aphis

Please give remedy for lice or aphids on cucumber and melon vines. The vines have been thrifty up to the present time.—Subscriber, Chino.

If when the aphids first appear the vines which are badly infested are burned and the remaining vines sprayed with tobacco or kerosene emulsion sprays, and all weeds or grass which might harbor other pests are destroyed, it will aid materially in the control of the pest. If, however, the pest is generally distributed spray with black leaf "40," two to three pounds to 200 gallons of water, or the kerosene emulsion which is made as follows: Kerosene 20 gallons, whale oil soap five pounds, water 10 gallons. Dissolve the soap in hot water. Add the kerosene while the suds are still hot (be careful not to get the kerosene too close to the fire) and mix thoroughly. After thorough emulsionation dilute with cold water one to eight.

### Drying Cluster Raisins

Please give method of drying grapes for table use, the same as employed in putting up the fancy cluster raisins which are used for the Christmas trade.—Subscriber, Modesto.

The grapes are dried on trays the same as ordinary grapes are dried, but greater care is used in picking and turning. If the cluster can be spread carefully it hastens the drying process. Then in a few days the cluster should be turned. Instead of turning the entire tray, as is usually done with the general run of raisins, lift each cluster carefully by the stem. When nearly dry it is better to stack and finish drying in the shade. See Prof. Bioletti's article of page 196 of last week's Cultivator.

### Propagating Berries

I wish to propagate a large number of cuttings of Himalaya and Logan berry plants for some reclamation work. I will use crown roots and also what tip roots may be available. I were to set canes in nursery row at



**BABY CARLEY BARLEY ROLLER**  
—Stops the High Cost of Feeding—  
Will Roll 10 sacks per hour with 3 to 4 h.p. engine.  
Costs only \$65 delivered.  
Many say it is the best money-maker on the farm.  
Larger sizes to meet all requirements.  
Ask your dealer or write  
**THOMAS R. BROWNE, Stockton, Cal.**



his time would they grow and be available for planting by February next? What time should the cuttings be made and should old canes be used or those of this season's growth? I am leveling a line at about five miles or the purpose of catching silt, which washes across the land each winter. The berries will be grown on a wire fence on top of the line of levee for the purpose of protecting the levee and at the same time assisting in taying the flow of the silt.—Subscriber, Oxnard.

We do not think blackberries could be propagated satisfactorily from cuttings of the canes but they may be by the use of root cuttings. If one has a greenhouse the roots may be cut even as short as one inch when placed in sand and satisfactory growth secured. Perhaps a better way would be to practice deep cultivation, or disturbing of the roots of the old plants, when they will automatically send up a great number of shoots from the roots which have been disturbed. In addition to the "tip roots" one may layer the entire cane and secure shoots from each joint. This is especially true of the loganberry. The root cuttings should be made in the late fall or early spring. If for layering one should use the present season's growth.

#### Strawberries not Bearing

Have about 200 strawberry plants set out one year ago which are in thrifty condition but do not bear. This spring I purchased 200 plants more and treated them in identically the same manner, planting in an adjoining bed. The new plants are bearing at this time. Would it be advisable to dig out the older plants and reset or will the new ones help to pollinize and make fruitful the older plants?—Subscriber, Concord.

It is possible the first plants purchased had been allowed to waste their vitality in bearing crops before they were reset or, as suggested by the inquirer, it is possible non-pollination may be a factor. If the plants are thrifty we would give opportunity to bear, since they are now interset with the new plants which have been secured. In sending questions of this kind if particulars regarding variety and method of growing the young plants could be given more intelligent answer could be made.

## Legal Queries

Louis B. Stanton, attorney, 243 Wilcox Building, Los Angeles, will answer legal queries in this department.

Immediate mail replies cannot be given except where fee to Mr. Stanton is paid. When replies are wished in Cultivator address query to 115½ N. Broadway, Los Angeles.

#### Contract Form

In case of contract of sale of beans from ranch it reads "In consideration of one dollar, etc.," the dollar was not paid. Can I be held on this contract?—Subscriber.

The dollar is only a small portion of the consideration to the usual contract such as above; the agreement to buy and pay the price stated is usually the real consideration. Not seeing the contract it would be impossible to give any opinion thereon, other than as above.

#### Wife's Signature to Deed

In order to make a deed valid is it necessary to secure the signature of the wife, or is the husband's enough?—Subscriber.

Prior to the 27th day of July, 1917, a deed executed by the husband alone covering real estate which was the separate property of the husband or was community property of the husband and wife, in a transaction where in a valuable consideration was received for the property, was valid and sufficient to convey full title to the property. The legislature of 1917 however, changed this law in so far as the community property is concerned so that under the present law, while the husband still has the management and control of the real property of the community, the wife must join with him in executing any instrument by which such community real property, or any interest therein, is leased for a period longer than one year, or is sold, conveyed, or encumbered; provided, however that a

lease, contract, mortgage, or deed executed by the husband alone, when he holds the sole record title to the property and the other party acts in good faith and without knowledge of the marriage relation, is presumed to be valid and there can be no action to avoid such instrument so executed by the husband alone after the expiration of one year from the date of filing the instrument for record in the office of the recorder of the county in which the land is situated.

#### Liability of Auto Driver

If you take a person for a ride in your auto, or pick him up on the road, and meet with an accident, either caused by your own negligence

or by the other party, are you liable for damages to your passenger?—Subscriber.

A person may carry another or not as he deems best; if he does carry another he is liable to the passenger for losses or injuries which result from his negligence and is bound to exercise ordinary care to preserve his passenger from accident; for failure of which the carrier is liable in damages; he is not liable to the passenger, however, for loss or injury occasioned by any other person, for the reason that he is not a carrier for hire and thus does not assume any contractual relation with his passenger.

Tulare County has ten squirrel inspectors in the field.

## HOLSTEIN-FRIESIAN CATTLE

Registered young bulls from best families. Some of serviceable age.

### REGISTERED BERKSHIRE PIGS

Masterpiece, Longfellow and Robin Hood Strains. Fine individuals of both sexes—we pay registration fee. Careful attention given to mail orders.

### Whittier State School

Whittier, Calif.

When writing advertisers, mention the Cultivator.

# ACME HERD JERSEYS

## EMINENT'S MISS RATT 283315

*This cow is great in breeding, fine type and a great producer, See her at the State Fair.*

### EMINENT'S PREMIER 86724

EMINENT, 69631, sire of 88 tested daughters and many producing sons.

### EMINENT'S VIRGINIA, 195830

Test 16 pounds 13 ounces.

CAPTAIN NICK, 63872. First prize Bull Kentucky and Indiana state fairs, 1902.

### CATHERINE PRATT 927116

### SPRITE'S POGIS OONAN 168489

*This is a sample of the cows I am bringing to Cal.*

**Chas. M. McLouth - Orland, Cal.**

IMP. GOLDEN FERN LAD, 65300, sire of 35 tested daughters.

EMINENCE F. S., 7124 H. C.. Dam of two great bulls. Dam of Little Eminence, 21 pounds 6 ounces Butter in 7 days, winner of many firsts at state fairs.

EMINENT, 69631, sire of 88,

VIRGINIA F. S., 8233 H. C.

CARNATION'S FERN LAD, 63542, sire of 12. Grand sire of one 971 pounds butter in one year.

ROWENA'S DAISY, 161,056, 17 pounds 8 ounces, 10,000 milk in one year.

OONAN'S TORMENTOR, 22280, sire of 53 tested daughters.

SPRITE POGIS, 98530.

# Edgemoor Farm Guernseys

## Senior Herd Bull



First Prize Aged Bull, Senior Grand Champion Panama Pacific International Exposition, 1915; Arizona State Fair, 1915; California State Fair, 1916.

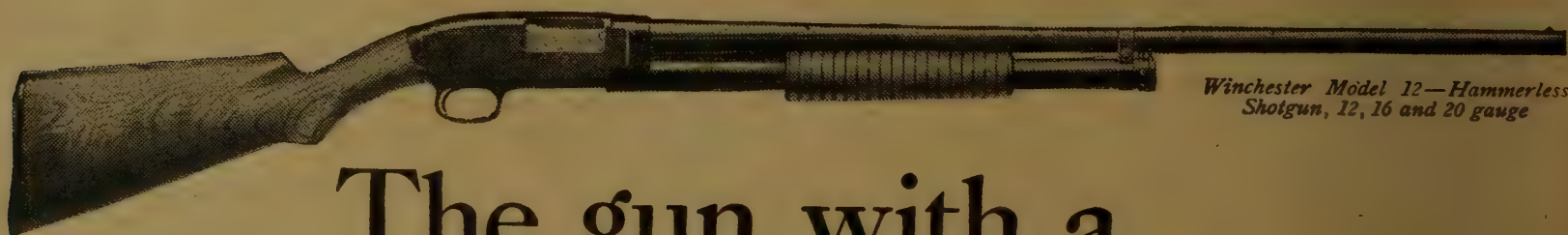
Sire, Imp. Itchen Red Raider 27342. Dam, Itchen Verbena 5501 E. G. H. B., 13,693 pounds milk, 693 pounds butterfat at twelve years of age.

Imp. Itchen May King 25174

**W. H. Dupee**

**Santee - San Diego, County - California**





Winchester Model 12—Hammerless  
Shotgun, 12, 16 and 20 gauge

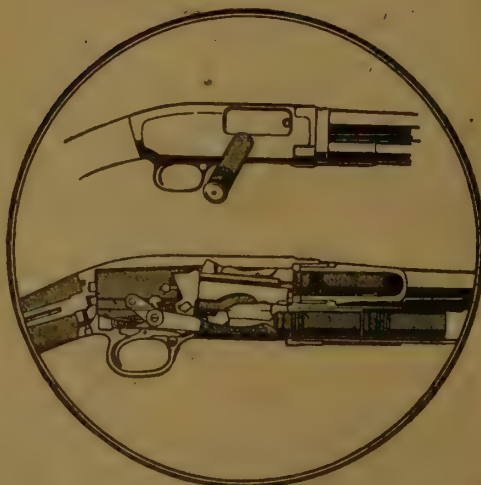
## The gun with a dog's pointing instinct

A dog points by instinct. Its nose, body and tail come into line naturally—instantly. So with the hunter and his gun.

Armed with the right gun, he "points" it instinctively. If properly balanced, his gun comes up into line naturally, as easily as pointing a finger.

But if the gun is not right, if it has not been perfectly balanced in the shop, it won't work out well in practice, just as a dog, if not properly bred, will not work out well with its master in the field.

The Winchester Model 12 Repeater is a *thoroughbred* of shotguns. It has been classed



Quick feeder, sure ejector. Throws empty shells to the side, out of your way

by experts as "The Perfect Repeater."

Its balance enables you to get onto fast flying birds instantly. Pointed right, it never fails to bring down the game.

Fifty years of the best gun making traditions have produced in the Winchester Model 12 a gun of almost human instincts.

The right amount of choke for different loads has been worked out after exhaustive experiment. Result: a pattern that spreads out evenly—neither too scattered nor too bunched—and lands with lots of steam behind it.

It is a triumph of guncraft. Nicely balanced, with its slim, graceful barrel, the Model 12 is a beautiful weapon, with a fascination about it that few sportsmen can resist.

# WINCHESTER

World Standard Guns and Ammunition





*Even spread, maximum penetration. Winchester shot pattern brings down the game.*

# The pattern that brings down the game

The remarkable game-getting pattern of the Winchester Model 12, shooting its own standard ammunition, is the result of infinite care taken in boring the barrel.

## The barrel is the gun

Men who know guns realize that the accuracy and durability of a gun lie in the barrel. On the quality of the barrel depends the quality of the gun. There is absolutely no difference in the standard quality of the barrels on the highest and lowest priced Winchester guns. With Winchester, the barrel is the gun, and the single standard of quality has been attained only by the most unremitting attention to the boring, finishing and testing of the barrel. The same high quality of Winchester barrel is found on every gun made by Winchester. The great volume of guns sold makes this policy possible.

## The Winchester barrel

The barrel of the Winchester Model 12 has been scientifically bored to micrometer measurements for the pattern it is meant to make.

The degree of choke exactly offsets the tendency of the shot to spread. Until its pattern proves up to Winchester standard, the gun cannot leave the factory. The Bennett Process, used exclusively by Winchester, gives the Winchester barrel a distinctive blue finish that with proper care will last a lifetime. The Nickel Steel construction preserves the original accuracy forever.

## What means

This mark on the barrel means *Viewed and Proved Winchester*. This stamp stands for Winchester's guarantee of quality, with fifty years of the best gun-making reputation behind it.

Every gun that bears the name "Winchester" and that is marked with the Winchester Viewed and Proved stamp has been fired many times with excess loads for strength, smooth action and accuracy.

At every stage of Winchester manufacture, machine production is supplemented by human craftsmanship. It is a *test and adjustment* process.

It is this care in manufacturing that has produced in the Model 12 a gun of unsurpassed game-getting qualities and whose grace, balance, beauty of lines, and never failing performances in the field have earned it the title of "thoroughbred of shotguns"—*the gun with a dog's pointing instinct*.

*For those who prefer a hammer action gun, we have made the Model 97. It is built on exactly the same lines as the Model 12, but with hammer action.*

Write for details of Winchester shotguns, rifles and ammunition

The Winchester catalog is an encyclopedia on shotguns, rifles and ammunition. Every hunter should have one. It gives detailed specifications of the Model 12 and describes at length the principles on which every one of the world famous Winchester shotguns and rifles is built. Write today. We will mail you a copy free, postpaid.

WINCHESTER REPEATING ARMS CO.  
Dept. XX-1 New Haven, Conn.

Winchester Model 97  
Hammer Shotgun

*Take-down Repeating Shotgun. Made in 12 gauge, weight about 7 3/4 lbs.; in 16 gauge, weight about 7 1/2 lbs. The favorite with shooters who prefer a slide forearm repeating gun with a hammer.*

# WINCHESTER

World Standard Guns and Ammunition



Established 1888. - Twenty-eighth Year

**The California Cultivator**

A Journal of Horticulture, Agriculture and Live Stock

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 Combined with California Cultivator 1914.  
 Livestock and Dairy Journal, Established  
 1901, Combined with California  
 Cultivator 1916

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Saturday, Sept. 8, 1917

## OUR ADVERTISERS RELIABLE

We guarantee our subscribers against  
 loss through dishonesty of any adver-  
 tiser in the Cultivator. We do not at-  
 tempt, however, to adjust trifling differ-  
 ences between subscribers and honest,  
 responsible advertisers, nor will we pay  
 the debts of honest bankrupts. Notice  
 of complaint must be sent us within 30  
 days from date of the transaction, and  
 the subscriber must have mentioned the  
 Cultivator when writing the advertiser.

## THIS WEEK'S COVER

A few weeks ago accounts of  
 public sales of Shorthorns in nearly  
 all sections of the East contained in  
 the lists of purchasers the name of  
 T. T. Miller, and invariably the top-  
 notchers were the ones purchased by  
 him. California Shorthorn breeders  
 inquired: "Who is Miller?" With  
 others, the Cultivator was interested,  
 and its field men have looked up some  
 of this great stock and on it have  
 used the Cultivator camera to excel-  
 lent results, as may be witnessed by  
 several illustrations in this issue,  
 chief of which is on the cover page.  
 This magnificent animal, Diamond  
 Choice, is a 2400-pounder and we be-  
 lieve will be at the state fair this  
 week.

## SULPHURING

The California Peach Growers  
 are making an investigation which  
 should lead to practical results. How  
 much sulphur to how much fruit is  
 a question which has vexed many a  
 fruit grower. There is no agitation  
 against the use of sulphur such as  
 came up a few years ago, but the  
 fruit grower is anxious to put out a  
 product which will make a permanent  
 name for itself, and if a high grade of  
 fruit can be prepared with less sul-  
 phur it is desirable to know it. It  
 has been found that some peach dry-  
 ers have sulphured until the "cup" is  
 filled and running over with the juice  
 extracted by the long sulphuring.  
 This lowers the appearance of the  
 fruit, is a waste of sulphur and may  
 encourage federal regulations. Let us  
 reform and let us standardize and  
 make a product above reproach.  
 Strength to the arm of the Peach  
 Growers.

## SECOND LIBERTY LOAN

More particulars of the second  
 liberty loan will be sent out soon by  
 the treasury department. The print-  
 ed forms of the first liberty bonds  
 have not yet been distributed. It  
 seems there has been some question  
 as to their recall and the issuance of  
 a four per cent bond instead. It is  
 now rumored that they will be sent  
 out as originally intended and will  
 bear the three and a half per cent,  
 and if the newly issued bonds bear  
 the four per cent they will not be ex-  
 empted from the provisions of the in-  
 come tax law, while the first issue  
 will be. In any case, more bonds are  
 coming, and, as the treasury depart-  
 ment announces in the advertisement  
 on page 196, it is time to be saving  
 your money for that next issue. The  
 United States is borrowing large; it  
 is also planning and doing things in a  
 large way, and not the least of these  
 is the aiding in the financing of the  
 Allies. It is said that already over  
 \$2,000,000,000 of gold has been loaned  
 to our Allies, so, while it appears that  
 we are going deeply into debt, it must  
 be remembered that there are others  
 to aid in the paying of the debt.

This is a time when money talks as  
 never before, and therein lies a great  
 power of America.

## BLUE RIBBONS

The livestock, which is given  
 such prominence in this week's Culti-  
 vator, will not be the only wearers  
 of blue ribbons at the coming state  
 fair. From the Cultivator force there  
 will be C. B. Messenger, the editor,  
 M. C. Holman of the San Francisco  
 office, C. A. Briggs and C. L. Hughes  
 of Sacramento, W. S. Guilford of the  
 Sacramento Valley, Field Man F. F.  
 Stonerod and several from the circula-  
 tion department. Two Fords will  
 also be on the job, and all decorated  
 with blue ribbons. This because the  
 Cultivator is a blue ribbon winner.

Look at this particular issue. It's  
 the biggest ever; biggest in number  
 of pages; biggest in number of papers  
 sent out; biggest in appreciation  
 shown by advertisers; biggest, we be-  
 lieve, in enterprise of any farm pa-  
 per yet issued on the Pacific Coast.

We have done so well that we will  
 not apologize, but we may be per-  
 mitted to call attention of fruit grow-  
 ers and farmers other than livestock  
 men to the fact that while the live-  
 stock people have largely monopolized  
 this one issue, they have no in-  
 tention of continuing their monopoly.  
 The Cultivator is a paper for the  
 farmer and fruit grower. Articles  
 which will be of special interest to  
 citrus and other fruit growers are in  
 hand and under way. In other words,  
 the Cultivator is doing its bit to the  
 best of its ability and hopes to pass  
 the word along to all productive in-  
 terests of the Coast and the South-  
 west.

## TRACTORS AND FARM TRUCKS

In honor of the coming tractor  
 demonstration the Cultivator will  
 next week give particular attention  
 to tractors and trucks and farm pow-  
 er discussion generally. The demon-  
 stration will be held the week fol-  
 lowing, September 18-22. This will  
 give opportunity to every farmer to  
 learn more regarding farm power and  
 tractor farming than perhaps any  
 similar event on the Coast. This  
 week's showing of tractors and im-  
 plements at the state fair will be  
 touched upon in that number. There  
 will be articles on many other fea-  
 tures of tractor work and the way  
 generally will be open for more mate-  
 rial regarding farm power at the Los  
 Angeles demonstration. The tractor

and farm implement people are faced  
 by a most serious problem, that of  
 shortage of steel. They are appeal-  
 ing to the council of defense for aid  
 in this matter, and so far as lies in  
 their power will supply the where-  
 with for producing America's great-  
 est crop next year. Farmers are  
 more than ever awakening to the  
 fact that their production of this year  
 must be vastly increased another  
 year. Europe's productive power is  
 growing less every day. America  
 must meet the need. California pro-  
 ducers will do their share. The cul-  
 tivator hopes it may aid in this cam-  
 paign in giving particular attention  
 to means of adding strength to their  
 arms.

## SAVE THE SEED

There has been organized with-  
 in the ranks of the United States de-  
 partment of agriculture a committee  
 on seed stocks, which committee is  
 taking steps to locate all available  
 stocks of first class seed of agricul-  
 tural crops, especially wheat, oats,  
 rye, crimson clover, hairy vetch, al-  
 falfa, etc. The committee is asking  
 everyone who has an available sup-  
 ply to report to the committee, care  
 of United States Department of Agri-  
 culture, Washington, D. C.

Governor Stephens has called a  
 meeting to be held in the state capitol  
 at Sacramento on Monday, Sep-  
 tember 10, to consider effective means  
 of cooperating with the United States  
 department of agriculture in carry-  
 ing out the purpose for which an  
 emergency appropriation of \$10,000,-  
 000 was made by congress. Part of  
 this \$10,000,000 appropriation is to be  
 used through the state agricultural  
 colleges. In calling the conference  
 Governor Stephens suggests discus-  
 sion of: Extending the farm bureau  
 system, increasing the number of  
 women demonstrators of fruit and  
 vegetable canning and other forms of  
 food conservation, and extending the  
 work of boys' and girls' clubs in the  
 public schools.

Working in conjunction with these  
 colleges are 3,000 county agents  
 working under 3,000 farm bureaus in  
 3,000 counties of the United States.  
 California is allotted something over  
 \$100,000 which will be administered  
 by the university. Governor Stephens  
 as chairman of the state council of  
 defense and president of the board  
 of regents of the state university asks  
 producers of California to meet him  
 in Sacramento and discuss methods  
 of accomplishing greatest production  
 and the greatest good for our country.

We believe no state has responded  
 to the country's call for troops and  
 for food more heartily than has Cali-  
 fornia. Our response for another year  
 should be even more patriotic.

## \$2.20 WHEAT

For once in the history of the  
 great gambling centers futures in  
 wheat will not be in good form. Many  
 farmers are complaining because of  
 government limitations and practical  
 government guarantee of prices on  
 food and staples. We are not cer-  
 tain ourselves where the matter will  
 land, but true it is there is satisfac-  
 tion in the fact that there has for  
 once been a limitation to the activi-  
 ties of the gamblers in staples and  
 foods.

The price differentials worked out  
 by the food administrator are: No. 1,  
 dark hard winter, \$2.24; hard winter  
 basic, \$2.20; red winter basic, \$2.20;  
 yellow hard winter, \$2.16; soft red  
 winter, \$2.18; dark northern spring,  
 \$2.24; red spring, \$2.18; humpback,  
 \$2.10; amber durum, \$2.24; durum  
 basic, \$2.20; red durum, \$2.13; red  
 walla, \$2.13; hard white basic, \$2.20;  
 soft white, \$2.18; white club, \$2.16.  
 No. 2 of each grade is three cents  
 less; No. 3, six cents less; No. 4, ten  
 cents less.

Relative market basis: Chicago,  
 Galveston, New Orleans, basic; Kan-  
 sas City and Omaha, five cents less  
 than basic; Duluth and Minneapolis,  
 three cents less; St. Louis, two cents  
 less; New York, ten cents more than  
 basic; Baltimore and Philadelphia,  
 nine cents more; Buffalo, five cents  
 more.

Although the prices are fixed on  
 government purchases only, the food  
 administration, through its wheat cor-  
 poration, expects to control the mar-  
 ket without difficulty. The corpora-  
 tion will make all government and

Allied purchases and has under  
 consideration plans to buy for millers.  
 It serves as broker between the  
 mill and the flour mills the cor-  
 poration will become purchaser of vir-  
 tually all the country's wheat crop.

This step will prove bitterly  
 appointing to many wheat grow-  
 ers. On the other hand some will see  
 there is an advantage in a guarant-  
 price which is a certainty and bet-  
 ter than gambling.

We have secured the U. S.  
 Patent Rights  
 FOR THE

**Australian KING****STUMP JUMP PLOW**

(PATENTED)

Built Expressly for Small Tractors



Four-Disc Plow, Convertible to One  
 Furrow Less if Desired

ITS STUMP JUMP feature is invaluable  
 in orchard work. Its special utility is in  
 scrubby or stony lands. When other makes  
 plows encounter similar conditions, the  
 plow is thrown entirely out of the ground,  
 sometimes very disastrous results.

With the STUMP JUMP PLOW, when a disc  
 strikes a root, stone or stump, that one disc  
 jumps or rolls over the obstacle while the other  
 discs continue to the soil.

EXPANDING FRAMES.  
 It is made to adjust to any desired width  
 furrow, from 8 1/2 to 16 inches. All furrows  
 and furrow wheels are automatically adjust-  
 ed to width, without taking the plow asunder,  
 the removal of any parts. Time required, 10  
 minutes.

THE DISCS are made to adjust to a variety  
 of angles to give more or less grip for varying  
 conditions of soil.

EXTRA WIDE TIRES, as illustrated. Keep  
 the plow up in light or spotted soils. They also  
 lessen the draft.

## SPECIAL LOW LIFT FOR ORCHARD WORK.

For the SMALL TRACTOR this plow offers  
 many wonderful advantages over other makes.

We can assure our customers that this  
 plow is the best plow made for small tractors  
 and will give in all conditions of soil, perfect  
 satisfaction.



THE OLD STYLE

Manufactured and sold exclusively by the

**Spalding-Robbins Disc Plow Co.**

625 Market St.

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**The Best Durocs** in the West

Are in Southern California. See  
 Our Herds at the Riverside Fair  
 October 9-13.

Delta Farm & Live Stock Co., Colton.  
 Falfadale Farm, Perris.  
 W. M. Taylor, San Bernardino.  
 Canejo Farm, Newberry Park.  
 H. S. White, Chino.  
 Peters, Lanson & Walker, Devore.  
 Dr. Michael Creamer, Brockman Bldg.  
 Los Angeles.  
 J. S. Prendergast, San Bernardino.  
 S. O. Houghton, Van Nuys.  
 Southern California Duroc Jersey Breed-  
 ers' Association.  
 R. K. Walker, See's, Devore, Calif.



# Agricultural News Notes of the Pacific Coast

## Northern California

Yacaville, Solano County, recently shipped 121 carloads of fresh fruits one week.

The rice harvest is on near Butte, three eight-hour shifts running harvesters.

Contra Costa County is using labor prisoners of its county jails in road construction work.

A spider is still causing considerable damage to almonds and prunes in Sacramento Valley.

The first Glenn County Live Stock, Poultry and Agricultural Fair will be held at Orland, September 26-30.

Trucks are running day and night shipping fruit from Nevada County to the pears orchards to market.

Butte County's rice crop is in exceptionally fine condition and the rice is at Biggs are being fitted for a run.

The forest service is making a campaign on plants poisonous to stock in Placer, Sierra and Stanislaus national forests.

The field force of the state veterinarian is being enlarged and reorganized in order to better enforce laws affecting live stock.

Napa County Grape Growers are protesting the action of the California Grape Protective Association enjoining the Rominger bill.

The national forests of California are now supporting 204,935 head of cattle and horses and 465,752 head of sheep and goats. This is a large increase over last year.

The turkey buzzard, protected for many years because of its being a scavenger, is now under suspicion of being a distributor of hog cholera and other live stock diseases.

"12,000 acres more for production" is the slogan of producers near Gridley where it is planned to take water from the Western Canal south of Gridley and reclaim more lands.

## Central California

The cannery at Tulare is running on tomatoes.

The Modesto irrigation district has closed operations for this season.

The government fixing of wheat has stopped all wheat purchases in the valley.

Livingston, Merced County, is marketing around 25 cars of watermelons weekly.

The foothills of the Sierra Nevada were visited by a heavy rain storm last week.

The Sperry Flour Company of this state sold over 2,000,000 barrels of flour last year.

The Selma cannery is paying a \$2000 a day labor bill and appealing for more help.

Ceres, Stanislaus County, is planning for an exhibit at the coming fair at Modesto.

Dairymen at Ripon have formed a cream pooling association, and will join the state milk association.

Dr. Fortier and Frank Adams are inspecting irrigation projects along the eastern side of the San Joaquin Valley.

County Horticultural Commissioner Collins of Tulare County is serving notices on orange growers to control the gray scale.

Twenty pure bred Holstein heifers were recently sold by Vogel of Fresno for shipment to Japan. The consideration was \$8000.

The Valley Fruit Growers Association has already secured jobs for about 1000 laborers and is aiding materially in clearing up the valley labor situation.

Terra Bella, Tulare County, is making an irrigation experiment in boosting water. Four wells are now producing 207 miners inches which are given a lift of 110 feet to a reservoir, thence irrigation is by gravity.

## Southern California

San Luis Obispo County is building an oiled road near Casmalia.

Every bean growing section is appealing for more harvesters.

The Alfalfa Growers' Association is now holding first class alfalfa at \$21 per ton.

Pomona citrus orchardists are doing some fumigating this year with liquid gas.

The Riverside County Fair will offer prizes for drills of home guard companies.

Walnut growers are now hoping that the output this year will be as large or larger than that of last year.

A cannery at Hueneme, Ventura County, is now running on tomatoes and planning to run later on sardines.

Pomona and Ontario canneries are running full handed. One cannery at Pomona is paying a \$3000 labor bill daily.

Citrus growers anticipate that prices of the next year's crop will be the largest ever received for citrus fruits.

Orange and lemon growers of San Dimas, in Eastern Los Angeles County, have received \$850,000 for this season's fruit.

The Hemet Apricot Growers' Association has been given permission by the state corporation commissioner to sell 5000 shares of stock at par.

The government crop report estimates the present season's output of beans from this state at 6,480,000 bushels, as compared with about 4,000,000 bushels last year.

The pear harvest at Little Rock in the Antelope Valley has been in progress several days, and while the crop is a little light it is running to large sizes and it is believed that fully as much tonnage will be obtained this year as last. Pears are not grading up quite as well as in former years.

## The Coast

Over 10,000 acres of peas were grown near Moscow, Idaho, this year.

Arizona cattlemen are refusing to sell any stock which may be possible breeders.

The Caldwell Cattle Company of Idaho just added a \$1000 Shorthorn bull to its holdings.

Idaho potato growers are complaining because of advanced freight rates to Middle Western points.

Guernsey men of Clackamas County, Oregon, have organized a County Breeders' Club to boost the Guernsey.

The Indians of the Pima Reservation of Arizona, are proving their patriotism by producing some exceptionally fine crops.

A large irrigation system near Caldwell, Idaho, has just installed an extensive irrigation district which cost \$18.80 per acre.

Managers of the stockyards at Portland, Oregon, insist that no good dairy animals are sent from those yards to slaughter.

One county in Idaho which has never produced beans marketed its first crop this year. It will have a value of over half a million dollars.

The state experiment farm between Mesa and Tempe, Arizona, reports that it has just threshed from one plot 100 bushels per acre of Texas "rolled" oats. This is surely a novelty and saves milling.

The chamber of commerce of Phoenix, Arizona, is leading in an effort to get together an "All-Arizona" exhibit to be placed at the International Soil Products Exhibition at Peoria, Illinois.

Dairymen of Skagit County, Washington, have voted to raise \$200,000 for the establishing of a condensary, this because dairymen contend that condensaries already established have not been fair in their treatment of the people.

## NORTHERN ARIZONA FEEDERS and STOCKERS

### (High Grade Herefords)

Feeders and stock cattle found along the Santa Fe railroad line in Arizona, are raised on the high mountain slopes and grassy valleys, are exceptional in bone, grade and quick weight producing qualities.

The heaviest of all the Northern Arizona yearling steers are grown in the famous White Mountains on a fenced ranch with plenty of grass, brush and fine oak, cedar, and pine trees, and many running streams. On our Apache ranch, 90 miles south of Holbrook, yearling steers branded (O R —), after the long drive and overnight shrink, will average right around 685 pounds each in October and November. In early spring they will weigh 500 to 550 pounds at the railroad.

The Apache ranch is not a large one as Arizona ranches go, but we usually have a limited supply of choice yearlings and stock cattle, and this year in addition some fine 450 pound calves, IDEAL FOR BABY BEEF.

### All Stock Guaranteed as Represented

Prices and Particulars on Application

**A. L. Spellmeyer**  
CIBECUE ARIZONA

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Consultation on Agricultural Problems  
Mark Walker, B.S., 211 W. First St., Los Angeles

## Elliott-Brant Rancho GUERNSEYS



Our registered Guernsey cattle have proven their worth in both the show ring and in the Advanced Register tests. Our A. R. records, made on home grown products, and under herd conditions, compare favorably with any in the country and they average far above the average of the breed.

Our herd contains over 125 pure-bred Guernseys. Our herd was one of the few in the state that did not show tubercular cattle under state tests.

### Our Herd is Headed by "WHITE FACE"

a Son of Langwater Stars and Stripes

Considered to be the best bred bull in America, he being a son of the greatest producing sire of the breed, Imp. King of the May, and out of Dolly Dimple, who was a leader in three classes for production.

### Bull Calves For Sale

WRITE FOR PEDIGREES and PRICES

**Elliott-Brant Rancho**  
OWENSMOUTH, CALIFORNIA

D. O. BRANT, Mgr.



# ̄ Herefords ̄

Mature early, are rustlers and are the cow-man's cattle. We are laying the foundation for a Registered Herd of High Merit.



Newman's Crest 426977

Breeding stock will be sold or exhibited under our regular cattle brand (Bar N), which will be our Trade Mark or guarantee of quality.

Nothing For Sale This Season

**E. A. Noyes & Son**  
SUTTER - - - CALIFORNIA

## Carruthers Farms

SHORTHORN CATTLE

and

BERKSHIRE HOGS

Shorthorn Herd Comprises  
200 Head

**FOR SALE**  
Two Carloads of Registered  
Cows

OUR ANNUAL SALES OF  
**Berkshire Hogs**

Have had highest average of any sale in America for the last two years.

See Our Exhibit at the State Fair.

For particulars address,

**Carruthers Farms**  
513 Hearst Bldg.  
SAN FRANCISCO  
**MAYFIELD, CALIFORNIA**

## Who's Who

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photographs and notes regarding them will bring us closer together. Bear in mind we say "homely" photographs and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Other sketches and portraits will appear in the next and following weeks.

Written for California Cultivator By F. F. Stonerod



HERE is there a man identified in any branch of the livestock industry who is better known or liked than M. Bassett? We insert the question mark here but it should have been left out.

Mr. Bassett is an all-around stock



Mark Bassett

man consistently no matter how strong the competition. This is no a boost for medium type Poland-China hogs as compared with big type or other breeds of swine, for we are certain that if Mr. Bassett would sell of his entire herd and start to breed something else he would be just as famous in a little while as he is now. The reason is that he is a practical man who has made a life study of breeding Poland-China hogs. By experience he knows what methods are best, and those that are worthless.

The name of Bassett has been an institution in Kings County for more than a generation. The large family of eight are all living, and two of the sons are managing the big Bassett ranches today. The Bassett estate is of several hundred acres planted in fine grapes, fruits, grains and grasses. The Bassett Indian corn has won many blue ribbons at state and county fairs. Many claim this variety of corn cannot be grown in California, but they never saw a Bassett cornfield in the fall.

Mr. Bassett is a great lover of horses. Percherons are his specialty. He has won grand champion ribbons twice at Sacramento on his imported stallion Ithos.

World's fair visitors recall the long string of Poland-China prizes Mr. Bassett captured. He has exhibited herds at the A. Y. P. Exposition in Seattle, the Portland Exposition, and has not missed a California fair for many years.

man, but his specialty is medium type Poland-China hogs. Times may change and other breeders may stray from long established principles of type and conformation, but Mr. Bassett goes right along breeding his kind of hogs and winning championships with

Mr. Bassett is a vice president of the American Poland-China Record Association, president of the Kings County Fair Association and a director in the State Swine Growers' Association. He is one of the pioneers in the California livestock field and the state is proud to own him.

## Balanced Rations Save Dairy Feed



AIRYMEN can solve the feed shortage by the same method that people are using to solve the food shortage; they can make what they have go farther. If food economies can result in feeding more people with the same amount of food, the same feed can feed more cows.

Dairymen who feel the pinch of feed shortage will do well to give special attention to balancing their herd rations. A balanced ration is an efficient ration. It means making the most of the feeds used.

Unless a proper balance between the protein and fat and carbohydrates content of the ration is maintained waste is certain. This waste may be in feed, in production, or both.

When the production of a cow is limited by the amount of protein in her ration the addition of more carbohydrates and fat does not help the situation. More fat and carbohy-

drates in that case only increase the amount of fat the cow is able to put upon her back.

This extra fat constitutes still another waste of feed. The dairy cow does better work when not in a beef-fat condition. Not only does extra fat on her back mean lost energy in putting it there, but additional lost energy in vitalizing and maintaining it.

Though seldom the case, carbohydrates and fat may be the limiting element in the ration while there is an excess of protein. This is more serious than an excess of carbohydrates and fat, for protein is more difficult and costly to obtain.

The fine point in feeding dairy cows is to use such feeds in such amounts as will give the greatest production at the most profit. This calls for balanced rations. With feed prices at their present altitudes it will pay dairymen to make a special study of their feeding practices.

## Joint Sheep Sale at Columbus Poorly Patronized

The lack of an adequate supply of sheep on Eastern farms and the urgent necessity of an increase in small farm flocks in that section prompted several of the largest breeders in the country to consign animals to the big public sale held at Columbus, Ohio, August 7-8. A. J. Knollin, Pocatello, Idaho, was the heaviest consignor. He sent more than 1000 head of good range sheep. Walnut Hall Farm, Ky., and McLaughlin Farm, West Virginia, consigned Hampshires. Rambouillets comprised a large part of the sale stock. The top of the sale was only \$150. Carload lots at \$500 and many individuals at \$1000 last

year at the Salt Lake sale shows the difference in the Eastern and Western demand.

Think of the bulk of these fine sheep selling at little better than mutton prices. The 358 head of registered sheep sold for \$12,434. The 1500 unregistered sheep and ewe lambs brought \$12,936.50.

Seven per cent of all corn has heretofore gone into whisky; none will go this year.

Exportation of corn will be greatly restricted this year for lack of ships.



## Breed Leaders

Every breed of live stock has its outstanding character the same as the human. A great dairy cow has proved her ability to produce anywhere up to 15 tons of milk annually; the trotting horse has secured his record around two minutes; the maker has shown his ability to make the least amount of feed into the greatest amount of food; swine, sheep and others of the live stock family have shown themselves as great characters. In addition—and here is where their worth is proven—these animals can transmit their productive power to their offspring. Beginning with the issue of August 4 the Cultivator gave an account of Pietertje, one of the university farm dairy herd. Some things she has done and more that daughters have done were chronicled. She was a most worthy leader in this line of articles. Others of her kind follow. More of the "handsome is as handsome" type of animals will be given in the columns of the Cultivator during the next months.

Written for California Cultivator By J. I. Thompson

ANKED with the best in both individuality and breeding ability is Long Advancer, 307610. This Duroc-Jersey matron was secured by the university from the herd of S. W. Hart and Sons, Kennard, Nebraska, during the summer of 1911. She was owned November 2, 1910, out of good sow Princess S, 288596, and sired by Chief Advance, 38675. She is a rangy, growthy pig when she

In 1914 a daughter of Queen of U. F., showing as a senior pig, and ready to farrow, was third in class, while a son, King Colonel, 154519, litter brother to the above sow, was champion boar of the breed. It is not often that a senior pig is able to defeat older boars for championship, but this was won under a judge who is one of the oldest and best known Duroc breeders in the central west. In 1916 a junior boar pig of Queen



Long Advancer

ved at the university farm, and continued to grow until she was past years of age. When her usefulness was at an end, due to an attack of milk fever after farrowing 16 live pigs, she was sent to San Francisco slaughter, and while in only moderate condition weighed 780 pounds. She was so much heavier than hogs usually slaughtered there that none of the gambrel sticks would carry her, and meat hooks were used. On March 14, 1912, this sow farrowed her first litter, ten pigs, and raised all of them. That fall at the fair this sow won first and champion Duroc sow and two of her pigs, first and second in the junior class. One of them, Queen of U. F., 336398, was reserve champion. In 1913 a junior sow pig out of Queen of U. F., named Queen of U. F. 3d, 248, was champion sow of the year.

of U. F. 3d was second in class and a sow pig out of Queen of U. F. 2d, 380246, a litter sister to Queen of U. F. 3d, was also second in class, being defeated only by the futurity winners in each case.

When it is taken into consideration that different blood was introduced through the boars, not all of which necessarily linked well with this line, and that it continues to produce show animals with clocklike regularity, the greatness of the transmitting ability of Long Advancer stands out conspicuously. Here is convincing proof that at least one champion female has also produced champions.

But this is only the show ring record. Probably no one sow's name is to be found in the pedigrees of so many foundation animals in new herds in this state and all of the sows but one in the university herd trace directly to her.

## Buying Your Foundation Herd

Written for California Cultivator By Mrs. L. M. Yore

IN this article which I have been asked to write I am going to write as if my readers were as I was when I first got into this hog game, as an unripe gourd upon the values of feeding, type and breeding. But I knew which hog I preferred, for I had tried out several breeds down in the valley on a ranch, and it was the Big White for me. The first thing to decide is your end, the type, and then whether you will raise for the market alone or for the selling of breeding animals too. There are always culls that will be sent to the block from any herd. Do not think that because a pig has won all the prizes in sight that he is the only thing, for there are many who never saw the showing and never will that are just as good, and prepotent to the highest degree in marking their progeny with their type and prolificacy. The sows should be of the same type as the boars, thus giving uniformity to your herd, and come of a long line of fruit-ancestors. Look well into the pedigrees of the animals out of which you are choos-

ing your foundation herd, not letting that of the boar outweigh that of the sows. It is said that the boar is 75 per cent of the herd, but I am only willing to grant him fifty-fifty, and in my opinion the dam stamps her type and qualities on the males of her litters, and the sire on the females of his progeny more particularly. It is so in the breeding of cattle and why should it not obtain in the result of mating hogs?

The high, long-bodied—all other points being equal—Chester White is my preference, as suited to this state's demands, and I am going to line breed to obtain it. We all know that every pig cannot come up to standard, out of each litter, and these can be turned into the pork-barrel as they fatten as easily as the finer pointed pigs, and in this way one can keep to the standard of his selected type. People say oftentimes that they supposed that when one had pure-breds that the hogs would be perfect in all ways and are critical of the pure-bred from this standpoint. In answer to this I always say that having animals which are bred for size and fruitfulness one can always bank on them to produce their qualities in



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30 TUBULAR STEEL STALLS  
Complete With  
30 TUBULAR STEEL STANCHIONS  
For \$187.00

Why Not Have a SANITARY and MODERN COW BARN

## WE CARRY COMPLETE LINE LOUDEN HAY TOOLS A Complete Louden Litter Carrier Equipment

For a 30 COW MILKING BARN of Average 35x50 ft. Size will be Furnished and Delivered to Any Railroad Station in California for \$120.00

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You Can Install a FEED CARRIER OUTFIT in Connection with the LITTER CARRIER OUTFIT for \$67.00

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An Opportunity to Secure a Choice Lot of Young Holstein Heifers Sired by Registered Bulls from Full Blood Unregistered Dams.

- 30 Head of 15 to 18 months old Holstein heifers now being bred to Registered Holstein Bull.
  - 4 Head of Grade heifers.
  - 7 Head grade four and five year old cows.
  - 1 Registered two year old Holstein Bull, Segis Paul Pontiac de Kol Burke.
  - 1 Two year old Guernsey Bull, sired by May King of Fern Ridge, a bull that took third at the San Francisco Exhibition in 1915, Dam Imported Lady of the Forgettes.
- Wish to sell in single lot and will make special price, on the above stock. ALSO a choice lot of brood mares, Jacks and Jennets at a bargain price.

## El Cerrito Rancho Company

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## Santa Anita Rancho

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ARABIAN THOROUGHBREDS: Two-year-olds, sired by Imported Stallion Ibn Mahruss, head of our Arabian stud. Dams are the choicest thoroughbred mares of Santa Anita Rancho.

SADDLE HORSES: Some of which were sired by Ibn Mahruss, world renowned imported desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle stallion. These horses are mostly three-year-olds.

POLAND-CHINA AND BERKSHIRE BOARS: Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the very best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

HOLSTEINS: We will sell a number of young bulls. Some sons and grandsons of the noted California State Record Cows. Write for details.

Correspondence Invited

Anita M. Baldwin

W. H. TAYLOR, Superintendent

Santa Anita, Cal.

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# Holstein Cattle Berkshire Hogs



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# Hardy Herefords



**BONNIE BRAE 96th 536772**  
Calved September 2nd, 1915  
Purchased at a long price to  
cross in on my best blood.

### OTHER SIRES IN SERVICE

New Era 2nd, 466672

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Herd numbers over 100 Registered Breeding Cows Selected for their type, character and individuality.

**A Few Fine Heifers For Sale**  
WILL EXHIBIT AT SACRAMENTO

**W. J. Bemmerly**

WOODLAND

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CALIFORNIA

the majority of their offspring, the law of like producing like working in hog breeding as well as in other things.

Do not be satisfied that you are getting pedigreed animals, but see that pedigree and insist on having it for more than two generations back for both dam and sire, which the seller of fruitful stock should be glad to furnish. Then you can judge the prolificacy of the blood you are paying for and choose accordingly.

Line breeding should bring in hogdom as great results as have attended line breeding in bringing the Jersey cow and the Guernsey to their

high degrees of productiveness. It requires careful study and selection of the animals and mating according to the rule and time. Do not expect to achieve this without giving time, money, hard work and thought. The combination is needed in the hog business to bring about any degree of success, and success will never be attained in any other way.

The government is calling for more meat, and it behooves the hog breeder to get size, as we have the quickest maturing meat which can be made into so many palatable and nourishing foods, and the larger the hog the better.

## A Royally Bred Shorthorn Cow

Written for California Cultivator By F. F. Stonerod

The arrival of the great imported Shorthorn cow, Brandsby's Jinny 18th, on the T. T. Miller ranch near Los Angeles a few weeks ago rounded out one of the highest class herds of registered beef cattle so far established in California. She came with the last shipment of cattle purchased in the Middle West by Mr. Miller, two other shipments preceding this one.

44 weeks. Aristocrat 4th is the sire of Brandsby's Count 6th, winner first and champion at the Royal Manchester show, and champion at the Nottingham show, 1916. He sold a South American buyer for \$15,000.

On her dam's side Jinny is just as fashionably bred as on the sire's side. She herself won second prize at the Nottingham show last year, four



Brandsby's Jinny 18th

A full show herd will be taken to Sacramento, when fair visitors will have the opportunity of seeing a few of Mr. Miller's choice ones.

Brandsby's Jinny was purchased at a long price, to be exact, \$3100, but she was well worth it. She not only was a consistent winner in the English and Scottish showyards, but comes from a long line of ancestors which were of championship caliber. She was bred by J. M. Strickland, Yorks, England, and dropped May 20, 1914. Her sire, Brandsby's Aristocrat 4th, 114422, won first prize at Hastingwold and sold to Buenos Ayres, 1916, for \$12,200. His sire, Brandsby's Jolly Jill, won many prizes. His dam, Carrie, gave 8380 pounds of milk in

Royal Agricultural Society, third at Scottish National, second at Smithfield, where she beat the Nottinghamshire champion and the Scottish National reserve champion and was described in the Livestock Journal as the best Shorthorn in the 1916 London show ring. When Mr. Miller bought her she was in calf to Broadhooks Star, the noted English bull.

Individually Brandsby's Jinny is difficult to fault. She carries a wealth of thick, mellow flesh, has a remarkably smooth shoulder, beautiful top line and exceptional Shorthorn character. Certainly she will prove herself a valuable breeding matron in the Miller herd and will give a good account of herself in the show ring.

## No Lamb---No Veal?

By Fred A. Ellenwood, Secretary California Wool Growers' Association



ONE of the best statements we have seen as to the no veal—no lamb campaign is made by Secretary F. A. Ellenwood of the California Wool Growers' Association in a letter to Superintendent Allan Pollock of the dining car service of the Southern Pacific. He writes:

Having understood from various sources that it is the intention of some of our railroads to discontinue the serving of lamb, veal and certain other meat products on the dining cars of the various railroad systems of our country, under the assumption that this action would tend to conserve the meat food supply of our country, I wish to present certain facts from a practical standpoint in contradiction of this general assumption.

First, and most important, is the fact that the action suggested would lessen the meat production, instead of increasing it.

Second, such a movement would be unfair to the dairymen.

Third, it would be unfair to the sheep men.

Fourth, it will give the public an inferior grade of meat.

In further explanation of these statements I would respectfully suggest that the dairyman is in his business first of all to produce milk or butterfat, and not beef. The skim milk that he has is a by-product which he uses to the best advantage possible by feeding it to hogs, chickens or calves, or for such other purposes as he may deem profitable.

He has a given number of acres devoted to his business. This acreage he divides into pasturage for the summer months and for the production of feed for the winter. He has figured his business carefully and knows how many cows he can run under his specified area. His desire is to run the greatest number of cows



possible because the cow to him is his factory.

It was common practice when beef was low for dairymen to kill at birth bull calves, retaining only the heifer calves. As beef and veal became more valuable most of the dairymen sell the bull calves as veal, having utilized some skim milk in the veal production. If the dairyman is denied this privilege he would be forced to either sell his bull calves at a sacrifice to the man who would keep them to maturity, or if he kept them himself it would mean that he would have to decrease his cow band to the extent of the feed these calves would consume.

Another well recognized fact is that the dairy bred calf, such as Jersey, Guernsey, Holstein and mixed dairy breeds, do not produce, economically, good beef, and if kept for this purpose they must be run for one or two years longer before marketing to reach the proper maturity than the regular beef breeds. As a rule when a dairyman keeps bull calves they are half-starved and add very little to the beef production of the country.

The production of beef is a business of itself and should not be confused with the dairy business from which comes a large percentage of the veal of the country, and as stated above, this veal is a by-product of the dairy business. A comparatively small amount of veal is sold by the range cattlemen, and especially is this true if the prices of beef justify the retaining of the calves.

You are well aware that during a good part of the year in our own markets our quotations on veal are nominal. A good range calf today is worth from \$20 to \$25; a yearling, \$40 to \$45, and very few of these are disposed of as veal. The dairy veal calf usually sells for from \$10 to \$15, depending upon the length of time the dairyman has fed the calf skim milk, and the dairyman is the best judge as to whether or not it pays him to keep a few veal calves to maturity at the sacrifice of the number of his cow band.

As to the sheepmen's position, I would suggest that for the past several years the amount of lamb eaten annually by the public has been increasing very rapidly, due to two facts, first, because the people have discovered that lamb is among the most delicious of meats, and second, because the sheepmen have spent considerable money in producing and developing a type of lamb especially fitted for mutton, without so much regard for the wool.

These lambs are at their best when from five to seven months old. If for any reason sheepmen are compelled to keep these lambs until they are one, two or three years old the business becomes greatly crippled owing to the high cost of feed, labor and the other elements entering into the production of this mutton lamb, with the one result, that the production would be decreased, for it is costing in excess of 100 per cent more today to produce these lambs than a few years ago.

This particular branch of the business has been specialized in until it has become distinctive. The wool is considered a by-product; it is of a different character and less in quantity than this type of sheep. The Merino sheep, is used as a base, and by cross-breeding the mutton type is produced. The Merino is the wool producer, but the meat of the Merino is more strongly flavored and is not as desirable.

The mutton type is not profitable to run until one or two years old, as the wool would not justify, and after seven or eight months of age the mutton type of sheep becomes rough and as a mature sheep is not palatable as compared with the delicious, juicy lamb. Consequently the sheep grower would have to change his method of breeding entirely, with the result that the public would be denied the privilege of having lamb, for which such a splendid market has been created, and would be forced to eat tough, matured mutton of an inferior type. This change would consume several years and cost a large amount of money.

Our Western ranges have been greatly impaired by the homesteader and dry farmer, and consequently the number of sheep and cattle have been reduced. Each sheep man is running on a prescribed area, and, like the dairyman with his cows, he is endeavoring to run as many ewes as

possible, and it naturally follows that if he must keep the lambs to maturity he will be forced to run that many less ewes and, as stated above, will go back to the wool type of sheep rather than the mutton-producing breed.

I believe that I can show you that under the propaganda suggested the production in pounds of mutton would be lessened rather than increased. For instance, suppose these lambs were not slaughtered at five or six months old, but kept until fully grown; under present conditions these lambs dress from 25 to 38 pounds, but using for the purpose of this argument 36 pounds, because the writer has recently seen several thousand head marketed which dressed this amount in San Francisco at slightly less than six months of age.

If these lambs were kept for another year they would not dress more than 46 pounds as yearlings, making an increase of ten pounds of mutton, apparently, by having kept these lambs 12 months, from which gross amount you would have to figure a loss of from ten per cent to 15 per cent for deaths, and sometimes it runs higher than this figure in hard winters. If a man is forced to keep, say 1000 lambs, until some future time, then he will be forced to sell nearly 1000 ewes for mutton, because there is no place where he can increase the size of his flock.

If we were permitted to keep these ewes in place of the lambs, in the next 12 months each ewe would produce another lamb that would dress 36 pounds when it was six months old, so that the meat supply would be increased in the 12 months by 36 pounds. By keeping the lamb we would have disposed of last year when it weighed 36 pounds until the present time when it weighs 46 pounds, we have only added ten pounds to the supply, so by forcing the sheep man to keep his lambs until one or more years of age you will only add ten pounds to the meat supply, when you could have added 36 pounds.

In other words, the consuming public is 26 pounds of meat short by this system of operation, and the factor is always present that you are not giving the public what they want. Old ewes and old wethers are not palatable, and until the sheepmen developed the mutton type of lamb, mutton was a by-product with most of the sheepmen.

Another factor to consider is the fact the development of the mutton lamb has enabled the sheepmen to take advantage of many of the rough, brushy summer ranges which were heretofore unused and which are only suited for the grazing of mutton type of lambs, being unsuited for the grazing of the wool type sheep, as the brush pulls out too great a quantity of wool, making it unprofitable when a producer is running wool type of sheep.

It has well been said that this is a lamb eating age, but this does not mean that the number of sheep is being lessened because of this condition. When people eat lamb they do not eat beef, but if they are forced to eat aged mutton they would soon eat more beef. All these are economic matters which to a large degree adjust themselves better than they can be adjusted by force.

The cowman is not going to sell the veal if it pays him better to run it to maturity. The lamb producer is in the same category, and these various branches of the livestock business have been developed along the lines of supply and demand, not only in the application of the sale of the finished product, but under the rule of supply and demand of feed supplies, which also enter into the question in the production of this commodity, as well as in the sale of it.

If the stockman is going to be forced to keep his young stuff to maturity, either he or someone must supply the necessary feed and, as urged above, the result would not be the one desired by our government. Practically every spear of feed available is being utilized today; compulsory methods regulating the method of production might result disastrously unless a very clear understanding of the matter is had.

My purpose in bringing this matter to your attention is that I realize that you are desirous of doing what seems best, not only for your company but for the country as a whole, and that you are a practical man in your business, the same as I am in mine.

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COLTON, CAL.

## National Forests Helping Increase the Meat Supply

**A**s a war emergency measure the national forest ranges are carrying this summer approximately 100,000 more cattle and 200,000 more sheep than in ordinary years, according to the grazing experts of the forest service. Ordinarily the national forests furnish pasturage for about 1,800,000 cattle and horses and 7,800,000 head of sheep.

The number of livestock permitted on the forests is limited in order to prevent damage to timber growth, water supplies, and the range itself. This year exceptional weather conditions combined with the general food situation to create an unusual emergency, calling for special provisions to take care of the stock. A severe winter and late spring exhausted the hay supply and forced use of the spring ranges before they had reached their normal state. To lessen the losses which the western livestock industry faced the national forest ranges were opened early. At the same time the number of stock permitted for the present season was raised to the maximum consistent with safeguarding future productive-ness.

It is fully recognized that the increases which have been made in the allowances of stock on the national forests involve danger that the range

will be depleted through overgrazing, but it is believed by the grazing experts of the government that the emergency increases made can be taken care of, at least this year, without material sacrifice of productive capacity. The condition of the ranges is, however, being carefully watched. Reliance is placed also on the special efforts being made to secure the most intensive utilization consistent with sustained productiveness by improved methods of handling the stock. Better salting methods and the development of new watering places are among the means employed for this purpose.

At the close of the grazing season a careful examination will be made of the range on each forest to determine its condition and to find out how many cattle or sheep it will support next season. On areas which are found to be overgrazed an attempt will be made to shift the surplus stock to range which can stand the strain better.

While the grazing officials do not think that the increase could be carried indefinitely without serious damage to the forage, regulated grazing has brought about a steady improvement of the range, and some areas will probably be able to support the larger numbers permanently.

## Silos Conserve Feed

**T**HE silo is the greatest feed saver known to farming. An acre of corn fodder put into the silo has more feeding value than an acre of corn whose stalks have been stripped of its ears and fed with the meal made from the dry corn. There are several reasons for this. One is that in putting corn into the silo none of it is wasted. The whole corn plant, except the roots, goes in, and when it comes out it is so palatable that the cattle, horses and sheep just cannot leave it alone until the last vestige has disappeared.

Another economy in the use of the silo results from corn being stored at a time when it contains the greatest amount of nutrients per acre. Then, after the fodder is in the silo, it goes right on getting better. It becomes even more palatable than the

corn was before being ensiled, tasting so good in the ration that the cow or steer does not mind particularly if some of the other feeds are somewhat dulling to the appetite.

In the labor saved lies further silo economy, which is of great importance now. It takes no more labor to put an acre of corn in the silo than to shock, husk and shred it; but the product is more valuable.

Rats and mice cannot eat the corn that is in the silo, nor wind and rain decrease its feeding value.

In many sections the filling season is very close at hand, and quick action will be needed if a silo is to be put up this year. Every fall sees a rush for silo materials at the last moment. The rush will be greater than ever this year on account of the feed shortage.

## How to Tell How Much Silage You Have

**H**ERE is a table from Bulletin 59 of Wisconsin experiment station which shows the average weight of good corn silage at different distances below the surface of the silage and the total weight to those distances two days after filling:

Depth of silage—feet	Weight per cubic foot of silage at different depth—lbs.	Total weight one square foot area to depth given—lbs.
1	18.7	18.7
2	20.4	39.1
3	22.1	61.2
4	23.7	84.9
5	25.4	110.3
6	27.0	137.3
7	28.5	165.8
8	30.1	195.9
9	31.6	227.5
10	33.1	260.6
11	34.5	295.1
12	35.9	331.0
13	37.3	368.3
14	38.7	407.0
15	40.0	447.0
16	41.3	488.3
17	42.6	530.9
18	43.8	574.3
19	45.0	619.7
20	46.2	665.9
21	47.4	713.3
22	48.5	761.8
23	49.6	811.4
24	50.6	862.0
25	52.7	913.7
26	52.7	966.4
27	53.8	1020.0
28	54.6	1074.6
29	55.5	1130.1
30	56.4	1186.5
31	57.2	1243.7
32	58.0	1301.7

33	58.8	1360.5
34	59.6	1420.1
35	60.3	1480.4
36	61.0	1541.4

Hoard's Dairyman explains how to use this table, as follows:

"Assume a problem. A silo containing 21 feet of silage after settling has been fed down until only 8 feet remain. Silo is 16 feet in diameter. How much remains?

"The weight of one square foot to a depth of 21 feet is seen from the table to be 713.3 pounds. If 8 feet remain, 13 feet have been fed. The weight of 13 feet is found in the table to be 368.3 pounds. Subtracting this from 713.3 leaves 345 pounds which equals the weight of the 8 remaining feet. Multiplying this weight by the number of square feet in the area will give the number of pounds left in the silo. The area of a 16-foot silo is 201 square feet; 345 times 201 equals 69,345 pounds, or 34.6 tons. Dividing the number of pounds by 2,000 gives the number of tons. To obtain the area of a silo multiply the square of the radius in feet (one-half the diameter) by the factor 3.1416. For example, a silo 18 feet in diameter has a radius of 9 feet; 9 squared is 81. Multiply this by 3.1416 and the answer is the number of square feet in the area."

Cochise County, Arizona, is holding a series of picnics and "motorcades." We are not fully conversant with that word but it seems it means a series of trips in motor cars to various orchards and farms, in which cultural methods are discussed.



Fair Dates

- Arbuckle Almond Festival, Arbuckle, September 7, 8, 9.
- State Fair, Sacramento, September 8-15.
- Stanislaus Live Stock Show and Exposition, Modesto, September 17-22.
- Kings County Fair, Hanford, September 17-22.
- Fresno District Fair, Fresno, September 25-29.
- Napa County Fair, September 22-26.
- Glenn County, Orland, September 26-30.
- Antelope Valley Fair, Lancaster, September 26-29.
- Kern County Agricultural Fair, Bakersfield, October 2-7.
- Yolo County Fair, Woodland, October 4-6.
- Riverside County Fair, Riverside, October 9-13.
- Hemet-San Jacinto Fair, Hemet, October 16-19.
- Coachella Valley Fair and Date Festival, Thermal, November 1-3.
- Tulare County Citrus Fair, Visalia, November 16-24.
- OTHER STATES
- Spokane Interstate Fair, Spokane, Washington, September 3-8.
- Wyoming State Fair, Douglas, September 11-15.
- Kings County Fair, Renton, Washington, September 14-16.
- North Yakima Fair, North Yakima, Washington, September 17-22.
- Southwestern Daisy Show, Kansas City, September 17-22.
- Colorado State Fair, Pueblo, September 17-22.
- Pendleton Round-up, Pendleton, Oregon, September 20-22.
- Idaho State Fair, Boise, Idaho, September 22-29.
- Oregon State Fair, Salem, Oregon, September 24-29.
- Montana Fair, Helena, Montana, September 24-29.
- American Royal Livestock, Kansas City, Mo., October 1-6.
- Dairy Cattle Congress, Waterloo, Iowa, October 1-7.
- National Swine Show, Omaha, Nebraska, October 3-10.
- Texas State Fair, Dallas, October 13-28.
- National Dairy Show, Columbus, Iowa, October 18-27.
- Arizona State Fair, Phoenix, November 12-17.
- Pacific National Dairy Show, Portland, Oregon, November 12-17.
- Pacific International Live Stock, Portland, Oregon, November 19-24.
- International Livestock, Chicago, December 1-8.
- National Western Stock Show, Denver, Colorado, January 19-26, 1918.
- National Shorthorn Congress, Chicago, February 11-16, 1918.

The annual report of the British Berkshire Society for 1917 has just been received in this country. The book contains 30 pages of matter touching the activities of this registry association in its different lines of work. Some of the prize-winning Berkshires of England are illustrated and a complete list of Berkshire swards at the leading fairs is given.

On many hog farms it has been found good practice to establish temporary feeding places in the pasture or field so that the manure will be deposited where most needed. This may sometimes cause a little extra labor in feeding, but it saves both the old and liquid manure and reduces the amount of filth about the barnyard and minimizes the danger of disease.



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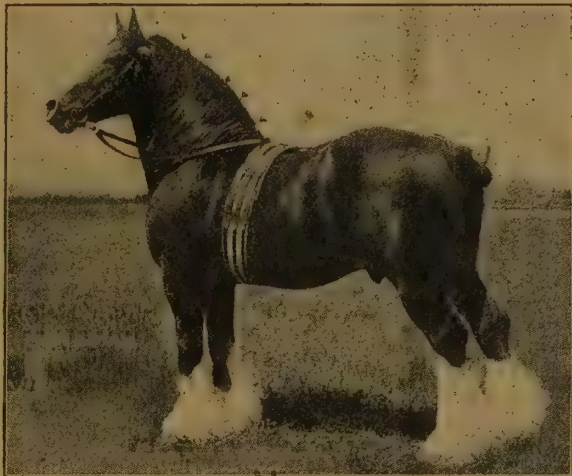
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Roselawn Choice and his get will be on exhibition at the State Fair. Also cows and calves descendent from "Arondale" and "Villager" International Grand Champions.

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It will keep your hogs free from worms, build up the constitution. It will also pay you in more pounds of fat out of the grain fed. It's like writing insurance on your herd against disease, as it purifies the blood, sweetens the stomach, expels and destroys all germs, worms and parasites, and it keeps your stock in a healthy condition. It stands in a class by itself—an honest article, which has been proved by the business that we have built up.

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**FREE** 36-page book and a liberal supply of Economy Stock Powder to make a thorough test — free. The book contains valuable information on livestock diseases, such as Lumbercold, Lung Worm, Thorn-headed or Bobkin Worm, Whip Worm, Pin Worm, Kidney Worm, Typhoid Pneumonia, Spleen Fever, Swine Plague, Indigestion, Coughing, Thumps, Paralysis, White Scours, Cholera, etc. You will also find valuable information on feeding.

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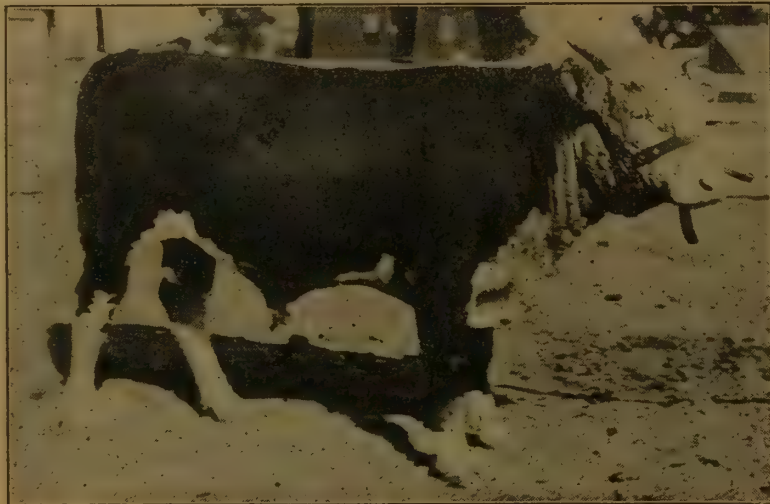
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One of the Creamcup Herd Sires



**Creamcup Pontiac Pietertje 103911**

Sire, Creamcup Pontiac Burke.

Dam, Tula De Kol Pietertje Netherland; Butter 33.82 pounds in seven days; Butter 129.6 pounds in 30 days. Average test 4.77 per cent.

WE SELL FEMALES RIGHT OUT OF MILKING HERD AND THE BULLS GO WHILE YOUNG

You are cordially invited to visit the ranch and inspect our stock.

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Modesto - - - Calif.

## Famous Jerseys Imported by Humboldt County Nurseryman

Breaking the world's dairy record is some ambition, even for California, but up in Humboldt County there is a nurseryman who proposes to perform the barnyard miracle. As a starter he has captured the best stock that money can buy. Among the recent high-bred arrivals on the C. W. Ward ranch near Carlotta is no less a prize than Dosoris Park Golden Lassie, distinguished daughter of Dosoris Park Lily, the world's record Jersey cow. Golden Lassie was going at nearly a thousand-pound gait while on test previous to shipment west a few weeks ago. She is now running along nicely at a high rate in her Humboldt home. If she does not succeed in surpassing all existing milk and butter records it will not be for lack of scientific care and ideal dairy conditions. Her advent has an important bearing upon Humboldt's already notable standing as a dairy section, that county ranking third among California's 58 in dairy products. It is a Jersey and Guernsey stronghold, as the climate is very similar to the Channel Islands, where these breeds originated. Several herds of grade cattle there are producing from 300 to 400 pounds of butter per cow each year. The present year has been a record one in this state in the number and variety of pure-bred livestock added to her herds.

Before going East to spend several weeks and a considerable fortune in collecting one of the best herds of Jersey cattle in the United States, Mr. Ward purchased after careful selection a large holding especially adapted to his purpose, and erected ample, modern, practical buildings, including milking barn, test barns, bull pens, etc. He even provided a spur from the main railroad line into his property. Then he went to Waterloo, Iowa, where he finally persuaded Professor Hugh G. Van Pelt—long recognized as a high authority on judging and breeding—to part with the choicest of his Jerseys, at a price as long as the Van Pelt string. Prof. Van Pelt for years has been demonstrating the doctrine of capacity, conformation and breed type, and the animals secured by Mr. Ward are splendid samples of the ideal type representing the professor's skill.

In addition to the Van Pelt and

Pratt cows, Mr. Ward purchased a string from W. R. Spann of Shelbyville, Kentucky, and another bunch from Edmund Butler of Mt. Kisco, New York, the remainder of the 52 head being secured in and around Waterloo from the best herds. He also brought out to Humboldt W. F. Merriam, formerly herdsman for Mr. Van Pelt, and Philip Preston, a Cornell boy, to care for the cattle. Official test work will be conducted and the average of the butterfat production of each animal raised each year until it is second to none.

The Ward Jerseys are mostly Financial King, San Alois and Blue Belle and Interest line, bred with a sprinkling of Golden Fern Lad and St. Lambert blood. Noble Lorne Financier, 124737, by Noble Lorne Count, and out of Adelaides Countess, the queen of the Van Pelt herd, is a dark, solid colored three-year-old who should return interest on the heavy investment Mr. Ward made in him. He is also a show bull.

Cannons Gambage is another young sire from which high producing females should result. His rudimentaries are exceptionally large and well placed, and he is of fine quality throughout. His dam, imp. Gambage Colleen, has a 722-pound butterfat record.

One of Mr. Ward's best prospects for a record-breaker as a full aged cow is Financial Buttercup Noble, who at three years of age is now on test and at seven months has produced nearly 300 pounds of butterfat. She has a big barrel, velvety skin, straight top line and a large well-placed udder. In fact there is not a single animal in the Van Pelt herd from which Buttercup came that could be faulted in this respect.

Another promising young cow is Financial Majestic Fairy, 235392, a February, 1915, heifer due to calve shortly and bred to Financial Fern Noble.

Space does not permit going into detail as to the breeding and individuality of each animal in this herd. It is sufficient that other Jersey herds in the country will have to make some big Jersey records to better the Ward records, once the animals get fairly started. This herd will prove a big asset to Humboldt County as well as to the state of California.

## Consolidated Herds

The Moorland herd owned by K. W. Abbott of Milpitas is to be shipped to Ripon to be developed by Gotshall and Magruder together with their Karlay herd. Mr. Abbott has tendered his services to the government during the period of war and while he is away he has asked Mr. Gotshall and Mr. Magruder to care for his stock for at least a period of two years.

In joining together these two prominent herds it will make a complete herd of registered Holsteins that have no peer on the Pacific Coast. The Gotshall & Magruder herd consists of more than 60 females and the Abbott herd of nearly 30, which will give the leading sires of these breeders the opportunity to which they are entitled.

Colantha Sir Pontiac Aaggie, the already famous Moorland herd sire, is a son of Colantha Johanna Lad out of the good dam, Aaggie Cornucopia Pauline 3rd. The three nearest dams of this sire have an average butter record for seven days of better than 30 pounds. He has 14 daughters that have qualified in the advanced registry and one of the three year old daughters, Moorland Johanna Haskins, recently made under the care of Mr. Abbott a very good record of 32.87 pounds of butter in seven days.

King Pontiac Ormsby Segis is the young sire owned by Gotshall and Magruder and is wonderfully bred insofar as he is a son of a 31-pound cow, the grandson of King of the Pontiacs out of one of the King's best proven sons. This young sire of Gotshall and Magruder is producing some very fine looking calves and as we find that the dam and sire's dam have an average test of 5.09 we have no

hesitancy in placing him as one of the coming sires of California.

One of the interesting animals to see at the Gotshall and Magruder ranch is K. P. Toia Joe the state record two year old who has completed her record this last May making 27.14 pounds of butter in seven days.

Gotshall & Magruder are constantly doing official testing under the very capable management of their herdsman, Mr. Keel.

### WHEN TO CUT SILAGE CORN

One of the few cases where a man had better be too late than too early is in the time of filling the silo. By all means avoid cutting silage corn too early. Silage from immature corn turns sour, is less palatable than when properly made, and has lower feeding value.


Best results are obtained by commencing to fill while the leaves of the upper part of the stalks are yet green, but not until the kernels are distinctly dented, in dent varieties, or considerably hardened in others.

When silage corn is so dry that the cut fodder does not feel moist as it is squeezed in the hand, water should be added at filling time. This can best be accomplished by turning a running hose into the blower. The amount of water to be used will depend on the rate of filling. Aim to make the cut fodder moist enough to pack down solidly.

Farmers who are making their first use of silos this fall in order to save all they can of the short feed supply, will do well to give close attention to the matter of cutting the corn at the proper time. An error then may mean feed wasted instead of feed conserved.



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See me at California's Biggest State Fair.

**Maurice Rucker**  
FAIR OAKS - CALIFORNIA

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When writing advertisers, mention the Cultivator.

### BRITISH MEAT PRICES

By Frank D. Tomson

**A** LETTER, received by John Clay from his brother A. T. Clay, Edinburgh, Scotland, appeared in the August 9 issue of the Livestock Report and throws light on the present meat market in the British Isles. For convenience the British values quoted by Mr. Clay have been reduced to their American equivalent. The letter reads:

"The government here, as you know, has been for some time restricting the price of foodstuffs and is contemplating doing the same with meat. The only result so far seems to have been to make meat go up so high that ordinary people can hardly buy it. I understand an order will shortly be issued commandeering so many cattle in each district per week or per month. I have just had a talk with my butcher who tells me that he bought bullocks in 1914 at \$106 and the same class of bullocks he bought this week cost him \$330. In 1914 sheep were costing him \$12 and today they are costing him \$36. In 1914 beef was \$9.60 per hundred weight (112 pounds). Today it is selling freely at \$26.40. Roast beef here today is selling at 44 cents per pound or over it, and mutton just about the same. Chilled meat coming from America is being sold to the public at about 30 cents per pound."

The several United States Shorthorn breeders who have imported Shorthorns from the British Isles this past season were obliged to turn back all animals that in the judgment of the British authorities had been purchased too close to the beef value, a ruling having been put into force prohibiting the exportation of meat animals unless there existed a decisive margin between the selling price and the beef value. A number of purebred herds have been disposed of by their owners for beef purposes as the present values for killing purposes seemed sufficiently attractive.

It seems reasonable to assume, in view of the condition prevailing in Britain and which can scarcely fail to be emphasized in this country, that the producer of beef cattle has every encouragement to continue and expand his operations. The use of the registered sire will have the effect of increasing the number of pounds per head and shorten the period required for development. These are items that the cattle grower is obliged to consider in view of the increasing cost of maintenance.

### HEALTH OF COLT DEPENDS ON CARE

Navel disease which infects colts soon after foaling can easily be prevented by providing clean and sanitary stalls for the mares. The disease is easily transmitted from old bedding, sawdust or barnyard scrapings. Only clean and new straw should be put in the stall and a strong solution of iodine kept handy for bathing the navel cord of the colt. The first milk of the mare contains colostrum, a natural laxative, and is essential in keeping the young colt in good condition; therefore, mares should not be milked before or soon after foaling. In a few days - both mare and colt can exercise in the pasture lot.

### DIRTY CALF PAILS CAUSE SCOURS

The farmer who uses the swill pail for feeding calves or who hangs the pail on a post between feedings without washing it will soon be looking for a cure for calf scours. The dirty calf pail is one of the chief causes of scours, according to L. W. Wing, Jr., of the Missouri college of agriculture. With the fly season and warm weather at hand extra precautions must be taken in caring for the calf pails. They should be washed thoroughly after each feed and sterilized either with steam or hot water. After the pails have been sterilized they should be inverted in a clean protected place until time to use them again.

Take the sow away from the pigs and not the pigs from the sow. In this way the pigs will be left in their accustomed lot and will be less likely to notice the change in their living conditions.

It doesn't pay to feed scrub cattle on high priced feed.

# ROSELAWN STOCK FARM

## Registered Shorthorn Cattle

After seeing our Exhibit at the State Fair Grounds, Sacramento, you are invited to visit the farm and inspect some choice young Bulls and Heifers we offer for sale. They are sired by bulls of national reputation, such as Ringleader, Gibsons Goods, and Roan Victor.

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# KING PONTIAC ORMSBY SEGIS

HIS dam, Christeria Overton Mechthilde, made 31.70 pounds of butter from 463 pounds of milk in seven days.

HIS sire, King Potiac Netherland Segis, is one of the wonderful sons of the greatest sire of the breed, King of the Pontiacs.

HIS dam and sire's dam have an average test of 5.09.

HIS blood makes him one of the foremost sires of the coast.

HIS story is a great deal longer and we will gladly tell you more.

HIS future is bright, as he is being bred with over twenty A. R. O. cows and with some of the most wonderfully bred heifers in the state.

**Gotshall and Magruder**  
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Imp. Clatford Fay of the Mill 65657

Won first in two and three year old class at leading English shows



Imp. Violet of the Caches Farm 65764

A 3 year old daughter of Prince of La Croisee, a noted Island show bull.



Imp. Lynchmere Meadow Sweet 2nd 65668

A heavy producer as well as a show cow.

## Other Herd Sires are:

**Imp. Roberts Secret 30805** out of a 598 pound dam and **Ricardo of Edgemoor 34367** out of a World Champion Sire and a 600 pound dam.

**B. E. NIXON, Owner**

**Itchen Daisy May**  
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**Sire:** Six A. R. daughters on retest is going at a completed her remarkable testing 5.81 per cent.

**Dam:** Imp. Itchen Daisy class B, is undoubtedly OF THE MAY 9001 A whose first 12 daughters of the breed. ITCHEN year old A. R. record for females. (Itchen Daisy's M daughters for \$1375.00 bull's get).

The final proof that ITCHEN DAISY MAY is that two of his first daughters on official test have made days respectively, both in class G, (two year old).

There is no living Guernsey sire who combines daughters, and his career is just starting.

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# UERNSEYS

of Langwater 17349  
ROSE SIRE

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ad Our  
d



ay King of Langwater 12997 A. R.  
including Langwater Nancy, 862 pounds butterfat, and  
This cow has a daughter, Follyland Nancy, who just  
ord of 712.60 pounds butterfat and 12,270.9 pounds milk

OTHER TO NE PLUS ULTRA  
who made 714.10 pounds fat and 13,636.80 pounds milk in  
st cows imported to America. She is the dam of KING  
R. daughters), and also the dam of NE PLUS ULTRA,  
pounds of butterfat, a record unequaled by any other sire  
the dam of Langwater Dairy Maid 26377, who has a two  
terfat, and was recently sold for \$6000.00, a breed record

aters' two day old son sold for \$1010.00, and two of his  
sale in May. This shows the strong demand for this

WATER is well worth the record price paid for him: is  
butterfat in one year, and 591.52 pounds butterfat in 341

breeding with proven ability to transmit production to his

nsey Farm  
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Imp. Morland Amber 65659  
A Granddaughter of Gov. of the Chene



Imp. Lynchmere Meadow Sweet 65667  
Now on test and milking over 45 pounds per day.



Imp. Polly 10th of the Beaulin 65713  
A recently imported Raymond of the Preel cow, and a great prospect.

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# BUY Sons of This Sire



King Korndyke Hengerveld Ormsby 7th

## Meet Him at Sacramento State Fair

At the Stevens Bros. sale his three sisters, Korndyke Pontiac Polkadot, 32.04 pounds, sold for \$4200, to Field of Brockton, Mass.; Maple Knoll Helen, 33.00 pounds, sold to McAdam of Utica, N. Y., for \$6100; Maple Knoll Lassie 4th, 29.55 pounds, sold for \$1975 to Brady of New York City. His dam has a four year old record of 23.86 pounds. His sire's dam, Pietertje Maid Ormsby, is a former world's champion cow and has a record of 35.55 pounds.

**George Kounias**

**MODESTO FARMS**



**Modesto, Cal.**

# Pacific Guernsey Herd

**JUNIOR HERD SIRE**



Proud King of Edgemoor

Dam: Proud Dame, 514.06 pounds fat at three years of age. She is a daughter of Ne Plus Ultra. Sire Imp. Itchen May King.

## Other Sires in Service:

Isabella May King of the Pacific 30775

King of the May on sire's side and out of a 500 pound two year old dam.

Pacific's Glenwood 27077

A grandson of Glenwood Boy of Haddon and Selma of Pinehurst. With no grain feed and running on natural Humboldt County pasture my 120 cows averaged 1.43 pounds butterfat per cow during month of July, according to supervisors' report. Herd average 200 pounds butter per cow during 1916. Sixty per cent of my registered stock carries close up Glenwood blood. Will sell surplus stock at prices which you can afford.

**C. S. Rasmussen**

**LOLETA, Humboldt County, CALIFORNIA**  
ON NORTHWESTERN PACIFIC

## Resume of Livestock Affairs for the Current Year

Written for California Cultivator by F. F. Stonerod



WITH the opening day of the 1917 California state fair at Sacramento the banner year of the livestock industry of this state will have ended and a new year be ushered in. We do not know what the coming 12 months holds in store for the producer of meat animals and their by-products, but we do know that so many things of import have occurred during the past year that they will bear repetition at this time.

After the most successful series of state and county fairs yet held in California stockmen turned their attention to the national shows, the cow testing season, new breeders' organizations, state dairy cow competition, etc.

Probably the greatest single achievement of the year was the sensational winnings of the Davis experiment station cattle and sheep entries at the Chicago International. Capturing both the grand and reserve grand championship prizes for steers at the greatest stock show in the world was no small honor, and it certainly advertised California as it had never been advertised before.

Shortly after the holidays the agitation for better organization among the producers commenced. The state swine growers held a large and enthusiastic convention in Los Angeles to discuss the pressing pork price question. The results of this convention were far reaching and a better understanding between the packers and the growers was reached. Then the beef men in the central district of the state organized, the sheep men got busy, farmers formed local marketing associations, and as the months passed by the producers saw the wisdom of their cooperative methods. If war conditions did nothing else than to awaken the California producer to a better understanding of his obsolete methods, they were worth the price.

Later on the dairymen caught the

fever. High prices for feed stuffs, acute labor trouble, etc., forced them to organize if they were to exist. At the present writing this organization is almost completed and gaining strength daily, and in the meantime prices for dairy products have been increased. The matter of public stock yards has been the biggest disappointment of the year, and while it was widely discussed for a time, the order buyer still travels up and down the state taking his pound of flesh, and the grower who spends time and money fitting stock for market has the satisfaction (?) of receiving from three to five cents per pound less than his fellow stockman receives in other states. Possibly the federal trade commission can tell us the reason for these things after it completes its investigation of the big American markets. Certainly it has been a long time coming in this state, I mean the competitive buying of meat animals.

Los Angeles made elaborate plans to hold a big 30-day fair and livestock exposition, but had to postpone the 1917 show until next year, or, as the resolution read, "until a more propitious time." War, mobilization of troops, with a possible shortage of cars for transporting exhibits, and business conditions were the prime influences which caused the postponement of this show. The time is here for annual shows at both San Francisco and Los Angeles, as the size and importance of the livestock industry in this state deserves all the support and recognition possible. Any thing that will increase production of meat animals and their kindred products, or that will educate the producer to improve his breeding stock is urgently needed, and the livestock show is one of the best known mediums to accomplish this end.

By and large the year 1917 will be a period whose advancement in agricultural affairs, especially in California, will be of lasting good to this commonwealth.

## Preventable Losses



AT the special meeting of the Amador-El Dorado Livestock Association held some time ago at Placerville Dr. H. J. Hammond, of the bureau of animal industry of the Department of Agriculture, spoke of the connection of the department with the industry in part as follows:

For 50 years the department of agriculture has been studying how to increase production, but only recently have we been endeavoring to make that production profitable. The farmers have formed various organizations with a view of getting more for what they produce.

The creation of the office of markets and rural organization in 1913, by legislation, is an epoch making innovation. The farm loan act is of much value to the producer for it provides capital, with easy payments, at a low rate of interest. The bonded warehouse act is beneficial in giving farmers a chance to get money at a low rate on their stored produce, which is a gilt edge security. All these help toward preventing losses in livestock by providing money to purchase feed when it is scarce and your produce may not have been harvested or at a time when you desire to hold for a better market or more favorable transportation.

There are two slogans to be remembered "Bury the dead" and "Care."

### Texas Fever Tick

A little care at the proper time will prevent much of the loss in your herds beside enabling them to withstand severe climatic changes. In discussing preventable losses we mean such losses as can be provided against economically. In the southern states the loss from the Texas fever tick is credited with being a menace to the livestock interests to the extent of \$50,000,000 annually. In this connection it is said that within a few years the tick will have been eliminated in this country, and the South will become an important cattle country. Already

where ticks have been eradicated pure bred animals are being purchased in large numbers, and the crossing of these animals on the native cows has produced excellent beef animals at a cost much less than can be done on the western range. So you see livestock centers may be changed and a country make wonderful progress by the elimination of one preventable cause.

Contagious abortion, shipping fever of cattle, anthrax, blackleg and a few other diseases in cattle may not even be entirely eliminated, but much of the loss due to them can be lessened.

### Tuberculosis

Tuberculosis you are more or less familiar with, but most stockmen do not realize that through the milk of the cows kept on the ranch, that appear healthy, may be passing the germs in the manure which soils the tail and udder and drops into the milk bucket, and then is conveyed to the children of the family. In controlling the spread of this disease, it seems the most practical method is to prevent its introduction to the herd by purchasing only tubercular free animals, especially pure bred bulls. Raw skimmed milk fed to hogs, especially from creameries and other sources, is very dangerous, as one infected cow in a locality may spread the disease to several herds. Get a government bulletin on tuberculosis and you will be surprised at the simple practical methods that will prevent the spread of this disease to your herds and your family. Anthrax and blackleg are also destructive, but you are able to see them at work in your herds; not so with tuberculosis.

### Anthrax and Blackleg

At present, reliable and effective vaccinating preparations are available to prevent both anthrax and blackleg. The vaccination of cattle for anthrax cannot probably be arranged so that a method for the use of such a preparation could be distributed to the stock owners as is blackleg vaccine. Therefore where anthrax is known to



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Orlons Golden Colonel, 193923  
First at Fresno, 1916, and Grand  
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My Durocs win in the showring and make good on the farm. A few choice March boars and open gilts from large litters for sale cheap.

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**Allen Thompson**  
TULARE, - CALIFORNIA



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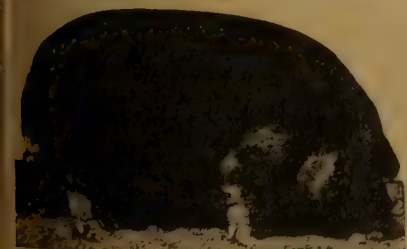
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50 lbs. (50 gals.), \$4.00 delivered.

Trial package that covers 250 square feet and booklet for 25 cents postpaid. Get it from your dealer or  
German Seed & Plant Co.,  
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## Large Type Poland Chinas



**W. H. Browning**  
Woodland, Yolo County, Calif.

**Berkshire Hogs—Milking Shorthorns**  
Breeding Stock For Sale  
**G. A. Murphy - Perkins, Cal.**

exist it is advisable to procure the services of a reliable veterinarian and vaccinate your animals against this disease. This is such a deadly and dangerous disease that all animals that die from it should be burned where found and no attempt made to skin or move the carcass. The spores of this disease will remain virile for years in the soil.

The bureau of animal industry has sent out 5,000,000 doses of vaccine during the last year. A letter, telegram, telephone or any means that will inform my office as to how many doses and where it is to be mailed to, will bring you blackleg vaccine free, with instructions how to use it.

### Docking

To the sheep owners: In docking your lambs you have been using a sharp knife. Every lamb loses probably one-half pint of blood, and this means one pound of lamb. Two thousand lambs less 1000 pounds is money you are losing which can be prevented. I have given the hot docking iron some attention and can safely say the old method should be abolished.

### Dipping for Ticks and Lice

We all know what scab meant since your flocks have been freed from the disease. We are facing the problem of another parasite that is gaining a considerable foothold in this state. I expect it will soon be necessary to compel the dipping of sheep infested with sheep ticks.

There is one more point that is very important in this connection, and that is the dipping of rams. By dipping the bucks you will prevent the possi-



Creamcup Pontiac Pietertje 103911  
A fine one owned by M. M. Holdridge

bility of the introduction of many external parasites and thus prevent financial losses as well as maintain a stronger animal, which means more lambs and more wool.

In this connection I believe it can be shown that the dipping of cattle for lice is a profitable investment. A lousy animal is not a thrifty one, and the lice will not leave until the animal sheds or the sun becomes quite hot. All this time the animal is feeding an unwelcome host.

The bureau is conducting experiments with external parasites, and as soon as we are able to learn the life history of a particular parasite we are in a position to take measures for its eradication. Considerable work is being done at the large stockyard centers in dipping animals that go out to feed stations or to farmers. In a time like the present, with our country at war and the high prices, it becomes necessary that we conserve our resources.

We have agricultural advisers who advise the farmer on almost every subject that pertains to his business, and I have often thought it might be a good idea to have a livestock adviser for the stockmen who do very little farming and devote all their attention to livestock, as in many of these mountain counties there is not sufficient agricultural land to justify the employment of a farm adviser.

The bureau of forestry has been a valuable factor in helping your industry. One of the most important suggestions has been the blanket method of herding sheep. I would urge that you look into the method of your employe before condemning the system.

Do not let the pigs wean themselves. Take the sow away from the pigs when they are about ten or 12 weeks old and give her next litter a fair start in life.

# ANNOUNCING Our New Herd Boar



## JOHNSON'S DEFENDER

Sire, Conway's Defender, by Defender. Dam, Choice Belle, by Fancy Crimson Wonder.

Picture was taken at the age of ten months. His bone measured seven and three-quarter inches at this age.

We are mating this boar to Our Critic, Cherry Chief King's Col, and Defender sows for spring litters.

Entirely sold out of sows and gilts at the present time. A few choice March and April boars for sale.

See our herd at the State Fair. We will show Johnson's Defender, not highly conditioned, but in just good growing condition.

**F. M. Johnson**

R. F. D. No. 1, Box 87    :-    :-    Napa, Calif.

# Champion Shropshires BRED ON CALIFORNIA RANGE



1st PEN 5 YEARLING RAMS CHICAGO INTERNATIONAL 1916

## Other Show Ring Winnings 1915-16 were:--

### WORLD'S FAIR 1915

#### Champion Ram

Premier Championship for Exhibitor  
Premier Championship for Breeder  
Aged Ram, 1st and 2d; Yearling Ram, 1st; Ram Lamb, 1st, 2d and 3d; Yearling Ewe, 2d; Ewe Lamb, 2d and 3d. Get of Sire, 1st; Pen of Three Lambs, Bred by Exhibitor, 1st and 4th; Pen of Four Rams, Bred by Exhibitor, 1st and 4th; Flock, any age, 2d; Flock, any age, Bred by Exhibitor, 2d; Flock One Year Old, 1st; Flock One Year Old, Bred by Exhibitor, 1st; Flock under

One Year Old, 1st; Flock under One Year Old, Bred by Exhibitor, 1st; Produce of Ewe, 1st, 2d and 3d.

Total, Including American Shropshire Specials, of 15 Firsts, 9 Seconds and 6 Championships

### CHICAGO 1916

1st Ram Lamb.  
1st Place Yearling.  
2nd Aged Ram.  
4, 5, 6 Yearling Ram.  
2nd Get of Sire.  
4th Pen of 3 Ewes.

NOTE—Our sheep have proven their quality on Range and in Show Yard. Testimonials from all over the country from satisfied customers.

## Sold Out for 1917 Season

**Bishop Bros.**

SAN RAMON, Contra Costa County, CALIFORNIA  
ON SOUTHERN PACIFIC

ED. BISHOP, Mgr.

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# Steibbrae Ayrshires

HEADED BY



Willowmoor Robin Hood 32nd  
Son of Second Prize two year old at P. P. I. E., 1915

Ayrshire cattle will thrive under adverse conditions. They are particularly adapted to the Coast and Sierra foothill districts. Are disease resisting—we have never had a reactor in our herd of nearly 100 head. Official test work in progress.

Home of Willowmoor Vesta 4th, who holds World's Jr. four year old milk record for Ayrshire breed.

**E. B. McFarland** **STEYBRAE FARM**  
OWNER San Mateo, Cal.

**Jack Glass**  
HERDSMAN

## Pacheco Shorthorns

Bred Right, Raised Right, Sold Right



Our own breeding and bulls sold to cattlemen for range duty are guaranteed to give satisfaction.

Look Our Show Herd Over at the State Fair

**Pacheco Cattle Co.**

**HOLLISTER** - - - **CALIFORNIA**  
Southern Pacific 100 miles South of San Francisco

### SEE OUR STATE FAIR EXHIBIT

consisting of

## 50 Head of Horses and Ponies

Including  
Percherons, Hackneys, Belgians, Shires, Coach and Saddle Horses

**ALSO JACKS**

GREATEST ENTRY BY ANY INDIVIDUAL FIRM, WE HANDLE ALL BREEDS OF HORSES AND CATTLE.

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**Ruby & Bowers,** Davis,  
California

## I Want You to See My Stock

at the Sacramento State Fair. My showing is headed by El Prado Wayne Colantha, who won second at State Fair in 1916. He looks better than ever. The rest of the string are worth looking over. Don't fail to see them.



**J. W. Benoit**  
**MODESTO** - **CALIFORNIA**

EL PRADO WAYNE COLANTHA, Second State Fair 1916

When writing advertisers, mention The Cultivator.

## The Time to Buy Beef Cattle

Written for California Cultivator By F. F. Stonerod



AR-SEEING cattlemen are not discouraged, by labor conditions and high prices of feed this year and not tempted to sell off their breeding stock, but are conserving every cow that is a possible calf producer and buying the best bulls they can secure regardless of price. They see devastated Europe bidding for foundation stocks to replenish depleted supplies, South America in the market for American beef, America herself running far behind consumptive demand, and a period of reconstruction world-wide in scope which will take every meat animal of breeding quality which can be raised for a generation. Does the breeder or layman ever consider the fact that increased acreage of grains and grasses brought about by abnormal wartime necessity will mean an abundance of cheap feedstuffs after the war is over? Demand will certainly prevent a return to starvation prices to the producer, and it requires but a few minutes with paper and pencil to figure the sure profit in feeding cheap feeds to high-priced beef.

The wholesale liquidation of cows and calves during 1916 is one of the most serious economic problems which confronts America today. Stockmen, lured by the record prices offered by the killers, rushed stuff off to be slaughtered without a thought of the future. The result was an unprecedented run of half finished beef because the feeder was afraid that prime weights could not be secured with high priced feed, in other words he was playing both ends against the middle.

Much speculation has been indulged in as to when the unheard of prices for purebred beef cattle would reach their pinnacle and start the downward trend. Predictions were made all year that the bubble would burst and

leave purchasers of top priced animals with an elephant on their hands so to speak. But the bubble refused to burst and the hundreds of fall sales in the Middle West will in all probability average up with the ap sales.

Here in California and the Southwest conditions are different. This is the great range country, country which turns off more than per cent of the American beef supply annually. Rangemen who have been accustomed to paying \$100 for a yearling are slow to see the advantage to be gained by paying \$200 and \$300 for Spring yearlings weighing 350 pounds or more by poor bulls and those weighing 550 pounds out of good bulls. More than the price difference is the breeding stock. This is the primary reason why California breeders registered beef animals have more or less discouraged in trying to secure a fair price for their bulls. Nowhere else in the country, can a buyer call at a breeding farm and pick up a bull of serviceable age reasonably as he can in California. That the rangemen have not taken advantage of this condition does not speak well for their business acumen. It was the chance of a lifetime to get a supply of good bulls at a little more than beef prices, and yet the average cattleman will sell the same kind of light-boned, featherweight cattle in a spring that he has been selling for a decade. The day of cheap range beef is rapidly passing, and herein lies the wisdom of increasing our purebred herds at any price. Those who speculate at the men who have invested their money in establishing breeding herds at a time when they cost more than at any time in history will live to see these same men clipping coupons as a result of their faith in the future of the beef cattle industry.

## Economic Treatment of Farm Slaughtered Animals

By J. C. Marshall, Inspector of Stock, Victoria, Australia



PROBABLY one of the greatest losses the grower suffers is due to bad skinning or flaying, especially in the case of cattle hides. Knife marks, cuts, ragged edges, and bad shape, together with the fact that they occasionally reach the market in a putrid condition, always spell loss, and many thousands of pounds annually are lost from this cause.

In the flaying of large or small cattle the proper opening up of the carcass is all important, as the ultimate shape of the skin or hide depends on this operation. Probably one of the best methods after sticking and carefully pumping the animal is to skin the head and then put the carcass on its back and prop it in that position by means of a pritch or blocks. Open the skin from crutch to neck in a direct line. Remove the fore feet at the knees and the hind feet at the hocks. Open the skin at the inside of fore legs to the point of the brisket and at the hind legs from hock to scrotum. Always skin tail and leave about six inches of it on the hide. Should the tail be cut out with the skin attached to it, not only a most valuable piece of hide from the butt is lost, but, further, the shape of the hide as a whole is spoiled. The dressing is accomplished by means of a good sharp butcher's knife, saw, and chopper. In flaying one of the main factors is to hold the skin up tight with one hand and drive or thrust the knife with the other. This is done by forcing the knife between the hide and the flesh per medium of the panniculus or "felm." After opening the carcass out on the ground and skinning well down each side, saw through the brisket and aitch. Hang up carcass and finish skinning; after removal of stomach, entrails, and pluck, saw or chop down evenly through the back bone. Use as little water as possible for cleansing, and make sure that it, as well as the cloth used, are clean. After washing the hide free from blood and debris, sprinkle well, espe-

cially at the edges, with clean coarse salt. Fold it up by throwing in side to center, then neck and tail end, and roll up. Efficient, clean and quick salting is necessary, as many putrid "farm" hides reach the city slaughterhouses. Farm-stored hides should be laid away flesh side up in shallow concrete pits, and treated well with clean salt. They will there maintain their own brine, and will keep ready for market, when they may be rolled up. It should be remembered that clean hides fetch more than dirty hides.

### Dressing Calves

In dressing calves for farm use the simplest way to bleed the animal is to lay it on its side and with one cleaver cut across the neck sever all the blood vessels. Next hang up carcass and by slitting the skin from crutch to neck and ringing about the tail open belly carefully, so as not to puncture the intestines. Remove entrails and stomach and split down brisket, then remove pluck. Use no more water, clean than is required. It is not necessary to completely skin the calf at time of slaughter, as portions can be skinned as the veal is required for use, especially in the cool weather. A portion of the stomach of the calf not ordinarily saved by farmers is in demand just now. This is commonly known as the rennet or veal from which the calf rennet extract is derived. It is the fourth stomach of the calf and is sometimes pickled in strong brine of salt and water and the agent employed to convert milk into curd for cheese making. Owing to the present war conditions, the ferment usually employed has risen considerably in value and there is now a keen demand for calf rennets.

The Victorian government cheese expert advises all country calf-killers to save the veils and recommends the following method for procuring and preserving them. After disemboweling the calf lay stomachs and intestines out on a clean board or table and cut away the intestines a few



ches from where they enter the stomach. Separate the fourth stomach from the others and squeeze out contents, but do not wash out. Fill vells with coarse salt and allow to dry. After drying shake out superfluous salt and pack away in small barrels or sprinkling salt between the layers. Another method is to blow up and tie the open ends and allow to dry after the fashion of bladders, but must be exercised to prevent them from being fly-blown.

#### Processing Sheep and Lambs

The knife is not used all the time removing the sheep skin or lamb skin. After "legging" the animal, that is, clearing around the head, knuckles and hocks by means of the knife, turning up, split the skin from pelvis to neck and use the fist and elbow to move the skin. It may be necessary to use the knife a little to clear around the tail. After a few trials it will be found that the pelt will peel off easily. Sheep skins should be hung fleshy side up in a shady, cool place to dry. If it is necessary to keep till several are available for market, paint with arsenical solution to prevent attacks by weevils.

#### Processing Pigs

Probably the most important feature in farm pig killing is in regard to the scald. It is well known that the scalding water be too hot and the hair sets and the cleaning process much prolonged and the work generally badly finished. The sticking operation can be carried out in several ways and care should be exercised not to "shoulder" the animal. Shouldering the pig the knife severs part of the blood vessels in the neck, instead of going into the chest cavity it slips along the outside of the ribs and enters the shoulder, where blood clots lodge to the detriment of the meat. Small pigs may be held in sitting position and then stuck. The knife should be driven in the neck in front of the breast bone, towards the heart, making a deep but small incision. Large pigs must be thrown on their sides and stuck while in that position. Pigs may be scalded in barrels, or tanks, according to the number and being slaughtered at a time. If possible, enough water could be used to nearly cover the animal, and the temperature of the water should be between 140 degrees and 150 degrees Fahrenheit; this heat is obtained by using two parts of boiling water to one of cold. Place the carcass in the tub or barrel and keep it moving as much under water as possible. The tail, ears and feet are first. A few well-directed strokes with a scud or shovel should, in the case of a porker, remove nearly all the hair. The animal ought, if possible, to be finished off in a tub of cold water. If the scald has been a good one very little shaving is required. Hang up and wash with cold water and brush in order to finish the beast prior to opening. The evisceration is done in similar fashion to that suggested for sheep and calves, but care is required to make a neat job of splitting the breast bone. Hang carcass in a cool place out of the wind, so that a good color may be obtained. If the pig is a large coner or chopper, it is advisable, less in very cold weather, to split the carcass immediately after slaughter and remove all internal fat and lean, including the fat attached to the kidneys and aitch.

#### Good Saving

Blood from farm-slaughtered animals is usually lost. All animals for human use should be bled on the same spot and a small cemented pit at the end of an impervious drain used to catch the blood. This may be saved in various ways and put to many uses on the farm. It makes a highly concentrated nitrogenous manure and is well suited for kitchen or flower garden. A good method of dealing with it is as follows: Collect the blood from water and boil, and then spread out on a clean marly patch or ground to dry in the sun. When dry it may be gathered with some of the marl and stored in bags and used as required.

For poultry food the blood should be collected fresh, and after boiling spread in the sun on sheets of iron. It is then be powdered and stored for use. This should be fed sparingly to birds.

Although rarely used for human food purposes it may be so employed.

Healthy pigs' blood is the best for the purpose. The animal should be bled into a clean dish and the blood immediately stirred with a wisp of twigs to remove some of the fibrin, and thus prevent clotting. It may then be mixed with oatmeal, boiled barley, rice or flour, and after seasoning filled into pig casings or sheep and ox bungs to make the various kinds of blood puddings.

#### Edible Fat

In order to get the best results from beef fat for table and cooking purposes, it is necessary to treat it while quite fresh. All beef fat and trimmings, including the caul fat, should be saved clean, sliced and put through a household mincer. The minced fat should then be warmed in an oven at a temperature not exceeding 150 degrees Fahrenheit. This will melt the bulk of the fat. The balance can be rendered at a higher temperature, but care should be taken not to mix the two melted fats, as that which melts at the lower temperature will be found to be of better quality, especially for table purposes. All the rougher fats, whether beef or mutton, may be rendered into tallow after washing clean and cutting into small pieces. The temperature should be much higher for tallow rendering than for edible fats, and care should be taken that the fat does not burn. When running off after straining for storage, stir well while setting, as this prevents seeding, i. e., the granular condition observed when the tallow has set, and further, the stirring will make the material keep better.

#### Tripes

The portion of the stomachs known as the paunch of cattle, calves and sheep can be used for human consumption, and when cleansed and parboiled is known as tripe. The method of preparation is as follows: First empty the stomach of contents and wash after turning inside out, and then scald in the way suggested for the scalding of pigs. Tripe should be scraped clean and white in water of a temperature of about 150 degrees, which may be obtained by using two buckets of boiling water to one of cold. To facilitate the cleaning process tripe may be laid out and beaten with a stick as soon as the lining begins to loosen in the scald. Scrape clean, rinse in clean cold water and, in the case of ox tripe, boil for about five hours. The smaller tripes of sheep and calves should be boiled for a proportionately shorter period. After freeing from all superfluous fat and skin the tripe will be ready for the household.

#### Casings

A fair proportion of the large and small intestines may be utilized for sausage casings. After cleaning they may be salted and saved till required for use. In the saving process the intestines are first run off from the "set" or intact lot of guts freed from adherent fat and turned by means of a turning stick. These runners are then soaked in luke-warm water and scraped perfectly clean of the mucous lining by means of a piece of bone or wood on a level and flat board. Finally they are packed in salt and stowed in barrels till required for use.

#### Bones

Bones may be utilized on the farm, either for cattle or poultry food. While the bones are fresh and green most of the softer ones may be ground and fed to poultry as ground green-bone. If required for cattle they may be burned, and the calcined result pulverized and mixed with the food.

#### Hair

Hog hair, cow tails and other hair in marketable quantities has a commercial value. Hair scraped from pigs should be sun-dried before putting into bags.

#### Other Products

Calves' heads and feet, ox feet and sheep trotters are first prepared for human consumption by scalding. The scalding method is similar to that used for preparing tripe, and the temperature is roughly the same. Ox heads and feet require a little higher temperature in the scald than calves' heads and feet. After striking the scald, place in luke-warm water and scrape clean, using a blunt knife and



## Get Rid of Worms

Figure how much it's worth to you in dollars and cents to keep your hogs free from worms. Worms prevent thrift—retard growth—rob you of good, high-priced pork.

## Dr. Hess Stock Tonic Drives Out the Worms

and at the same time tones and conditions the system. It enables your hogs to be at their best—to do their best. You take no chances. My Stock Tonic is guaranteed. You buy it at an honest price, from my dealer in your town who will return your money if it does not do as claimed.

**Why Pay the Peddler Twice My Price?**

**25-lb. Pail, \$2.25; 100-lb. Drum, \$7.00**

Smaller packages in proportion.

**DR. HESS & CLARK, Ashland, Ohio**

**DR. HESS POULTRY PAN-A-CE-A**  
will help your hens through the moult.

## Dr. Hess Dip and Disinfectant Kills Hog Lice

## FOURTH SEMI-ANNUAL SALE

OF  
KINGS COUNTY POLAND CHINA  
BREEDERS' ASSOCIATION

**Friday, October, 19th**

AT  
Kings County Fair Grounds  
HANFORD, CAL.

**100-Head-100**

**Registered Poland Chinas**

TO BE SOLD WITHOUT RESERVE

The Best from Kings County Herds—Boars of Herd Header  
Quality—Gilts and Sows That Equal the Best

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The advertisers in the California Cultivator are known to be reliable and we recommend them to our many subscribers.



large tablespoon for the purpose. Finish off by shaving with a very sharp knife.

#### Neatsfoot Oil

Calves' feet, ox feet and sheep trotters, after scalding, may be further boiled for the oil which they give off. After boiling in water for a few hours the oil will float on the water. This may be skimmed off and stored in bottles.

#### All Utilized

At city abattoirs practically everything that is derived from the animal is utilized. About the only portion of which use is not made is the paunch contents, and at some of the works even that is subjected to special treatment, being pressed in hydraulic or screw presses to free it from moisture, when it is dried finally and used as fuel.

Provide some shade in the pasture and some shelter from bad weather. The pigs will show their appreciation in increased returns.

#### CAN HE BRING HOME THE BACON

By R. Q. Wickham

He may be fat, he may be tall,  
He may be lean, he may be small,  
The most important thing of all,  
Can he bring home the bacon?

He may not be a handsome gent,  
He may not have an extra cent,  
But always ready with the rent,  
And he brings home the bacon.

It matters little when and how,  
So the man behind the plow,  
Fills the corn crib and the mow,  
And thus brings home the bacon.

It makes no difference how it's done,  
So the man behind the gun,  
Makes the other fellow run,  
And he brings home the bacon.

The Eastern American Berkshire Congress Show and Eastern States Exposition takes place at Springfield, Massachusetts October 12-20. A long list of cash prizes and trophies is offered.

## Field Notes from the Live Stock Men

D. F. Conant of Santa Margarita Rancho writes that he has sold to S. C. Thompson of Fallon, Nevada, a bull calf out of Mamie Owl, 261075. This cow as a two year old made 435 pounds of fat. The calf's sire is Pansy's Gertie, Lad, 104963, whose dam made 539 pounds of fat. Mr. Conant has also just delivered to C. J. Daily of Camarillo a bull calf out of Victor's Lady Dolly, 237739 who has a record of three pounds of butter in one day (official test).

Gotshall and Magruder report the sale of the young sire, Stratford Juliana De Kol, to Hard Brothers of Ribon.

Thousands of head of Texas cattle will be transferred to grazing sections of Arkansas, Mississippi and Alabama. This great movement of livestock will be under direction of agents of the federal department of agriculture.

Eastern creameries and cheese factories are making appeal for trained workers and dairymen generally in sections of the country are crying for trained dairy help.

The famous Dome Building on Illinois state fair grounds at Springfield recently destroyed by fire. The old building, which was valued at \$150,000, was a noted landmark. Its loss was seriously felt just before the annual fair.

State and county fairs generally over the East this year announce exceptionally large showings of draft horses. It was feared some months ago that the draft horse class would show exceptionally light entries. The prospect at this moment is favorable.

It costs \$104.06 to raise a horse three years of age under general conditions as they exist over the United States.

# Bassett's Poland Chinas

Prize Winners  
Profit Producers  
Sure Breeders  
Good Dispositions  
Splendid Mothers



Large Litters  
Healthy Pigs  
Quick Growers  
Easy Keepers  
Money Earners

This sow of splendid individuality and type is bred right, there is

## NO BETTER BREEDING IN THE WORLD

She was sired by Chief Picture 3rd and is also strong in Hustler blood. Her sire's dam, Lady C. I. Know, was Grand Champion at the Alaska-Yukon Exposition at Seattle. Her sire's dam's sire was Reserve Grand Champion at the same fair and also won Grand Championship in the same year (1909) at Sacramento, at the Oregon State Fair, and at the Portland Live Stock Show.

Booking Orders for Her Pigs, Spring of 1918 Delivery

SEE MY HERD AT SACRAMENTO STATE FAIR

# M. Bassett

HANFORD

CALIFORNIA

# Butte City Ranch Live Stock

## Shorthorns

Herd of 50 headed by Victor Stamford, grandson of Whitehall Sultan.

YOUNG BULLS and  
HEIFERS FOR SALE

## Shropshires

Stock headed by International Winner.

Hardy sheep grown under natural conditions.

## Berkshires

Herd of 150 with best families of the breed represented.

STOCK OF ALL AGES  
FOR SALE

## Ponies

Shetland and Welsh ponies, all ages, broken and unbroken.

Outfits furnished.

BUTTE CITY RANCH, Box C, Butte City, Glenn Co. Cal.



A spectacular stunt is being pulled off in Washington by the maintaining of a flock of sheep on the White House lawn. The idea is to encourage or attract attention to the sheep industry. Present prices of wool and of mutton will accomplish far more, however, in this direction.

Some "medium bright" wools have been sold in Boston at 70 and 72 cents. Some Montana clips in original bags sold at 66 cents, which means \$1.70 cleaned. The farmers generally over the East are paying \$10 and \$11 for aged stock and \$13 to \$16 for yearling ewes for breeding purposes. More general interest was never shown in picking up breeders.

The Dairy Cattle Congress will be held at Waterloo, Iowa, October 1-7.

Holstein breeders of Kentucky have organized a state organization. The president is J. V. Bowles, Bardstown.

The Bureau of Markets, United States department of agriculture, is now issuing reports showing carlot shipments of cattle, hogs, sheep and horses.

Secretary Houston of the United States department of agriculture has ordered amendment of regulations

governing interstate movement of livestock which provides that swine given "simultaneous" inoculation shall be held under supervision at public stockyards not less than seven days. Formerly the regulations called for a 14-day quarantine.

A total decrease of 115,005,000 in the world's meat producing animals is shown in a comparison of present with pre-war conditions. While the increase of cattle in the United States was 7,090,000 during this period, the total world decrease was 28,080,000. Sheep decreased 3,000,000 in the United States, and 54,500,000 in the world. Hogs increased 6,275,000 in the United States, but decreased 32,425,000 in the world supply.

The McAlister Holstein herd at Chino has been making some creditable performances during the past nine months. Several state records have been broken during this period. The hot weather has not caused a postponement of the official test work as shown by the remarkable record of the senior three year old heifer, Meta Ward Kuperus, whose photograph and record appear in this issue. The McAlister boys call her the champion hot weather cow of the

state, and she has earned the title. This makes no less than eight heifers in the McAlister herd to break state records since last November. Forty-six cows have freshened in the last eight months, three of which have made over 31 pounds butter in seven days; 19 made over 25 pounds butter, and only two heifers made less than 20 pounds. Seven two year olds made over 20 pounds butter with their first calves. Twenty cows from two to four and one-half years of age have averaged 27.91 pounds butter in seven days. Individually and collectively this is a great bunch of A. R. O. cows and reflect great credit on their owners.

Follyland Nancy (52457), a two-year-old Guernsey heifer, bred and owned by I. C. Blandy of New York, recently completed an official year's record of 12270.9 pounds of milk and 712.60 pounds of butterfat, her average test being 5.8 per cent. Three weeks after finishing her record she dropped a fine heifer calf, which is now growing well.

O. Harris, the noted Hereford breeder of Harris, Missouri, has been visiting his son, Clifford B. Harris of Los Angeles, who represents the Harris interests in California. This was a

vacation trip for the elder Harris, who was much in need of a rest after a strenuous year of Hereford sales, events which will stand out in bold relief as long as Herefords are bred in America. More than 500 head of the Harris cattle sold for a grand average of approximately \$1400 per head and shattered all existing records for the breed. The great show and breeding bull, Repeater 7th brought \$27,000; Gay Lad 16th sold for \$20,000, and a number of others in four and five figures. Mr. Harris returned to his Missouri home via Canada. He is an ex-president of the American Hereford Breeders' Association and is still a director. He is a director in the American Royal and Chicago International shows and is one of the deans of American Herefordism.

C. B. Cunningham of the Billiken Herd writes as to that great Chester White, Billiken, No. 375....7, that he will be at the coming state fair. Some Chester White breeders in California think this is one of the finest Chester boars yet produced. He was sired by William A, he by Billy A, and he by Wonder. His dam is Elmo's Pride, she by Hiland Chief who traces back

# KING SADIE VALE ROSE

One of the Best Sons of KING KORNDYKE SADIE VALE



His sire, KING KORNDYKE SADIE VALE is the only son of a 40 pound cow having a 40 pound daughter. Is the only sire having a 40 pound daughter, whose sire also has a 40 pound daughter. His first 13 daughters to freshen averaged more than 26 pounds in 7 days. Among his daughters are a 40 pound three year old and a 29 pound 2 year old.

THIS SON OF THE MOST SENSATIONAL TRANSMITTING SIRE OF THE BREED WILL BE GIVEN EVERY OPPORTUNITY IN THE TAGUS HERD.

**Duroc Jersey Hogs**  
SENIOR HERD SIRE  
**California Defender**  
World's Fair Champion Boar

The get of Defender are winning laurels in the show yard and have improved many herds in the state from the standpoint of pork production.

**Hulett C. Merritt**  
PRESIDENT

**Tagus Ranch**  
(PACIFIC STATES CORPORATION)  
**TULARE, CALIFORNIA**

**H. C. Merritt, Jr.**  
V. PRES. and GEN. MGR.



GERTIE'S GOLDEN VICTOR 154555  
Dropped February 15, 1916—Solid color, Golden Fawn

## WORLD'S RECORD BREEDING

Gertie's Lad 70050, sire of Gertie's Fern Princess, 625 lbs. butter at 2 years of age, and many OTHERS.

Victor's Lasserohn 237740 R. M., 536 lbs. butter, one year.

Rosaire's Golden Lad 64554, sire of three former World's Record cows up to 990 lbs. butter.

Gertie of Glynlyn 74474 made 16,780 lbs. milk, 990 lbs. butter, former World's Record. Also dam of World's Record daughter.

Lady Letty's Victor 65020, son of World's Record cow, and held World's Record for number of two year old daughters in Register of Merit.

Lasserohn 216823, two R. M. daughters.

**A. A. Jenkins Tulare, California**



# Greatest Proven Sire in the West

**PRINCE  
GELSCHÉ  
WALKER  
81663**



**AGAIN  
at the HEAD  
of  
OUR HERD**

***Judged from every angle, the distinction of being called the "Greatest Bull in the West" is justly due Prince Gelsche Walker.***

He is backed by the most consistent array of high producing and prepotent ancestors of any bull in the West, with the possible exception of King of the Black and Whites, who comes of the same family.

Every one of his first seven sires have produced a 30 pound daughter and all but one have sired two or more.

Five of his seven nearest dams are 30 pound cows, the seven averaging 29.60. Five of the seven have produced 30 pound daughters and the other two have young daughters that bid fair to exceed this mark.

His dam with her dam and grand dam form one of the few instances of three generations of 30 pound cows and the only family in the world in which two 30 pound cows appear in the third generation.

It is this great inheritance of production blood that has enabled the daughters of Prince Gelsche Walker to break no less than 15 state records for milk and butter before any have reached mature age.

He is the only sire in California with two daughters that average over 35 pounds butter in 7 days.

He is the only sire in California with two two year old daughters averaging over 25 pounds in 7 days and 98.75 pounds in 30 days.

Out of 15 tested daughters seven two year olds average 20.45 pounds.

He is sire of—

Miss Valley Mead De Kol Walker,

36.81 at 3 yrs. 5 mos., State Record.

25.68 at 2 yrs. 6 mos., State Record when made.

30 days, 102.38 at 2 yrs. 6 mos., State Record when made.  
8 months after calving, 21.33 at 2 yrs. 6 mos., World's Record.

Butter 8 months (strictly official), 754.24 at 2 yrs. 6 mos., State Record.

Lady Hiske Walker,

34.25 at 4 yrs. 4 mos., State Record.

Nutula Queen Alcartra 3rd,

24.46 at 2 yrs. 6 mos., State Record when made.

30 days, 95.16 at 2 yrs. 6 mos., State Record when made.

Miss Gelsche Walker Korn.,

23.17 at 2 yrs. 4 mos., State Record when made.

30 days, 94.86 at 2 yrs. 4 mos., State Record.

Inka Tritomia Walker, 21.39 at 2 yrs. 6 mos.

30 days, 87.22 at 2 yrs. 6 mos.

365 days, 817.11.

Miss Valley Mead De Kol Walker was awarded \$98.00 prize money in her two year old form by the Holstein Friesian Association of America, which we believe is more than was credited to any other cow. Two of his daughters were awarded \$165.00 in prize money last year by the National Association.

These are only a few of the evidences of unquestionable superiority and transmitting power of Prince Gelsche Walker. His career is only well started, having as yet no daughters at mature age. His sons already head a number of pure bred herds and will add to the fame of this family when their daughters are tested.

***A son of this famous sire placed at the head of your herd will bring the greatest possible return. His granddaughters will be in great demand at high figures.***

We have for sale what we believe to be one of his very best sons. He represents what has proved to be an extremely fortunate cross. He is full brother to the state record junior 4 year old 34.25 and 75 per cent brother to the state junior 3 year old 36.81. His dam is a 26.87 pound daughter of Juliana King of Riverside and has a good yearly record.

This youngster is right individually, perfectly straight and about three-fourths to seven-eighths white. He has another full sister coming on and a full brother already in service in a pure bred herd.

Also have several of his sons that will make ideal sires for high class grade herds.

Pedigrees and detailed information by request.

**A. W. Morris & Sons Corporation**  
**Woodland Cal.**



o Chicksaw Chief. Elmo's Pride was two times grand champion at the Interstate Show at Sioux City.

Finding the number of cows in their herd far too small to supply the increasing demand for their famous brand of guaranteed milk, the Elliott Brant Company of Los Angeles County decided to enlarge their herd. With this object in mind D. O. Brant went East a few weeks ago and according to his own statement he had considerable difficulty in buying the number and quality he wanted. Before going East Mr. Brant tried to get cattle on the coast but was unsuccessful. He says that the bidding for high class Guernseys at the big Eastern sales this year was remarkable. Mr. Brant travelled through Pennsylvania, New York, Massachusetts, New Hampshire, and Maine before he found the seventy odd head he shipped out. There were about 40 yearlings and 32 head of two

year olds and up in the shipment. There were 17 head of Langwater bred stock in the lot, including a beautiful bunch of heifers. There were also seven imported cows in milk. This concern now owns one of the very largest Guernsey breeding establishments in the West. Including the last importation there are over 140 head of high class animals. The results of their first two years of official test work show an average production of 10,172.28 pounds of milk and 507.97 pounds of fat for the herd, truly a remarkable record. While the show yard is not neglected the utility type receives first consideration, and the results attained on the Elliott Brant ranch are proof sufficient of both the capacity of the animals for production and the able management of the extensive business. The company supplies the most exclusive Los Angeles trade with its product.

## Work of Agricultural Clubs

By Chas. L. Hampton

This 12-year-old boy, Stewart Duhig of Napa County, represents one of over 2000 elementary school agricultural club boys of California. A high school agricultural club boy is the

fice of district club leader, as agents of the United States department of agriculture in the states relations service working under the Smith-Lever Act of 1912. Their duty is to super-



Work of a 12-year-old

Ohio Improved Chester White barrow, age 6½ months, weight 305.5 pounds. Bred by H. C. Melone. Raised in a four-months' economical pork producing contest by a 12-year-old boy, Stewart Duhig of Napa County. The contest began when the pig was 6 weeks old. Gain in four months 247.5 pounds, average daily gain 2.06 pounds, gross profits at 14 cents a pound \$42.77, net profit \$18.38.

local leader of each elementary agricultural club. This method of supervision was started by the boys of the Napa High School Agricultural Club in 1915. As a result of their success the government has appointed 16 high school agricultural teachers to the of-

vice all agricultural club work carried on by the boys of the high school and by boys of the last three grades of the elementary schools.

The agricultural club work consists of animal and crop contests.

## Preventing Increase of Cholera

Recommendations by the department of agriculture:

Locate your hog lots and pastures away from streams and public high ways and do not allow your hogs to run on free range or highways nor to have access to canals or irrigation ditches.

Do not visit your neighbor's farm or allow him to visit you if he has hog cholera on his premises.

Do not drive into hog lots after driving on public highways.

Do not use hog lots for yarding wagons and farm implements.

Do not place newly-purchased stock, stock procured or borrowed for breeding purposes, or stock exhibited at county fairs immediately with your herd. Keep such stock quarantined in separate pens for at least two weeks, and use care in feeding and attending stock to prevent carrying infection from these to other pens.

Burn to ashes or cover with quicklime and bury under four feet of earth all dead animals and the viscera removed from animals at butchering time, because they attract buzzards, dogs, etc., which are liable to carry hog cholera infection.

If hog cholera appears in the neighborhood confine your dog and encourage your neighbor to do the same. Mange, lice and worms lower the vitality of hogs, rendering them more susceptible to disease.

Have all hogs treated immediately with anti-hog cholera serum, after which they should be kept on a light diet, with pure drinking water, and confined to limited quarters that

should be cleaned and sprayed three times a week with "1 part of compound cresol solution to 30 parts of water," until the disease has abated in the herd.

To obtain the best results the serum must be administered as soon as the disease is detected in the herd. Be sure that the temperature of all hogs is taken. A temperature above 104 degrees Fahrenheit in ordinary weather and when the animal is not excited indicates infection, and such hogs require an increased dose of serum.

Remove all manure and mix it thoroughly with quicklime.

Burn all litter, rubbish and old hog troughs.

After the premises are thoroughly cleaned, spray walls, floors and other surfaces, including remaining hog troughs, etc., with a disinfectant (1 part compound cresol solution to 30 parts water). Where hog houses are small, turn them over, exposing interior to sunlight. Clean premises, properly exposed to sunlight, will not retain infection any great length of time.

Wallow holes and cesspools should be filled in, drained, or fenced off.

All runs underneath buildings should be cleaned and disinfected and then boarded up to keep hogs out.

Destroy hogs that do not fully recover, as they may be carriers of cholera infection.

Ventura has recalled its arrangements for a county fair and will hold none until 1918.

## MARSH'S Big Type Poland Chinas



Model Major

Won 1st 1916, State Fair, 1st and Grand Champion, Modesto; 1st and Grand Champion, Sweepstakes and Gold Medal, Fresno. A sire whose get are of uniform excellence, attaining great weight at an early age and will win in the show yard. His pigs are great-sellers.



I B A Wonder

Reserve Champion P. P. I. E., 2nd aged Boar, Sacramento, 1916. Stands on 11¼-inch bone and scales 1000 pounds. One of the Great A Wonder's best sons.



Smooth Orphan

A true to type young sire of close up Hadley breeding and makes a wonderful cross on Model Major sows. Great spring of rib, heavy hammed and from a prolific strain.

## 3 Greatest Boars in America

My 14 sows averaged 8 pigs to the litter raised this year because big litters of uniformly good pigs are my hobby.

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MONEY BACK GUARANTEE**

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**MODESTO, Stanislaus County, CALIFORNIA**

**Southern Pacific  
or Santa Fe**

**Visitors Always  
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EXHIBITION HERD AT STATE FAIR



# Cottage Gardens Jersey Farm

**BREEDERS OF PURE BRED JERSEY CATTLE**



Financial But-  
tercup Noble.  
316029

328.16 lbs. but-  
ter in 8 months,  
still on test.



Sans Alois  
Satin 276154

10,756.1 pounds  
milk, 717.14 but-  
ter, 5.67 per  
cent fat, 3 year  
old.



Financial Maj-  
esty Fancy  
335392

Just freshened  
and will go on  
test.



NOBLE LORNE FINANCIER 124737

Bred by H. A. Van Pelt, Waterloo, Iowa

The Cottage Gardens Jersey Herd was selected for productive capacity first, then for Conformation, Type and Beauty. The leading females of the herd were secured from such well known breeders as the Chas. E. Pratt Estate, Dosofis Park, L. I.; Waterloo Jersey Farm, Hugh G. Van Pelt the famous judge of cattle of Waterloo, Iowa; Edmund Butler, Mt. Kisco, N. Y.; W. R. Spaun, Shelbyville, Ky.; and direct from the Island of Jersey.

A few Choice Bull Calves to spare, which will be priced according to individuality and records of Dam.

## Cottage Gardens Jersey Farm

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Dairy Ranch at Charlotta, Humboldt County, California

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**A complete line of Coniferous Evergreens and**

**Dutch Bulbs**

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**Has Imitators But No Competitors.**

**A Safe, Speedy and Positive Cure for**  
 Curb, Splint, Sweeney, Capped Hock,  
 Strained Tendons, Founder, Wind  
 Puffs, and all lameness from Spavin,  
 Ringbone and other bony tumors.  
 Cures all skin diseases or Parasites,  
 Thrush, Diphtheria. Removes all  
 Bunches from Horses or Cattle.

**As a Human Remedy for Rheumatism,  
 Sprains, Sore Throat, etc., it is invaluable.**  
 Every bottle of Caustic Balsam sold is  
 Warranted to give satisfaction. Price \$1.50  
 per bottle. Sold by druggists, or sent by ex-  
 press, charges paid, with full directions for  
 its use. Send for descriptive circulars,  
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 The Lawrence-Williams Co., Cleveland, O.

## Prepare for Fall Calving

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### HOOD FARM BREEDING POWDER

In order that you may treat every cow after calving with this Powder. It is the most economical thing you can do, because it keeps cows in a normal, healthy breeding condition; makes them clean quickly; breed readily; there is less use of the bull, and little danger from abortion. You should also order

**HOOD FARM CALF SCOUR TREATMENT**  
 consisting of Hood Farm Calf Scour Remedy and Hood Farm Digestive Powder. Include in the order


**HOOD FARM MILK FEVER OUTFIT**  
 and  
**HOOD FARM GARGET REMEDY**

and you will be well prepared to meet the emergencies which frequently arise at calving time.

Prices, information and advice gladly given. Mention this paper.

**C. I. HOOD Co., Lowell, Mass.**

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**SPAVIN TREATMENT**

**Known for 40 Years as Kendall's Spavin Cure**

**A New Name But the Same Old Reliable Remedy**

**FARMERS and horsemen everywhere will be glad to know that this change is in the name only—that there is no change whatever in the famous old-time formula that has rendered such remarkable service in horse ailments—Bone Spavin, Ringbone, Splint, Curb, Sprains and Lameness—by the counter-irritant method.**

**Whether you get Kendall's under the old label or the new, the quality and efficiency is the same old reliable—with a 40-year-old reputation.**

**Get it of your druggist—\$1.00 per bottle—six for \$5.00—and ask for book "Treatise on the Horse"—or write**

**DR. B. J. KENDALL CO.**  
 Enosburg Falls, Vt.

When writing advertisers, mention the Cultivator.

## Bodega Cow Testing Association

By E. C. Voorhies

**P**ROOF as to the results of the work of cow testing associations is often asked by many of our dairymen. These men are usually desirous of seeing just where testing is going to benefit them.

The Bodega Cow Testing Association has just completed its second successful year, and a complete summary of the records shows where improvement has been brought about and also points toward need for further improvement. Due largely to the conscientious work of Matthew Resindes as tester, this association in one of the oldest dairy sections in California has prospered.

The following are summaries for two years' work. Records of six months duration or over are included in the summaries. All records of under six months duration are left out.

Butterfat—Lbs.	1st Yr.	2nd Yr.
Less than 100	34	9
100-125	49	47
125-150	81	97
150-175	125	131
175-200	120	122
200-250	184	189
250-300	78	86
300-400	15	27
400-500	1	—
500-600	—	1

The second year shows a decided advantage over the first, especially in the number of cows falling under 100 pounds of fat. The first year of the work practically five per cent fell under the 100 pound mark while the second year reduced this number to a trifle over one per cent of the total. Merely this in itself is proof enough as to the value of the work.

Oftentimes dairymen are found who admit that it is a good thing to test for a year or so but fail to see why it is necessary to continue the work. A glance at the summary for even this last year should show the intelligent dairyman why he should continue.

The Sebastopol Bank donated \$40 to be distributed among the owners of herds numbering 24 or under. Best herd—24 or less, \$15. This prize went to C. Welling with a herd of eight which averaged 220.59 pounds butterfat (for all cows) or 245.9 pounds butterfat (considering those with lactation periods of six months or over). Best 10 cows in herd 24 or less—\$10. David Gleason won this with 10 cows averaging 248.33 pounds fat. Best cow in herd 24 or less—won fat. Best cow in herd 24 or less, \$10—won by C. Welling 311.76 pounds butterfat. Highest record for a three-year-old in herds 24 or less—\$3.00—won by C. Welling, 255.13 pounds butterfat. Highest record for a two-year-old in herd 24 or less, \$2.00. Won by David Gleason, 240.29 pounds butterfat.

The Dairyman's Bank of Valley Ford donated \$60 to be used for prizes in herds of over 25 cows. For the best herd of 25 cows or over, \$20, won by Edward Gleason. Average 217.43 pounds of fat for all cows (32). Average for those with lactation periods of over six months (30 cows), 221.9 pounds fat. Best 10 cows in herd of over 25 cows \$10, won by J. D. Williams, average 343.92 pounds butterfat. For the best cow, \$10. J. D. Williams won this on a record of 591.75 pounds butterfat. For the best three-year-old, \$7.50, won by J. R. Gallagher, 249.45 pounds fat. For the best two-year-old, \$5.50, won by Ed Gleason, 229.59 pounds fat.

John Sereni of Fresno in addition to the above prizes offered a ton of alfalfa hay to the owner of the highest producer. This was won by J. D. Williams on his 592 pound cow. It might be interesting to note in this connection that during the first year of the association the highest record was 421.57 pounds butterfat. This year the highest milk record was 9103 pounds milk, while for the first year it was 7921.3 pounds.

Dairymen who are unfortunate enough to be outside the limits of a cow testing association can do much toward doing their own testing if they can spare the time once a month. Information will be gladly given and the necessary books furnished to those who are desirous of doing this work themselves, by applying to Animal Husbandry Division, University Farm, Davis, California.

## The 100% Silo

is the silo that's built of California Redwood. Think up all the good points a silo material should have—you'll find every one of them in

## California Redwood

*Resists rot and fire*

**Permanent**—contains a natural preservative that prevents decay. Not affected by sun, rain or violent changes of weather.

**Will not shrink, warp or swell**, when properly seasoned.

**Non-conducting**—Redwood retains the heat necessary for perfect fermentation of silage, keeps out cold, prevents freezing.

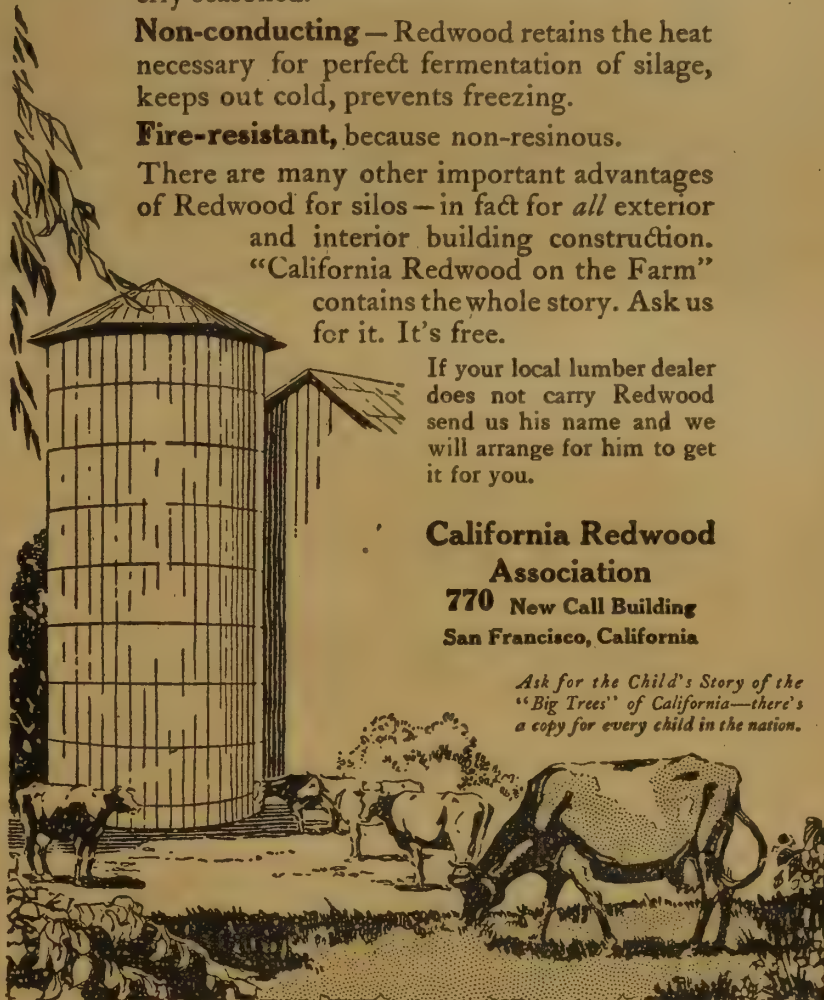
**Fire-resistant**, because non-resinous.

There are many other important advantages of Redwood for silos—in fact for all exterior and interior building construction. "California Redwood on the Farm" contains the whole story. Ask us for it. It's free.

If your local lumber dealer does not carry Redwood send us his name and we will arrange for him to get it for you.

**California Redwood Association**  
 770 New Call Building  
 San Francisco, California

Ask for the Child's Story of the "Big Trees" of California—there's a copy for every child in the nation.



## Book Your Orders

Now for a boar to head your herd from this grand sow. She traces directly to the splendid ancestry of Good Enuff on Sire's side, to Ohio Chief on Dam's side. Can you beat it? Come to the farm and see these fine Youngsters. They are sired by Oregon Defender, by Defender, the \$5000. boar, twice Chicago International Grand Champion. They are good enough for any one.

**H. P. Eakle, Jr.**  
 Woodland, Cal.



Belle's Good E Nuff 5th

**ANDREW H. McINNES**  
 Red Bluff, California

**Will Exhibit at the California State Fair**  
 Sacramento, Cal., Sept. 8th to 15th Inclusive

## 66 Head of Pure Bred Shropshire Rams

**This Stock all Registered from Noted Herds and will be For Sale at Close of Fair.**

## INNISFAIL DAIRY SHORTHORNS

Herd of sixteen to be exhibited at State Fair, including three imported females and two yearling bulls. The latter, of high producing dams, for sale. All milk records official. Herd in charge of Dr. Little of Wisconsin will make circuit of county fairs.

**Alexander & Kellogg**

Farm on Grisley Island

SUISUN, CAL.



# 20 Great Sows

## OPPORTUNITY KNOCKS AT YOUR DOOR

Now is the time to start right in the hog business or add to your herd



On October 17th I shall sell at the Kings County Poland-China Breeders' 4th Semi-Annual Sale at Hanford,

12 TRIED BROOD SOWS 8 BRED GILTS

### Two Herd Boars

These are show animals and proven breeders. THEY ARE MY BEST.

The boars ROYAL KING and ROSEBUD CHIEF are second to none and deserve the attention of anyone wanting the highest type of boar to head their herds.

SEE THEM AT STATE FAIR

## W. BERNSTEIN

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# LAKE SIDE STOCK FARM

Large Medium Poland Chinas

CALIFORNIA'S IDEAL MARKET HOG

WE HAVE A LARGE NUMBER OF FINE GILTS FOR SALE, ALSO A FEW CHOICE BOARS

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### MORE CATTLE

"Increased production of cattle, sheep and hogs is vital to save the world from a meat famine."

Ten years ago we had more beef cattle and fourteen million less population than we have now.

Our total number of cattle on hand January 1, 1917, 63,617,000 shows an increase, but of this number only 40,849,000 are beef cattle. In proportion to population and war needs our meat supply has greatly decreased.

The United States has only 739 cattle to the thousand of population and this includes dairy cattle.

Germany had 327 cattle to the thousand of population, has starved for meat fats, and has been an importing meat nation for years, dependant on other countries for its beef supply and supply of dairy products.

Cattle in Europe are estimated at over twenty-five million head, less than when the war started.

The export of meat and meat products has greatly increased.

The forest service officials estimate 15,000,000 cattle grazing on open ranges in the western states. This is a tremendous portion of the entire beef supply, as the western cattle are the source of supply drawn upon for stock cattle and feeders.

Every hoof of beef finished from grass saves much forage and grain for other use.

There is less net profit on running open range cattle than three years ago as feeder prices have not advanced in proportion to expense.

The Western cattleman who produces cattle must have a fair profit and cheap money, if the cattle are to be increased to bear the burden of war demands.—A. L. Spellmeyer.

### TYPES OF SILOS

There are two general types of silos: Pit silos, or silos built partially or wholly below ground; silos above ground, built of wood or of masonry. The masonry silo is commonly built of concrete hollow blocks, clay blocks or hollow brick, solid concrete, built by pouring concrete into form: sometimes called the "monolithic silo," concrete plastered on metal lath. All masonry silos should be reinforced with steel.

The essential features of a well designed silo can be summed up briefly as follows:

The walls should be practically airtight.

The inner surfaces should be smooth and perpendicular.

The inner surfaces should be free from corners. Round silos are more efficient and economical than other types.

The walls should be sufficiently non-conducting to prevent excessive freezing, especially so when the silage is to be fed during cold weather.

The walls should be sufficiently firm or sufficiently well anchored to prevent cracking due to settling or racking due to wind.

The doors should be so designed that a minimum amount of silage has to be removed before they can be opened.

A good ladder should be provided with steps from 15 to 18 inches apart and at least 3½ inches away from the silo or walls of the chute.

The foundation should be heavy, well made and reach below the frost line.

A good roof makes the silo more durable, adds greatly to its appearance, and if tight assists materially in keeping the silage from freezing.

Silos which have the above features will be found convenient, cause little trouble and when properly filled will keep the silage in perfect condition.

The Waterloo Dairy Show, October 1-7, will undoubtedly be the best ever this year. Practical demonstrations of every phase of the dairy industry will be made. Breeders representing 15 states have already placed entries. The premiums offered for Jerseys, Guernseys, Ayrshires and Holsteins aggregate \$8000. The national breed associations and clubs offer special premiums.

E. A. Temblin of Swift and Co., Chicago, has been chosen to make the long journey to Buenos Aires where he will judge the bullocks at the fat stock show. He has judged carlot classes at the International several times with satisfaction.

## CUTTER'S BLACKLEG PILLS

"California's Favorite" for nearly 20 years

For the Prevention of Blackleg in calves and young cattle

Their superiority is due to nearly 20 years of specializing in "Vaccines and Serums only."

Year in and Year Out they give better satisfaction than any other vaccine made, and the cost of a few cents per dose is cheap insurance against a disease that always takes the fattest and best.

Single Pills may be used for ordinary and range stock.

Double Pills should be used for pure bred and high grade stock.

Use any Injector, but Cutter's simplest and strongest.

Prices:

10 dose pkge. Single pills \$1.00  
50 dose pkge. Single pills 4.00  
10 dose pkge. Double Pills 1.50  
50 dose pkge. Double Pills 6.00  
Cutter's Pill Injector... 1.50

Insist on Cutter's. If unobtainable, order direct.

Write for new booklet, "The Control of Blackleg." It tells about Anti-Blackleg Serum which cures Blackleg and may be used simultaneously with vaccine to combat outbreaks and safely protect valuable stock.

The Cutter Laboratory, Berkeley, Calif.

The Cutter Laboratory of Illinois, Chicago  
Eastern Agent

## Sunnyside Holsteins



Lady Leola

Butter, 7 days, 28.08 pounds

Now is the time to buy Holsteins. We have the kind you want at attractive prices. Come to Sunnyside and look them over.

R. F. Guerin

Visalia

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STOCKMEN: Stop at the

## GATES HOTEL

FIRE-PROOF LOS ANGELES

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Garage in connection

Take Taxi at Station at our expense

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A. F. MOLINA, Chief Clerk



## Moldy Silage



**FAILURE** to properly exclude the air which is essential to fungus growth is the principal cause of moldy silage, according to a writer in *Practical Dairyman*. This is explained several ways and one of the most

organisms are kept from them. The acid destroying organisms are certain molds and *Oidium Lactis*. When these destroy the acid present, the sour milk and silage will spoil and decay. It is an important fact that these acid destroying organisms re-



Moorland Johanna Haskins

Came within one day of breaking the state record in the junior three-year-old class. She made 32.87 pounds butter, 414.8 pounds milk, and tested 6.33 per cent fat, one of the highest testing animals of the breed. Owned by W. K. Abbott.

reasonable is that given by the Connecticut experiment station as a result of its six-year investigation of silage fermentation. The investigators state that silage fermentation is similar to that which occurs in milk; "that soured milk is pickled milk as silage pickled corn, pickled by the acids produced from the sugars by the acid bacteria. Soured milk and silage will keep as long as acid destroying or-

quire the presence of air. To keep silage, then, is to keep air from it.

Other investigators have given other theories as to the exact cause of moldy silage, but all unite on the essential point—to preserve silage air must be kept from it. The data given in the particular instance under discussion is insufficient to determine the exact cause of the moldy silage, but it is doubtless due to the failure to comply

with one of the following essentials of silage preservation:

The silo should be sufficiently deep to provide for good settling and packing; the walls should be as impervious to air as possible, and noncon-

ducting to heat, cold and moisture.

Corn should be ensiled as the ear begins to glaze.

Corn should be cut fine and packed firmly so as to exclude as much air as possible.

## Shorthorns

**Paicines Ranch  
Company**

Offers for immediate delivery both registered and unregistered weanling bull calves. For prices and particulars apply to,

**David J. Stollery**

320 Sharon Bldg.  
SAN FRANCISCO, CALIF



## El Dorado Coconut Oil Cakes

FOR MILK COWS and CHICKENS, HORSES  
YOUNG PIGS and HOGS

Cheapest Food in the Market Today

If Your Dealer doesn't carry it, address

**EL DORADO OIL WORKS**

433 California Street

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## Brighton Farm Herds

Established 1880 37 Years in One Family on One Farm

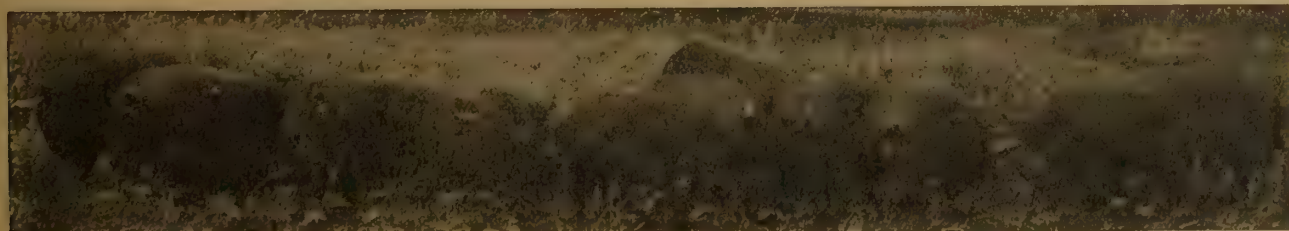
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Perkins, SACRAMENTO COUNTY, California



## SHORTHORNS

We have for sale seventeen yearling and two year old Shorthorn bulls, as good as we ever offered for sale, large, girthy, heavy boned bulls of strong individuality and breeding. We also have ten under a year bulls that will please any breeder or range man, also a few choice females that will be bought by the first man that wants females and sees them.



## BERKSHIRES

Our Herd carries the best strains of blood in America, the individuality of which is shown by our consistent winning throughout the state and district fairs. Our Herd is headed by the great breeding and show boar, Artful King 11th, 210779, second prize boar at the National Swine Show at Omaha, 1916. Our brood sows consist of such noted animals as,

Symboleer's Belle, 192393, farrowed 32 pigs in last two litters.

Legal Duchess, 212916.  
Rookwood Lady 83rd, 207887.  
Mayfield Laurel 10th, 238170.  
Mayfield Laurel 11th, 238171.  
Mayfield Laurel 15th, 238172.

and other sows of equally high breeding. Choice young stock for sale at all times. All matured stock guaranteed breeders or an animal of equal value given in place.

Our winnings on Shorthorns and Berkshires on the 1916 circuit of California fairs were: 24 champions, 51 first prizes, 30 second prizes.

Meet us at the State Fair, see our exhibit and visit our farm four miles from Fair Grounds.



The leaves and heavier portions should be well mixed and evenly scattered over the surface during the filling.

If fodder and weather are very dry, water should be added. If too dry, corn will not pack or ferment sufficiently to prevent fungus growth.

Not less than 1½ inches should be fed from the surface each day after the silo has been opened.

The corn should be spread during

the filling and not allowed to heat in a pile.

Silage should not be dug into when hot, or the surface, either as a whole or in spots, be broken deeper than necessary for the day's feed.

New South Wales has a workmen's compensation law covering all employees except those receiving a yearly income above \$1518 or casual workers.



WHAT kind of silo to build must be determined by each man according to individual circumstances and preferences. The size to build should be determined by the number of stock to be fed. The following table is from a bulletin of the Missouri experiment station and is intended as a guide to the dairyman who is going to

build a silo. The requirements of beef cattle will not be greatly different, and if one wishes to feed silage for more than the six months' period for which the estimate is made, will be easy to figure out the size required on a proportion basis. In case the silo should be large enough to hold a little more silage than likely to be needed. There are of times in the early and late summer when the silo is needed to supplement pastures, so that it is best not keep too close to the actual requirements of the six months for which figures are made.

The table follows:

Number of cows in herd.	Feed for 180 days.		
	Estimate of silage consumed, tons.	Size of silo. Diameter feet.	Height feet.
10	36	10	25
12	43	10	28
15	54	11	29
20	72	12	32
25	90	13	33
30	108	14	34
35	126	15	34
40	144	16	35
45	162	16	37
50	180	17	37

#### BATTLING FOR EFFICIENCY

THE Traction Engine and Implement Dealers' Association reports prospects exceedingly bright for the second annual demonstration which is scheduled for September 18-22. The location is accessible being on the Vall Ranch two miles east of the end of the Stephenson Avenue car line, Los Angeles.

There are 650 acres in this tract and it is expected that it will all be thoroughly plowed at the end of five days.

Tractor farming has been brought down to a fine point of efficiency, as just as in all other phases of modern farming, it had to have many trials and many eliminations before reaching its ultimate degree of success. It is the purpose at this coming demonstration to illustrate to each ranchman and grower just what he himself might do on his own ground with a tractor.

A splendid exhibit is being arranged that will prove of tremendous interest and drawing power to thousands. A long list of representative and reliable merchants are planning on displays of their products. Several large realty firms will have attractive booths; portable bungalows will be shown; electrical appliances and tractors, automobiles and motor trucks and their accessories will all be exhibited; there will be daily demonstrations of food products; household equipment and pianos will be artistically displayed; also interesting exhibits and demonstrations of fuel and lubricating oils.

The railroads appreciate the importance of the demonstration to ranchers and are offering sumptuous rates of a fare and one-third for a round trip from all points in California, Nevada, and Arizona.

An excellent cafe will furnish moderate priced meals. Completely equipped rest rooms for women and children will add to the comfort.

No admission is charged and parking for autos is provided.

# Farm Home Protection

## Put the Water in a Redwood Tank—

Pacific Redwood Tanks are not affected by heat or cold, dry atmosphere or dampness—and Redwood is the hardest wood to burn.

The water in the tank may always be depended upon, when the tank is built of Pacific Redwood, by the Pacific workmen, according to Pacific plans. They have proved their staying qualities in the mountains and on the plains, in all the varying climates of the Pacific Coast from Canada to Mexico, for a quarter of a century.

Why pay three times as much for a steel tank, besides double the freight, when a Pacific Redwood tank is better, lasts longer, and gives better service?

Ask us to prove these claims.

Pacific Tank and Pipe Co.  
318 Market St.  
San Francisco.

Dept. C-4

Gentlemen:

Please send promptly your catalogue of Water Tanks.

I need a tank to hold \_\_\_\_\_ gallons.

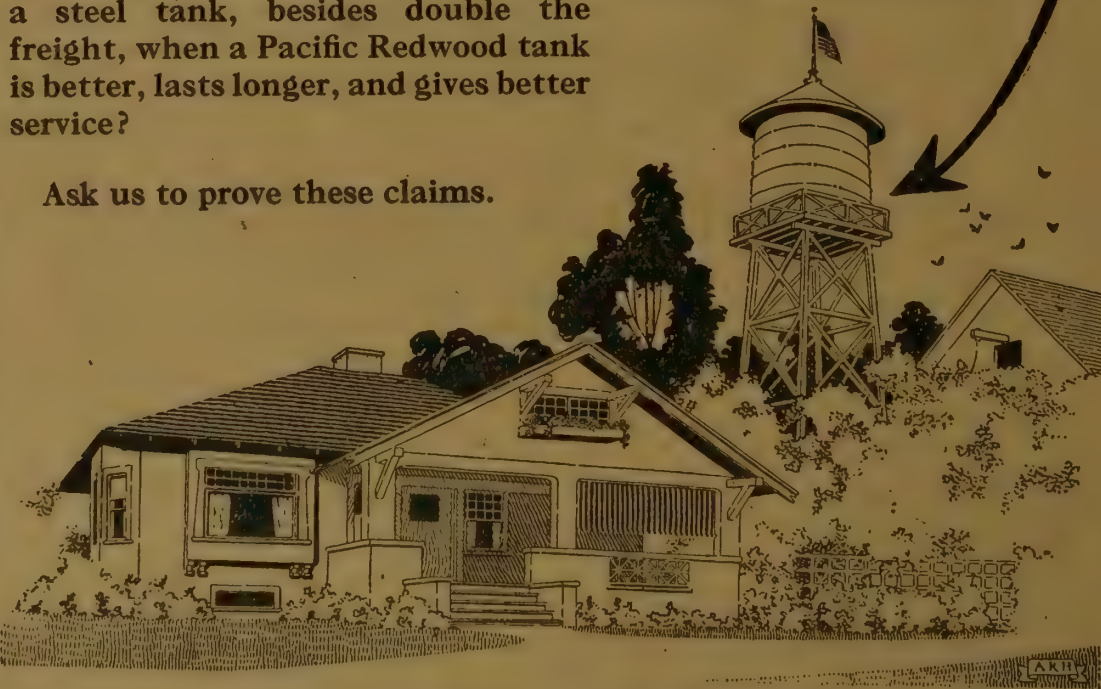
It should be mounted on a tower \_\_\_\_\_ feet high.

The water to be delivered from \_\_\_\_\_

Pipe { Length \_\_\_\_\_  
Size \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_



Pacific Tank & Pipe Co.  
318 Market Street San Francisco

SHORTHORNS BERKSHIRES

## Hopland Stock Farm

HOPLAND, CALIFORNIA

Registered Herd and Range Bulls by Right Choice 28951, and Tule King, 304655. Visit our Exhibit at State Fair.

A limited number of Boars and Glits sired by

IOWANA RIVAL MAJESTIC, 194736

Reserved Grand Champion State Fair, 1918, and son of Rival Champion, 112500.

San Francisco Office, 1210 Flood Building



SNOW GIRL'S QUEEN, 148800, Senior and Reserve Grand Champion Better P.P.I.E. 191



We

believe in advertising.

But

First the herd is going to be absolutely straight and right, before making too much noise.

It

has now passed two official tests without a single reactor and is being regularly tested under state supervision.

In

the meantime we are making records,

And

when we do start, hope to have something worth while talking about.

This

is merely to let you know that we are not "sleeping" on the job and that we want you to visit us during State Fair.

## Jane Garden Farm

FRED W. KIESEL, Proprietor

Sacramento

:-

:-

California

## Ormondale State Fair Exhibit



GOLDEN GOODS, JR., HERD BULL, 374838

By Golden Goods out of Roan Mable 3rd., by Ruddington Star, out of Roan Mable, tracing to Imp. Gem, by Broker

### THE FOLLOWING STOCK FOR SALE

1. Ormondale Chief, 515958. Yearling Bull, by National Chief, out of Edna S by Missie's Robin, out of Supremacy, by Knight of Meadow.
2. Sweetheart, four year old cow, by Imperial Victor, out of Baron's Princess, by Baron's Luck out of Hazelwood Princess.
3. Star of Ormondale. Red bull, 8 months old. Out of Maplewood Maid 4th, by May King, out of Maplewood Maid, by Ramsden Viscount.
4. Five heifers by Golden Goods, Jr.

### For Exhibition Only

Mayflower 4th, 201294, by Crusader, out of Archer's Sunray, by Archer's Best, out of Imperial Sunray, tracing to Mayflower 7th, by Filbert. This three year old heifer was recently purchased by the Ormondale Farm for \$1,500.00.

The Ormondale Herd consists of 44 head.

See our prize winning Shorthorns at the State Fair or write for descriptive circular to

**Ormondale Company**

Redwood City,

R. D. No. 1

California

# Prince

# Riverside

# Walker 112081



This Photograph Not Retouched

His dam made 28.35 pounds butter in 7 days, and 808.82 pounds butter in one year.

His half sister on his dam's side made 35.38 pounds butter in 7 days and 142.31 pounds butter in 30 days. A State Record when made.

He has a world's record half sister on his sire's side, Miss Valley Mead De Kol Walker, (8 months after calving as a two year old). She also holds state 7 day Butter Record, 36.81 pounds at three years and five months.

His sire, Prince Gelsche Walker, is also the sire of 10 daughters with State Records to their credit.

Few young sires if any, in the West possess better breeding or individuality, and he is particularly valuable from a transmitting standpoint.

Study his pedigree carefully and compare his closest blood relations with other bulls, State and World's Records; and the ability to transmit these qualities do not come by accident.

A. R. O. heifers bred to Prince Riverside Walker are just dropping beautifully marked calves mostly white. If you want a "Sure Thing" tip place your,

Order Early for one of His sons because they are in great demand. When their dam's are put on test and make big records you double your money.

Visit my Ranch just outside city limits and see Prince Riverside Walker and His calves.

# W. J. Higdon

Tulare

Calif.



# SHORTHORNS

## Senior Herd Sire



**DIAMOND CHOICE**

A son of Diamond Goods, weighs 2400 pounds

## Senior Calf, Fancy Bred Young Matron



**WHITE MAYFIELD**

By Mayfield Sultan. Dam, White Briar, a daughter of Ringmaster who was three times Grand Champion at Chicago International.

## Senior Yearling Bull



**GREENDALE SULTAN**

By Lespedeza Sultan, of straight Scotch breeding and an exceptional individual. A combination of Whitehall Sultan and King Cumberland.

### ANNOUNCEMENT

The establishment of this herd of registered Shorthorn cattle of pure Scotch breeding was accomplished only after months of time spent in selecting the animals from the herds of our foremost American breeders, and from the larger breeders' consignment sales. Special attention was given to the matter of breed character, individual excellence and beef type. No expense was spared to lay the foundation for a first class lot of breeding matrons headed by the best bulls obtainable. Cattlemen who demand the rugged, fleshy type of bulls for range duty will have a choice lot to select from next season.

**Exhibition Herd at Sacramento  
During State Fair**

**T. T. MILLER, Owner**

**314 So. Normandie Ave.**

**LOS ANGELES**

- - -

**CALIFORNIA**

*ANDREW SIMPSON, Herdsman*



# Digest of Food Control Bill

**B**Y reason of the existence of a state of war, congress has enacted and the president has approved a bill to "provide further for the national security and defense by encouraging the production, conserving the supply and controlling the distribution of food products and fuel."

## Scope of Food Bill

This act relates to "foods, feeds, fuel, including fuel oil and natural gas, fertilizers and fertilizer ingredients, tools, utensils, implements, machinery and equipment required for the actual production of food, feeds and fuel."

The president is authorized to use such agencies or persons as he may see fit to carry out its provisions.

## Price Assurance for Wheat

A minimum guarantee for wheat of 2 a bushel is assured for the 1918 crop, but this guarantee does not apply to the 1917 crop. In addition the president may during the period of the war determine what shall be a suitable guarantee of the price of wheat in order to stimulate production. The import of this is that the government would have to support wheat at that price should an unusually big world crop tend to force it down. This guarantees the farmer a fair price for his wheat in the face of unforeseen price depressing emergencies. Authority is also given the president to change tariff schedules

other part thereof, in or through which any necessities are or may be manufactured, produced, prepared or mined." Whenever the president deems the governmental need of such plants has ended they may be restored to their owners. Compensation, of course, is provided. In the clause authorizing the president to operate plants it is provided that he may prescribe regulations governing the employment, control or compensation of employees employed in such plants, etc.

## Distillation Banned

The "liquor" section of the bill forbids the use of "foods, fruits, food materials and feeds" for making distilled liquors except for non-beverage purposes and for the fortification of sweet wines. As to beer and wine, the president is given authority to stop their manufacture if he deems it essential to secure an adequate and continuous supply of food. Stocks of liquor already made, whether in bond or in stock, may be commandeered by the president for redistillation if such action is necessary to meet the requirements of the government. These two latter provisions are left entirely at the president's discretion.

## Prices of Coal to Be Fixed

If deemed necessary the president is authorized to fix the price of coal and coke. This applies to wherever coal or coke may be sold and whether by producer or dealer. The president



Meta Ward Kuperus

Senior three year old owned by McAlister and Son, Chino. She just finished seven day test and made 32.43 pounds of butter, a state record in her class.

wheat should conditions change and wheat start to pour into the United States in response to the attraction of the existing artificial price.

## Provisions Against Speculation and Hoarding

The hoarding or monopolization of, or the willful waste for the purpose of enhancing the price of, or the entering into a conspiracy for the purpose of interfering in certain enumerated ways with the production or distribution of foods, feeds and fuels is made unlawful. The president is authorized thereto to regulate or prohibit speculation in foods, feeds and fuels.

## Road Powers

Whenever the president may find it essential, he is empowered to license any business relating to importation, manufacture, storage, mining or distribution of food, feed, fuel or other articles named. This does not apply to farmers or other actual producers or to the railroads.

He is also authorized to purchase, store, provide, storage facilities for and sell wheat, flour, meal, beans and potatoes.

These provisions are in addition to the power granted to requisition any supplies he may need for the national defense forces. There is an exemption to protect supplies of foodstuffs reasonably required by the owners for use or consumption by themselves or dependents.

## Power to Take Over Plants

In order to supply the army and navy the president is authorized to take over and operate "any factory, packing house, oil pipe line, mine or

is further authorized "to establish rules for the regulation of the production, sale, shipment, distribution, apportionment or storage thereof among dealers and consumers, domestic or foreign; said authority and power may be exercised by him through the agency of the federal trade commission during the war or for such part of said time as in his judgment may be necessary."

If, in, the president's opinion, any producer or dealer fails or neglects to conform to such prices or regulation, or to conduct his business efficiently under such regulation and control, the president is authorized to requisition such plant or business for the period of the war or such part of that time as may be deemed expedient.

## Government May Buy Coal

In addition the bill gives the president the option, if he should think that plan better, of forcing all producers of coal and coke, either in any special coal field or in the entire country, to sell all their products to the United States or to some agency which the president may designate, and then let the United States or that agency distribute the coal and coke.

## Nitrates for Fertilizers

Power is given the president to acquire such stocks of nitrates as he may determine to be necessary and find available for fertilizers, and to dispose of them to the consumer at cost plus expenses.

## Bill Dies at Conclusion of War

The entire bill is automatically wiped off the statute books with the coming of peace.

# Montelena Herd of Large Yorkshires



Lake Park King 25211

Unsurpassed as a breeder, feeder, and producer of quality pork, the Yorkshire, with its quick, economical gains, and its large litters, cannot help but appeal to all hog raisers, in these days when the demand for pork products so far exceeds the supply.

We invite your inspection of our Herd at the State Fair next week.

**A. L. Tubbs Company**  
**CALISTOGA -:- CALIFORNIA**

## Grape Wild Farm

# Berkshires

Winners of Premier Breeders' Grand Championship Ribbon at P. P. I. E. See our Display Herd at State Fair This Year.

# Grape Wild Farms

A. B. Humphrey, Prop.

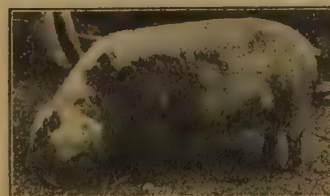
Escalon, San Joaquin Co., California

# Grizzly Bear Herd of Improved Chester Whites

Offers boars and sows of prolific and prepotent ancestry. Also booking orders for weanlings of both sexes, November delivery. Correspondence invited.

**Grizzly Bear Ranch**

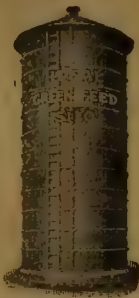
East Auburn, Cal.





## The De Laval Line IDEAL GREEN FEED SILO

Now is the time to plan for your silo. In selecting it remember that it is GOOD silage that is most profitable to feed, and that GOOD silage can be produced only in a Good silo. Something that is claimed to be "just as good" at a lower price is never as good. A "cheap" silo is bound to be an inferior silo, and it cannot produce GOOD silage. A "cheap" silo, or a silo that you can erect from "cheap" material, will prove the most costly you can buy.



**Don't Take a Chance—Get the Best—  
Install an Ideal Green Feed Silo**

## ACME FEED CUTTER and SILO FILLER



All Steel Frame—Securely riveted. No bolts to jar loose. No warping nor bearings out of alignment, causing vibration and unnecessary wear, as is the case with the old style wood frame cutters.

Low Feed Table—Automatic Feeding Device—Enormous Capacity—Six-Arm Blower Fan—Independent Control of Blower and Cutter Speeds—Reversible Feed Rollers—Positive Safety Device. Reasonable Prices.

### AT THE STATE FAIR

The De Laval Line will be exhibited at the State Fair, Sacramento, September 8-15. A cordial invitation is extended to all to call and inspect our complete line of Dairy Equipment. Location:—On Fair Grounds near Creamery and Milking Barn.

Everything for the Dairy  
61 BEALE ST. SAN FRANCISCO, CAL.

Correspondence with the advertisers in the California Cultivator will convince you that their articles will save you money.

### 1000 POUND JERSEYS WITH 800 POUND RECORDS

Authorities on Jersey cattle who have seen the big official record making registered Jersey cows in California, have invariably remarked that we have a number of 1000 pound cows in the herds of this state. They have in mind that if these cows had been handled on official test in the same way that the big record makers in other sections of the country are handled, we would have a number of cows with official records above 1000 pounds butter in one year instead of the records of 700 to 800 pounds that they now have.

There is no doubt of the soundness of this conclusion, for all the leading California Jersey breeders have carried the theory of making official records under ordinary dairy conditions to the extreme. In other words it has been their aim to make their records an absolutely normal index to the dairy production capacity of their cows, and a guide to the average dairyman as to what yields he might expect to secure from the same cows or cows of like capacity in his own herd, under normal conditions of feeding and twice a day milking.

Jerseys breeders of Stanislaus County, California, have made the bulk of the Register of Merit records so far made in the state, and hold practically all of the state records in the various classes. Yet these records have been made under no better conditions than should prevail in any commercial dairy, and the records are away below what the cows could do with more liberal feeding and three-time milking.

The records of all the splendid group of Register of Merit cows and the dams of the Register of Merit daughters that will be sold in the Stanislaus County Jersey Breeders' First Consignment Sale at Modesto on Tuesday, September 25, were made under ordinary dairy conditions, and the dairyman who wants to add a few real good registered Jerseys to his herd will find the right sort in this sale.

### DEVELOPING PULLETS FOR HEAVY LAYERS

Written for California Cultivator  
By Chas. Weeks.



**T**O make each year's pullet better than the parent stock is a difficult task. To do requires the most exact selection of the parent stock for vigor and prepotency, with due regard to maturity and prime condition. Pullets must excel parent stock in order to make progress in developing strain. This parent stock must correctly mated with long years breeding behind both male and female, and the matings must not closely related and should be of a pure age. To make a correct mating excel itself in progeny requires a condition in this parent stock that is very best possible. The parent stock must be at the zenith in condition, order to stamp superiority on the young.

Sunshine, fresh air, plenty of exercise, clean quarters free from dirt and pure, wholesome feed constitute the environment that will be conducive to best results from well-mated birds. Do not feed wet mash or sloppy feeds to breeding stock. Selection and conditioning of breeding stock is the first essential toward producing better pullets.

So much for the starting of a well-bred pullet. The egg from which the well-bred pullet comes must be very carefully and exactly incubated or the pullet will be handicapped for life. Here is where the very fine adjustment and care is necessary, that strong germ in the egg will meet obstacles in the way of its development that will hinder natural progress. The temperature should be kept as regular as a clock between 102 and 103 degrees. The egg must not be chilled in cooling or overheated one single time during incubation. Too little moisture weakens the germ and too much makes the chick too large to get out of the egg. Incubation requires the closest attention to exactness. Anyone can hatch chicks. It is very easy to hatch chicks, but to do it without injury to the tender, growing germ or embryo is very difficult and careful piece of work.

No careless person can afford to tempt incubation. A well-bred chick correctly hatched and you have a good foundation upon which to build a profitable layer.

Thus if this well-bred chick is naturally brooded, with plenty of sunshine and fresh air during the period it needs artificial heat, with clean quarters free from dust, then it has a good start in life and can be grown into a profitable hen.

At three or four weeks of age the chicks should be taken away from artificial heat and divided into smaller flocks, the cockerels and pullets being separated. Right here where my small pen system proves superior. We move them from heated pens into pens exactly the same in every detail except they are without heat. The chicks climb always up, for they have the climbing habit from the start, to a roosting platform as usual, and are divided into smaller flocks are in danger of piling and sweating, for never place more than 50 together in one compartment. These have a close bed of straw to snuggle in, and if the weather is too cold we throw sacks over the two perches and let them hang down over the chicks. Fifty chicks in a close bed of straw up on this drooping board, two feet from the ground floor will snuggle together with each head out to the fresh air and seldom if ever, will one be smothered.

The sooner the chicks can do without artificial heat the better, for artificial heat after a certain age tends to weaken and lessen the vigor. By one they take to the perches of their own accord, for the perches are right above them as they huddle in the clean straw, and it is surprising how quickly they line up. I have this year taking to the perches with no trouble at all. When I look back at the worry and loss of previous years in trying to get chicks to the perches I draw a long sigh of relief to think that I have at last solved that hardest of problems for the poultryman, the getting of young stock to take to the perches. As young stock takes the perches usually think they are just as good as gold. Of all the inventions for

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## 22 FRESH COWS

- 12 Register of Merit cows (7 with records above 500 pounds butter).
- 10 Daughters of Register of Merit cows.
- 2 Daughters of Altama Interest.
- 2 Daughters of Mergery Golden's

- Fox.
- 5 Daughters of Golden Brutus.
- 2 Granddaughters of Interested Prince.
- 5 Daughters of Primrose's King.
- A Grandson of Sensational Fern.

All of these and many more of equal merit will be sold by leading Stanislaus County Jersey breeders in their first consignment sale.

### MODESTO, CALIFORNIA

**Tuesday, September 25, 1917**

**10 o'clock A. M. on the Modesto Fair Grounds**

This is without question the most attractive lot of registered Jersey cattle ever sold through a public sale ring in California.

The great Register of Merit records present in the pedigrees are proof of the productive blood offered, and the animals listed for sale represent the pick of those offered for consignment.

Most of the offering consists of young cows, heifers with first calf, and choice bred and unbred heifers. The fresh cows and heifers form one of the most attractive features of the sale.

Only two bulls of service age will be sold and they are both high class individuals of rich breeding.

#### CONTRIBUTORS TO THE SALE.

Guy H. Miller, Modesto  
M. W. Brady, Modesto  
Riverina Farms, Modesto  
Fred B. Wulff, Modesto

W. J. Hackett, Ceres  
Jno. A. Orr, Ceres  
O. J. Ames, Oakdale

**TUBERCULIN TEST**—Every animal in this sale over six months of age has been tuberculin tested and individual certificate will be given with each animal. The buyer has the privilege of tuberculin retesting every animal purchased and if any reactors are found the seller will receive them back at full purchase price.

WRITE FOR CATALOG. MAILED ONLY ON REQUEST.

Sale under Management of

**California Breeders' Sales and Pedigree Co.**

**C. L. HUGHES, Sales Manager**

**SACRAMENTO, CALIFORNIA**

**AUCTIONEERS:—Col. Ben A. Rhoades Col. Cy N. Clark**

**Registered  
Jersey**

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S**



re been tried to get young stock on perches this scheme of teaching baby chick right from the start going up habit beats all that I have ever tried.

We have followed this well-bred pullet from the parent stock up to three four weeks of age. If she has had any essential in each department passed through she now has clear lines, and it is only a matter of an quarters, clean water and a wholesome variety of clean feed, with emphasis on clean. It is the biggest mistake to take clean feed and throw it into filth for the pullet to

This eight-foot-square pen is the world of these 50 pullets until they are ten or twelve weeks old, when they fill the two perches and at again have more room and are divided into two pens, making 25 to 50 pen. On the outside of this pen is a feed trough under the projecting of which extends over three feet and keeps the rain from blowing too much into the open front. The pullets eat from this trough by sticking their heads through an opening. Thus they cannot get into the feed with

be opened in feeding and watering.

The dry mash is composed of four parts ground wheat, one part ground corn, one part ground oats with hull sifted out (when not too high one part beef cracklings), half part soy bean meal, half part linseed meal, half part charcoal. Many would say that this is too rich for young growing pullets, but where they have a mixture of grains in the compartment of the hopper adjoining they will eat only enough of this dry mash to balance their ration. The feed trough on the outside is filled twice daily with fresh, crisp green feed. This can be alfalfa, kale, green barley, beets, cabbage, chard or rape, and the greater the variety the better. Be sure they have this green feed 365 days in the year, including the fourth of a day. Don't under any circumstances attempt to keep hens without plenty of green feed. To have that in California means that you must irrigate. And you must have your poultry ranch located where water is cheap or you can never succeed. If you have no water for irrigation, or if you have not plenty of it, sell out and get the right location.



A Prize Winner at San Jose in '16 and at Chico in '17  
The Barred Rock illustrated above is the property of W. B. Carpenter of the B. C. Ranch.

their feet and must take it in the easiest way possible. They also have a feed hopper upon the side of the wall that holds a sack full of dry feed in one compartment, and a sack of mixed grains in the other. The platform to this hopper is 18 inches from the floor, so they must jump up to feed. They must also jump up to the perches above the feeding board, and this continual jumping up and down gives them exercise as well as entertainment. The water bucket is on the outside with a feed trough so that no doors need

For goodness sake, do not attempt to raise poultry on a dry, poor, barren place, for it cannot be done. I know, for I tried it early. You must have plenty of water or the time using it will not pay for the results. There is plenty of good, cheap water near good markets if you will find the right locality.

The pullets stay in these eight-foot-square pens with open fronts during their first laying year. They have everything before them to eat all the time and fresh air, sunshine and a deep, sandy ground floor to roll and dust in, and are absolutely better off than any hen that ever roamed the wide world outside. They eat, drink and grow, and when they arrive at the laying age it is simply a sociological principle; their mind is on their business, eat, drink and lay; that's their daily routine. They have no other amusement and can specialize. They eat to digest, and digest to lay, and as their parents were heavy eaters before them and made eggs out of their food, they have that tendency and have it accelerated. Each year the tendency to digest and lay grows because habits make tendencies and tendencies in time become traits.

We must remove every obstacle that would hinder the development of this well-bred pullet from the breeding stock to the day the first egg is laid. System, method, exactness and a fine adjustment pay in the breeding of heavy laying hens.

We have made a wonderful progress in developing heavy layers in all parts of the world in the last ten years. The 200-egg hen is no longer a marvel. We have already reached the 300 mark, and are still progressing. Will there be a limit? When we cease to wonder at the 300-egg hen will there be a 400-egg hen to create new sensations? I believe there are no bounds in development. Evolution is a wonderful process, and with the plastic White Leghorn hen man can have an absorbing game in watching the advance from year to year.

## Are Your Hen Profits Satisfactory?

If not, there is something wrong; and by adopting the

**"LEE WAY"**  
the wrong can be easily corrected.  
**Cash Prizes**

Those who will report to us by December 15th, 1917, the results received from use of the "Lee Way" and the "Lee Way Assortment" during the months August, September, October and November, we offer Cash Prizes for the 15 best reports:

- First Prize .....\$25.00
- Second Prize ..... 20.00
- Third Prize ..... 15.00
- Fourth Prize ..... 10.00
- Fifth Prize ..... 5.00
- Ten Prizes of (each) 2.50

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Get the Free Lee Library from  
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FOR GREATER EGG PRODUCTION  
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"CHICKENS FROM SHELL TO MARKET"  
**Coulson Co.**  
PETALUMA, CAL.

# Second Annual Tractor Demonstration

## September 18, 19, 20, 21, 22

### AT Vail Ranch

Located on Telegraph Road two miles East of the end of the Stephenson Avenue car line. Auto Busses from car line to Demonstration Field.

Don't fail to attend the greatest Working Demonstration of Tractors and Tractor Drawn Implements ever shown on the Pacific Coast.

No Admission charge. Free Auto parking space. Fine Restaurant meals at moderate prices. Public Demonstrations daily from 2 to 4 P. M.

There will be Tractors for all kinds of work from the small Garden Tractor to the largest type of Tractor.

Exhibits by well known Automobile Dealers, Auto Trucks and their Accessories, Lubricating and Fuel Oils, Food Products, Household Goods, Electric Appliances, in fact everything for the Rancher's use.

Reduced Rates on All Railroads, of a fare and one-third for the Round Trip from All Points in California, Arizona and Nevada.

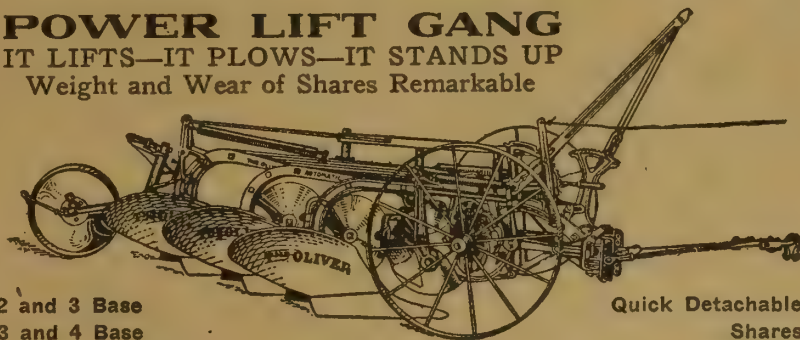
## Traction Engine and Implement Dealers Association of Southern California

115 So. Los Angeles St. Los Angeles, Cal.

# THE OLIVER

## POWER LIFT GANG

IT LIFTS—IT PLOWS—IT STANDS UP  
Weight and Wear of Shares Remarkable



2 and 3 Base  
3 and 4 Base

Quick Detachable Shares

STRENGTH OF BEAM, AXLES, ETC., SURPRISING  
ACTUAL PLOWING RESULTS PERFECT

Call and Examine our plows at the Tractor tent at the State Fair  
**OLIVER CHILLED PLOW WORKS, San Francisco Los Angeles**

## PETALUMA INCUBATORS & BROODERS

STANDARD OF THE WORLD

### Ducks Never Cackle

Neither do all people write us who are making big hatches in different parts of the world in the

## PETALUMA INCUBATOR

but thousands have and we would like to tell you what they say. Present Models better than ever. You should know about *The Electrified Hen*. Write us. Just say "Send your big envelope of free literature. We Pay Freight."

PETALUMA INCUBATOR CO.  
248 Main Street Petaluma, Calif.


## Mr. Poultryman: TRI-STATE MOLT MASH

will help your hens through the molt and make it possible for you to stay in the business.

SOLD by our agent in each town or inquire of **GLOBE MILLS, LOS ANGELES**, Southern Wholesale Distributors, or **TRI-STATE POULTRYMEN'S COOPERATIVE ASS'N.**, Headquarters, Fresno, California.

When writing advertisers, mention The Cultivator.





# The Nation's Strength

is not only in the mailed fist but in the hand of industry—the hand of health. It behooves all of us to be strong and keep strong, in order to carry the present day burden.

As a strength-giving food product Ghirardelli's Ground Chocolate is an ideal blend of foods—cocoa and pure sugar, each full of elements that supply energy and build up worn tissues.

A tablespoonful of Ghirardelli's Ground Chocolate, 1c. worth, makes not only a delicious but an unusually nutritious beverage. Drink daily a cup of

## Ghirardelli's Ground Chocolate

Comes in 1/2 lb., 1 lb. and 3 lb., sealed cans.

D. GHIRARDELLI COMPANY  
Since 1852 San Francisco



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Founded in 1889

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LEMON, ORANGE  
POMELO AND LIME

Properly grown and cared for to produce good crops of quality fruit; immediate delivery; write for prices.

R. M. Teague Citrus Nurseries  
San Dimas, California



Headquarters for IRRIGATION

SUPPLIES PUMPS, ENGINES, SPRAYERS, HOISTS ETC.

Catalog FREE on Request

Smith-Booth-Usher Co.  
LOS ANGELES



### TROOPER SHIRT

## SIDEWELL COLLAR

PREFERRED BY THE RANK & FILE OF MEN

The modified curves prevent cutting of the shirt over the shoulders. Made with patented Graduated Tie-Space and Tie-Protecting Shield. Comfortable. "SQUADRON" is like "TROOPER" but one-quarter inch higher. Your dealer sells them.

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## Household Department

### A WAR LITANY

From all boll worms,  
From all potato bugs,  
From all grain-eating rats,  
From all bird-killing cats,  
From all food speculators,  
From all cabbage worms,  
From the I. W. W.,  
From all locusts,  
From all pacifist and notoriety-seeking nuisances,  
From all cut worms,  
From all dry rot,  
From all senators and representatives who obstruct legislation,  
From all slackers,  
From all weeds,  
From all women who wail,  
From employers who seize upon "patriotism" as an excuse for oppressing labor,  
From harpies who take advantage of the preoccupation of the public to prey upon the interests of all consumers,  
From all spies and poultry lice,  
From all cattle-ticks and traitors,  
From all hog-cholera and picketing suffragists,  
From employers who try to evade enforcement of child-labor laws,  
From all ignorance of the grave situation in which the country is involved,  
From all indifference to the needs of America and her Allies,  
From these and all the rest of the kaiser's friends who are not being fought so vigorously as they deserve because their attacks are too insidious,  
Oh Lord, deliver us!

For courage,  
For self-control,  
For self-denial,  
For perseverance to the end in courage, self-control and self-denial,  
For stiffened backbones,  
For brotherly love,  
For a realization that rich and poor, high and low, capitalist and laborer, soldier and stay-at-home, young and old, the future generation, as well as the present one all hang together, that advantage to one is advantage to all, that nothing of good can be accomplished without a vital sense of brotherly love and the stiff backbone that enables people to bring their ideals to realization,  
For peace which is lasting and enfolds all nations,  
For victory which means the betterment of all mankind,  
For strength to conquer all enemies to the rights of men, at home and abroad,  
We pray thee, oh Lord!  
—Riverside Press.

### TIPPECANOE

Written for California Cultivator  
By L. M., Lancaster

THE youngest boy came lugging home one afternoon a plump little brown puppy. The mother dog was a collie and her litter of four all resembled her but this little brown one. For fear of hurting the sale of the others this one was to be killed if a home was not found for him. "Please let us have him for our own," the children pleaded, so their father and I talked it over, and as we had recently moved from Los Angeles to a ranch and had no dog we consented for them to keep this one.

Try as they might, no name seemed good enough, and they came to me to help them. As I looked over the little brown puppy I discovered he had a white spot between his fore paws, and also the tip of his tail was white, just a few white hairs, I should have said. So I said, "What is the matter with calling him Tip, or Tippecanoe?" I looked at the oldest boy for his approval, for he was suggesting such names as Brown Eye and Brown Boy, and it was at once settled. Tip it was, but more appropriate would have been "Roly-poly," for he rolled over and over when his fat, short legs tried to catch up with the children at play.

His training commenced among the rabbits, where he learned to help catch the rabbits that would work the door of the hutch open and wander out. He never was known to injure one. Often he would sit and watch them through the wire. They seemed to interest him, and the mother rabbits looked upon him as a part of the fixtures, even when he put his nose in their faces as they begged at their doors to be fed, often licking their noses, which greatly amused the children.

His puppyhood days seemed never to end; from one prank to another

he went. My washing on the line to be carefully watched. There were holes all over the flower beds, with the geraniums bordering the path were gnawed down one by one as a beaver had been at work. When he was half grown the boys found a half-starved gray kitten nearby in a gum tree grove. I was afraid for the safety of Gray Boy, as the boys named the little Gray kitten, but we saw there was nothing to fear. Tip from the first let it sleep in his kennel. It nestled close in his arms and was content, and many a morning he would deliberately take the kitten up by the back of the neck and carry it to a sunny place in the yard and give it a washing with his tongue, holding it between his paws. Its cries and growls sometimes were so rebellious we would have to bring the kitten in out of his reach. He always seemed to look upon the helpless kitten as his individual plaything, but as Gray Boy grew older he would climb one of the pepper trees by the house to avoid too much of the caresses.

When we became Mohave Desert pioneers we brought Tip with us. The children would not part with him as we grown-ups were as fond of him as they. And it was well we did; he needed him for company, having no neighbors within three to five miles. He had a way of curling his tail away from his teeth when you talked to him that was a near smile. He was so human in ways of obeying us we never called him in the manner one calls to a dog; all that was necessary was to speak his name. I believe his obedience was due to always being kindly treated.

How he missed the children when they all were in school! He would watch the road that led to the school house. When he sighted them in the distance he would bound away through the sagebrush, meeting them a mile or more from home. Taking him in the buggy they would feed him what remained of their lunch. He followed the older boy wherever he went, at times warning him of a snake by leaping in front of the boy and pouncing on it. Although it was only a gopher snake the rattlers were everywhere and it was well he was watching. Many the chase they had after jack rabbits and cottontails that would run through the wire netting fence in the alfalfa field, catching them and holding on till someone had taken the rabbit, which was always alive, even bruised, and it was at this spot he met his death.

One Sunday morning not long after Tip followed the youngest boy around the rabbit traps, while the older boy and his father cut alfalfa for the hogs, with the scythe, near the fence. Almost the last swath cut, old leaped a jackrabbit that had hidden in the high alfalfa. Not knowing Tip was near to get the rabbit, he pitched the scythe at it, but almost the same time Tip had seen it and bounded past in pursuit, only to be caught as the scythe bounced off the ground, cutting his poor head from left ear to throat.

Some men were out hunting on Sunday, among them a doctor. He looked poor Tip over and shook his head. In the meantime the boys had come to me for bandages and salt to stop the bleeding. Getting what they were sent for they had only gone a few steps when we heard a pistol shot. Without being told, the children knew what had been done. It had been necessary to kill him to avoid long suffering. Then, as we realized their pet would romp with them no more, they gave way to such grief as only children can feel.

As the sun sank to rest over the mountain the boys, with the help of their father, laid their pet in a grave the boys had dug during the day. Then the two girls put bouquets of alfalfa blossoms on the mound. There are no other flowers to be found on a new desert ranch. On a few days ago some friends in the city sent the children a full-grown shepherd dog, and they seem, in a way, over their loss, but when I came to naming the new pet I learned otherwise. The youngest girl said, "Oh, let's call him Tip." "No," said the other three, as a shadow crossed their faces. And I knew for the first time there was but one Tip.



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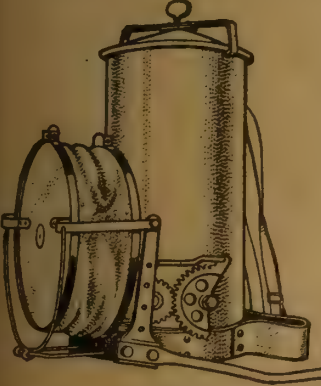
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**WAR BREAD**  
Written for California Cultivator  
By Mrs. Guy Halley

**R**ICE, whole wheat, bran, rye flour, buckwheat flour, corn meal, potatoes and oatmeal may all be used successfully in war bread.

Oatmeal bread is very good. Use your favorite bread recipe and use one-quarter oatmeal and add half cup molasses. You'll be surprised at the tasty golden brown loaves.

Rye nut bread is another variety of war bread and easily made. Cream well one cup white sugar and one beaten egg. Add one and one-half cups sweet milk. Sift together two and two-thirds cups white flour, one and one-third cups rye flour, four heaping teaspoons baking powder and one teaspoon salt. Add to liquid mixture and lastly add one cup ground nut meats. Beat well and place in greased tins. Let rise 20 minutes and bake.

Bran bread is delicious as well as very wholesome. It may be added to your favorite bread recipe, adding one-fourth in place of white flour.

Try making yeastless whole wheat bread. Two cups buttermilk or sour milk, one teaspoon soda, one tablespoon sugar, one teaspoon baking powder, one teaspoon salt and four cups whole wheat flour. Beat well and bake one-half to three-fourths of an hour.

Another satisfactory war bread is made from rice. Three-fourths cup lukewarm water or milk, three-fourths cup uncooked brown rice, two teaspoons salt, one tablespoon sugar, one tablespoon shortening, one cake compressed yeast and six to eight cups whole wheat flour. Cook rice with one teaspoon salt till tender, letting it absorb all the water. Place sugar, salt and fat in mixing bowl, add one-half cup of liquid. Add yeast dissolved in one-fourth cup of the water and two cups flour. Add lukewarm rice. Beat this sponge well and let get very light. Add remaining flour. Let rise till double its bulk, put in two loaves and let rise to top of pan. Bake.

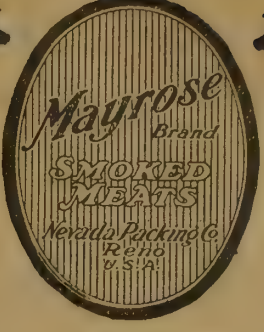
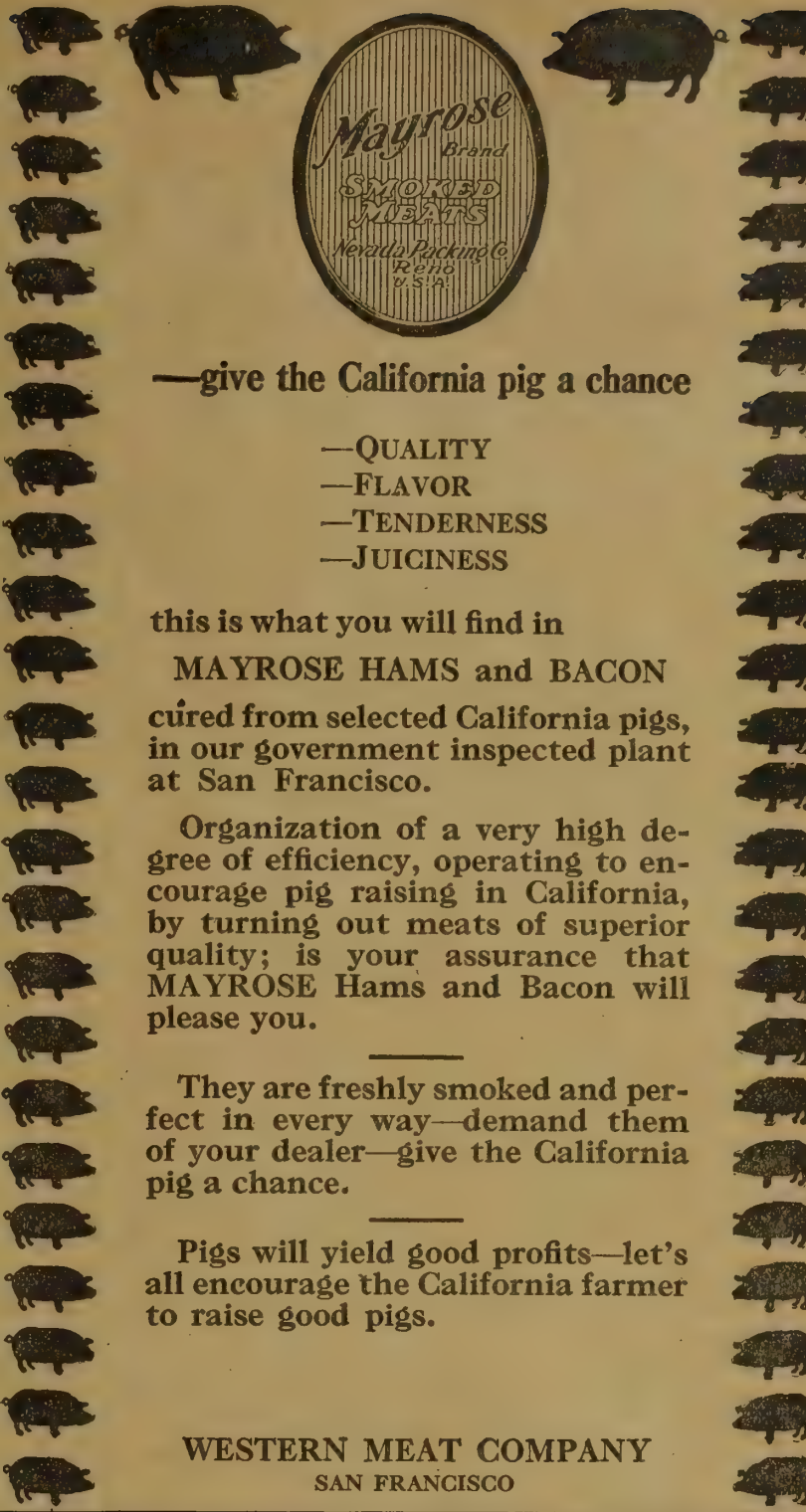
Potatoes are a good flour substitute. One cup lukewarm water, three pounds potatoes, five to six cups whole wheat flour, three tablespoons sugar, two cakes compressed yeast, dissolved in one-half cup water, and one tablespoon salt. Boil potatoes with skins on till soft. Peel and mash thoroughly while hot. Add dissolved yeast to lukewarm potatoes, rest of water, salt, sugar and a scant cup of flour. Mix and let rise at 86 degrees Fahrenheit. After two hours knead in thoroughly the remaining flour. Let rise till double its bulk and place in pans. Let rise again till double and bake at 380 to 400 degrees Fahrenheit.

Bran muffins are quickly prepared for breakfast. One cup bran, one cup flour, one well-beaten egg, one-fourth cup molasses, four level teaspoons baking powder, one-half teaspoon salt and one cup sweet milk. Sift dry ingredients into the liquids and beat well. Bake quickly.

**A ROOM FOR THE BOY OR GIRL**

Sometimes we hear the remark, "Why don't you keep your toys out of my way? They are always where they should not be." Are you sure there is a place for them to be kept where they are not "always in the way?" Any little girl will take pride in having her small bureau or trunk in her own room and can easily be taught to put her doll and other things away in their proper places when through playing with them. Then, by so doing, she is laying a foundation for neat and orderly housekeeping in later years. And what boy does not enjoy having his chest of tools or building blocks in a room of his own where he can work and build to his heart's content without the older ones disturbing him? He can also be taught that everything must have a place and must be put in that place when he is through with them.

To clean coffee stained linen soak in cold water to which has been added a little borax. All coffee, chocolate, tea and fruit stains will disappear if boiling water be poured over and through the spot before the linen is washed. It is best to do this while the stain is fresh and damp.



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Here is Your Opportunity to Secure All citrus trees. We offer several thousand 2-year-old lemons; Eureka and Villa Franca, also Washington navel; also several hundred Valencia on sweet root. We call these good trees and we know whereof we speak. ALBERT JACKSON, Upland, Cal.

By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator. The cost is only 3 cents per word per issue, with a minimum of 35 cents.

Four Thousand Eureka Lemons, six thousand Valencia, five hundred seedless Grapefruit, two years old; good stock. For sale or trade. What have you? Smith & Lane, Glendora, Cal.

For Sale—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. Randall Bros. Nursery Co., Whittier, Calif.

Citrus Trees—All kinds, any quantity. Butler's Morning Side Nursery, Landa Park, Cal.

Citrus Nurseries, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

### WANTED

Wanted—Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' work to right parties. Address J. H. Yetter, Sales Department, 810 Santa Marina Building, 112 Market St. San Francisco, Cal.

Wanted—Position on ranch by single, middle aged Eastern man, 3 years California experience. No liquor. Understands all kinds ranch work—stock, poultry, fruit, carpenter work, etc., except milking. F. C. Kilbourn, E. 7th St., Lankershim, Cal.

Experienced Orchardist understands pruning and caring for trees, can give good references. Wants position handling orchard work. Address P. O. Box 171, Victorville.

Wanted—A first class stock and dairy man to look after herd of Holstein cows. Good opening for a competent man. Address Dairy, California Cultivator.

Wanted Position as Foreman or superintendent of orchard or general farming. Eleven years good California experience. Address W. S., care Cultivator.

Wanted—Position as head milker and herdsman. Familiar with testing, scientific feeding and treatment of disease. Good reference. Box D, Cultivator.

We Buy Weed Seeds—Mustard, rape, anise, bitter clover, etc. Send samples. Write us, stating quantity and price. Globe Mills, Los Angeles.

One of the Most perplexing problems to farmers and ranchers is that of help. A small liner ad in California Cultivator is the quickest and easiest means of securing farm help.

### POULTRY

White Leghorn Baby Chicks—We are hatching from 2 and 3 year old hens that are proven good layers. We did not sell our last year chicks but have them to breed from and are not forced to use young immature chicks. We are hatching a limited number of R. I. Reds. Lyon Hatchery, Gardena, Cal.

Day Old Chix—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Calif.

Poultry Wanted—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

200-290-Egg Leghorn, Wyandottes, Rocks, Reds, Anconas, Orpington Pullets, Cockerels, Breeders. Hatching eggs, chicks for high-priced broilers. C. Beeson, Pasadena, Cal.

"Eastman's Bred-to-Lay" Barred Plymouth Rocks, Fall chicks, eggs, cockerels. Fairmead Poultry Farm, Fairmead, Cal.

### SEEDS AND PLANTS

Alfalfa Planters, fill your fall requirements NOW with GREEN-GOLD seed. High quality because of personal field selection. Low price because of direct dealing. Send for samples and prices. Bomberger Seed Co., Modesto, Cal.

\*\* ORDER YOUR SEEDS NOW \*\* If you are going to need any seeds for next season now is the time to render your orders. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbutus, Cal.

\*\* ALFALFA SEED OUR SPECIALTY \*\* Alfalfa Seed—Common variety, hairy and smooth. Peruvian. Grown under ideal conditions. Do not buy until you have compared our prices and samples with seed others offer. E. F. Sanguinetti, Yuma, Arizona.

Rhubarb—\$127.00 from one acre. A crop every month of the year. Write to me and I will tell you how you can do as well. J. M. Stone, Lodi, Cal., Route 4.

Vetch Seed—New crop clean seed, \$4.00 per 100 lbs., on car. Alsike, Red Clover. Price on application. Carlton Nursery Co., Carlton, Ore.

20,000 Yellow Calla, Elliottiana; Pink Calla, Rothermanni, Spotted Leaf White Calla. William Richard Nursery, Santa Cruz, Cal.

New Crop Alfalfa Seed now ready. Not the lowest in price, but high in quality. Leo. Turner, Yuma, Arizona.

### HOGS

THESE PIGS PRODUCE THE BACON Ordinary thoughts in ordinary words, Like random shots at flocks of birds, Seldom bring home the bacon. Ordinary Pigs in ordinary herds, Like random shots at flocks of birds, Seldom bring home the bacon.

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Breeders of Registered High Class Duroc-Jersey Hogs. A long, smooth, medium size, bacon hog. Why not the best? Give them a test. Our Specialty—yearlings—every month in the year. Shipped on approval. Brood sows, gilts and mature boars for sale. Glen Ellen, Cal. R. G. Wickham, Owner

Registered Durocs—We offer for sale a choice service boar out of a daughter of Modesto King and by a grandson of Burk's Good E. Nuff; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col.; three young boars out of a great sow of Crimson Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. Derryfield Farm, I. O. O. F. Building, Sacramento, Cal.

A High Class Berkshire Boar for sale—Mayhews Leader 11th, sired by World's Champion Grand Leader 2nd, age 2 years, 1 month. Weight in breeding condition about 750 pounds. A very large, smooth, heavy boned hog, and an excellent herd boar. Guaranteed in every respect. Price very reasonable. Dallas Bache, Hollister, Cal.

Chester Whites, the Billiken Brand.—Your duty is to raise more hogs and increase the meat supply. The demand for pork exceeds the production. Get started with some of these Chesters; 3 bred sows farrowed in April, 1916, due to farrow in September, and October; 18 October gilts bred to farrow in October; 3 October boars ready for service. All first class in every respect and good enough to fit and show at the different fairs this fall. All are cholera immune and will be registered free. Write for price list and booklet. C. B. Cunningham, Box C, Mills, California.

Grape-Wild Farm Berkshires—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

Large Yorkshires—Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

Wanted—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

Duroc Jersey Boar for sale—Two years old, from Kansas City. \$50.00. Cost \$100.00 when pig. Excellent sire. Object, change of blood. Two Berkshire sows, one with pigs. Jersey Queen Farm, San Jose, Cal.

Poland Chinas—Three litters by a Big Orange Wonder Boar. Dams from Eastern stock, \$15 to \$20 at weaning time. Registered, crated and transferred. N. M. Lester, Gridley, Cal.

Poland-Chinas—A number of magnificent young boars for sale, just ready for service. Don't overlook my offering of splendid sows at the Poland-China sale on October 17 at Hanford. Will Bernstein, Hanford, California.

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Big Type Durocs. Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

Most Money in Duroc-Jerseys. Bred sows and yearlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

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Large Type Poland Chinas are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Calif.

### HOGS

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Model Herd Berkshires bred for size and quality. Weanlings and gilts. J. L. Gish, Laws, Calif.

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Poland-Chinas—A few good breeding boars. S. F. Williams, Orland, Cal.

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Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

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Registered Shires—Blackhawk Stock Ranch. Importers and Breeders. Easton & Ward, Burlingame, Cal.

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Thirty high-grade Holstein Cows and one registered Holstein bull. Chas. Hubbard, Riverdale, Calif.

Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Calif.

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Holstein Bulls from record cows. Prices right. A. M. Bibens, Modesto, Calif.

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NEW, USED WOOD, GALV. TANKS All sizes, used heavy 1500 gal. galv. with metal covers, cost new \$75, for \$28; 100 gal. galv., \$7.50; 10,000 redwood, \$75. Fine, heavy 10,000 galvanized, \$135; 16,000 corrugated galv., \$195. Galv. 4x4x4 tank, \$15. 25,000 gal. redwood with fine stand, \$135.

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PUMPS, CYLINDERS, PIPE 2½-in. two-runner hor. centrifugal pump, \$50; 2-in. rotary, \$22; 5-in. two-stage Byron Jackson hor. cent. pump, \$150; 8-in. hor. cent. \$150, pumps 200 in. water. 7 vert. cent. Krough, deep well double-acting No. 2 Ames, \$145. Large Bulldozer Jacks, \$68. Plunger pumps, \$2 up. 5x6 air compressor, \$25. 350 ft. 7-in. irrigating pipe, 35c. All kinds brass pump cylinders, rods, big pipe fittings of every description.

RANCH MACHINERY Walking plows, \$2.75 up; harrows and cultivators, \$2.50 up; 4 and 5-ft. Fresno, \$9 to \$12; wheel barrows, \$2.50 up; 350 ft. ¾-in. cable, 6c; water troughs, \$4; bone grinders, \$6.50; feed mill; sprayer; mowers; sundries too numerous to advertise. Material guaranteed as represented or money refunded. Down town office DEMMITT CO., UPSTAIRS 120 N. Main. Yards, 816 Yale, Los Angeles. Phones 15191; Bdwy. 1984, Bdwy. 3650.

Gasoline Engines, the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles.

Several new and slightly used engines at a bargain. Best makes. 1 to 35 h.p. Arnett & Company, Wholesale Machinery and Implements, 112 South Los Angeles St., Los Angeles, Cal.

For Sale—Yuba Tractor No. 12 in A-1 condition. Plow and cultivator if wanted. Satisfactory reason given for selling. P. O. Box 308, Colton.

### RODENT EXTERMINATORS

United States Government Formula—Poisoned barley for killing rodents. In competition with other dealers we were awarded the contract to furnish this poison to the United States Government. How much do you need? Write for prices. UNITED STATES SUPPLY COMPANY, MANUFACTURING CHEMISTS, NEW CALL BUILDING, San Francisco, Cal.

### LUMBER

Lumber—Sash—Doors—Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A.R.W. Shingles 50c per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.

### RABBITS

Raise Rabbits For Us—We sell you foundation stock and buy back what you raise, paying \$1.75 and \$2.00 each for them. Send 25c for our proposition, our book on rabbit culture and our supply catalog. Gilmore's Rabbit Farm, Dept. C, Santa Barbara, Cal. (The rabbit farm of international reputation.)

### HORTICULTURAL PRINTING

Catalogues—Good Printing. Specialists in preparing nursery, seed, poultry and live stock catalogues and all kinds of commercial printing. For prices and information address WOLFER PRINTING Co., 424 Wall St., Los Angeles.

Our Printing Will Get Results for You.—It will help to sell your goods and earn you profits. Send for samples and price list. G. C. Gallagher, 441 Sacramento St., San Francisco.

### PATENT ATTORNEYS

Patents that protect are secured through The PACIFIC COAST PATENT AGENCY, INC., Savings & Loan Building, Stockton, California; send for our little booklet on "PATENTS."

Patents—Copyrights, trade marks and labels registered. Solicitor of American and foreign. James R. Townsend, 712 San Fernando Bldg., Los Angeles. Phones, Home A4619, Sunset Main 347.

### FARM LANDS FOR SALE

BUTTE COUNTY BARGAINS 390 acres—Bumper barley crop this year. Irrigation canal runs through place. Water \$2 per acre year. Price \$100 per acre. Terms.

120 acres—All fenced, good alfalfa, fruit, bean, corn and general farming land. On main County Road, near town and schools. Canal for irrigation on one side of place. \$150 per acre. Liberal terms. 40 acres—35 acres alfalfa, balance family orchard. Good house, barn and out-buildings. Price \$500 per acre; terms. 20 acres—House and barn, land all fenced, 2½ acres bearing Thompson Seedless grapes, 2 acres bearing peach orchard, some alfalfa, rest diversified farming land, a sure bargain at \$175 per acre, \$1500 cash and balance 5 years 6 per cent interest. Paid up water right. Water \$2 per year.

### BOULWARE & BOULWARE,

Gridley, Cal.

BEST LAND BUY IN CALIFORNIA 210 acres located in famous Aromas apricot section, 8 miles from Watsonville, 3 miles from Aromas on S. P. R. R., 6 miles from San Juan and state highway. Land fronts County road on two sides. It adjoins cot orchards that have yielded annually \$250 to \$400 an acre, no failures, no frosts, no irrigation. 100 acres now farmed to grain, beans, potatoes, etc. 30 acres in Oak timber, 20 acres set out to cots, all ideal cot land. Part level, balance rolling. Abundance of water, springs and creeks. Could be subdivided to good profit. Could be set out to cots and sold off at big advance or could be run as a stock and hog ranch. Nothing in same class for less than \$100 an acre. This must be sold and can be had now for \$75 an acre. One-third cash; send for maps, soil survey book and literature about the famous Pajaro Valley.

FARM & FOREST REALTY CO., 467 Main St., Watsonville, Cal.

NO PAYMENT DOWN FARMERS ARE MAKING GOOD IN THE "PROJECT OF NO REGRETS" AT ORLAND, CAL. WATER FURNISHED BY UNCLE SAM. WE SUPPLY THE LAND AND ASK NO PAYMENT UNTIL YOU CAN MAKE SAME FROM CROPS. NO BETTER SOIL FOR ALFALFA, ALMONDS, OLIVES, ORANGES, LEMONS, ETC. WRITE US FOR U. S. GOVERNMENT REPORT AND BOOKLET "ORLAND FARMS." F. D. BURR CO., 253 RUSS BLDG., 235 MONTGOMERY STREET, SAN FRANCISCO.

Oregon, California Government Lands. Latest Green Booklet Free. Tell "How, Why, Where." Write Joseph Clark, Sacramento.

### MISCELLANEOUS

Farmers and Orchardists Attention! "Making the Farm Pay" is a book every farmer should read and profit by. Book is cloth bound, 300 pages. Price only \$1.00. Supply is limited. Satisfaction guaranteed or money refunded on return of book. Order today. Send P. O. order or your personal check, payable to G. W. Schweinhart, 223 Grosse Building, Los Angeles.

Save 20 Per Cent on Six Cyl. Auto—You live outside of Los Angeles County will give you dealer's price on high grade car built by one of most substantial makers. Investigate. P. O. Box 698, Los Angeles.

Famous Hairy Peruvian Alfalfa Seed—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and sample gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.

Slacked Lime—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road, Pasadena.

Make Money writing short stories or articles. Good pay. Send for free information. United Press Syndicate, Los Angeles.

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 113 Clay St. San Francisco.

For Sale, Small Hotel—On account of poor health. A bargain. H. W. Lührs, Chico, Cal.

### AGRICULTURAL IMPLEMENTS

Large Assortment slightly used and agents' sample plows, harrows, cultivators, wagons. Call and see them before buying. Save 50 per cent on some. Four floors. Largest stock. Arnett & Company, Ranchers' Supply House, 111 to 118 South Los Angeles St., Los Angeles.

Bean Threshers Attention—The best and cheapest source of power for small threshing outfit is a Little Bull Tractor. Will haul your outfit anywhere and give ample power at the belt at very low cost. Several of these tractors have been used for this purpose two seasons with great success. Terms if desired. Low prices. See P. J. Weisel & Co., Anaheim, Cal.



Los Angeles Market

Los Angeles, Sept. 5, 1917.

BUTTER

Produce Exch. Quotations.  
Price to trade 4c higher.

California extra creamery.....41

CHEESE

Brokers' prices:

California fresh, lb.....24½@25

Oregon Longhorn.....28

Tillamook Trip.....26

Domestic Swiss.....32

EGGS

Exchange quotations. Prices include  
cases and fillers valued at 35c.

Fresh extras.....44½

Case count.....42

Pullet.....36½

POULTRY

We quote to producers:

Broilers, 1½ lbs. and up, 25; small.....23

Fryers, 2½ lbs. and up.....23

Hens—Leghorns, 13@16; Heavy Cold.....21

Roasters, 3 lbs. and up.....23

Ducks, lb.....15@17

Squabs, doz.....2.00@3.00

Rooster, old.....10

Geese.....10

LIVE STOCK

We quote cwt. f.o.b. L. A.

Corrected Wednesday morning, Sep-  
tember 5 by the Cudahy Company.

Cattle—

Beef steers, av. 1000 to 1100 lbs.8.50@9.00

Heifers, good.....6.50@7.00

Cows, good.....5.50@6.50

Fair.....5.00@5.50

HOGS—

Av. 125 lbs.....13.00

Av. 150 lbs.....14.00

Av. 175-200 lbs.....14.50

Rough, docked 20 lbs.; piggy sows, 40  
lbs., stags, 40 per cent.

Prime wethers.....9.50@10.00

Ewes.....9.00@9.50

Lambs.....13.50

Yearlings.....10.00@10.50

POTATOES

Wholesale selling price:

New cwt. 2.00 @3.40; lug.....1.00@1.10

Sweets, lb.....3½@4

ONIONS

Wholesale selling price:

Brown, cwt., 1.65; white.....1.65

Garlic.....8

VEGETABLES

Wholesale prices:

Artichokes, doz.....50@90

Beans—Wax.....4½@5

Limas, lb.....4@4½

Ky. Wonder.....4½@5

Beets, skt.....1.00

Cabbage, lb.....1½

Carrots, skt.....50@55

Cauliflower, doz.....1.25

Celery, doz.....65

Corn, lug.....50@55

Cucumbers, lug.....30@40

Egg Plant, lb.....3@3½

Horseradish, rt. lb.....15

Lettuce, doz.....85

Leeks, doz.....80

Mint.....40

Onions, green, doz.....25

Okra, lb.....10@12

Peas, lb., Telephone.....8@8½

Peppers, Chili, lb., 3½@4; Bell.....4@4½

Parsnips, doz.....40

Parsley, doz.....20

Radishes, doz.....20

Rhubarb—Strawberry.....1.10

Romaine, doz.....40

Spinach, doz.....17½@20

Squash, Summer, cr.....34@40

Crookneck.....35

Hubbard, lb.....2

Tomatoes, cr., 25@50; lug.....25@50

Turnips, doz.....30

FRUITS

Wholesale prices:

Apples—Crabapples, lug.....1.50

Alexanders.....1.75

Skinner's Seedling.....1.50@1.75

Bellflowers.....1.15@1.35

Avocados, doz.....7.00@8.50

Apricots, lb.....3½@4

Bananas, lb.....5

Cantaloupes—Standard.....1.50

Tip Top.....65@1.65

Ponies.....1.10

Pineapples.....1.50@1.65

Persian.....2.00

Sasabas, lb.....1½

Figs, box.....1.10@1.25

Grapes, Seedless, cr., 80@85; Malagas 1.25

Concord, cr.....1.10

Black.....90

Muscat, lug.....1.10@1.15

Tokays.....1.50

Nectarines, lug.....1.25

Peaches, lug.....60@1.10

Pears, Bartlett, lug.....1.25

Pineapples.....1.25

Plums, lug.....90@1.50

Quinces, lug.....70

Watermelon, lb.....1½@1½

CITRUS

Lemons, 5.25@6.25; juice.....2.25

Grapefruit.....3.00@3.50

Limes, basket.....1.00

Valencias.....3.25@3.50

HONEY

Wholesale prices:

Extr. White, lb.....11½@12½

W. W., lb.....12@14

Comb, case W.....3.75

W. W. case.....4.25@4.50

NUTS

Wholesale prices:

Peanuts, raw.....12

Pine Nuts.....20

Pecans.....19

RICE

Wholesale quotations:

Cal.....6.25

Broken.....4.75@5.60

BEANS

Wholesale Prices:

Ady Washington.....13.50

Jinas.....18.50

Pinks.....10.00

Manchurian Reds.....10.50

Baby Mex.....9.00

Garbanzos.....9.00@10.00

Small White.....13.50

Blackeyes.....3.00

Tepary.....7.00

Lentils.....18.00

HAY

Quotations by Nichols-Loomis Com-  
pany. Wholesale prices to grower f.o.b.  
L. A. carlots.

Tame Oat.....20.00@22.00

Volunteer Oat.....14.00@16.00

Wheat.....16.00@19.00

Barley.....17.00@20.00

Alfalfa.....16.00@19.00

Straw.....7.00

The Alfalfa Growers' Association of  
Southern California quotes: No. 1 Cow  
alfalfa hay \$22.50 f. o. b. Los Angeles,  
and Southern California points. No. 1  
horse alfalfa hay \$21.50 f. o. b. Los An-  
geles and Southern California points.  
Market has been good and demand has  
been exceeding the supply.

GRAIN AND FEEDSTUFFS

Wholesale cwt. f.o.b. L. A.

Alfalfa Meal.....1.75

Alfalfa Molasses.....1.80

Barley, Rolled.....2.80

Barley, Recleaned, Whole.....2.75

Barley, Hulled.....3.35

Beet Pulp.....1.80

Bran, Heavy.....2.45

Cocaoanut Meal.....2.30

Cottonseed Meal.....2.75

Corn, Yellow.....4.45

Corn, White.....4.55

Corn, Cracked.....4.50

Corn, Feed Meal.....4.55

Corn, Egyptian.....4.00

Middlings.....3.05

Milo.....4.00

Oat Chop.....1.90

Oats, White.....3.00

Oats, Rolled White.....3.05

Oats, Hulled.....4.90

Oats, Rolled Chicken Groats.....5.00

Oilcake Meal.....3.40

Wheat, No. 1.....4.00@4.05

Wheat, Cracked, No. 1.....4.40

Rye.....4.00

Blood Meal.....5.10@5.20

Bone, Green.....2.85@2.95

Bone, Dry.....3.05@3.15

Charcoal, 50-lb. skt.....2.70@2.80

Clam Shell.....70@80

Grit, Granite.....65@75

Oyster Shell.....1.25@1.35

Sunflower Seed.....4.10@4.20

Soya Bean Meal.....3.20@3.30

Scratch Feed.....3.95@4.05

Gritless.....4.15@4.25

Rice Bran, ton.....40.00

Middlings, ton.....45.00

Rice Polish, ton.....49.00

San Francisco Markets

San Francisco, Sept. 4, 1917.

BUTTER

Dairy Exchange quotations, lb.:

Fresh extras.....40½

Prime firsts.....40

CHEESE

Dairy Exchange quotations:

Cal. Flats. 18@22½ Y. Am.....24½

New Firsts.....20

Jack Cheese, full cream.....21@20

EGGS

Dairy Exchange quotations:

Fresh extras.....44

Select Pullets.....41½

Firsts.....40½

POULTRY

We quote from producers, lb.:

Hens, large, 23@24; Leghorns,.....16@18

Small colored.....18@20

Broilers.....26@30

Roosters.....29@30

Squabs, doz.....2.00@3.50

Ducks.....12@15

Geese.....19@20

Belgian Hares, live, 11@13; dr.....15@16

LIVE STOCK

Prices gross weight:

Cattle: The following prices are for  
grass fed stock. Hay fed bring ½ to ¾ c  
more.

Steers, lb., 6½@9; cows and heifers,  
4@7½; calves, 7½@9c.

Sheep: Wethers, 10@10½; ewes, 8@8½;  
lambs, lb., 11½@12.

HOGS—Hard grain-fed, weighing 100  
to 150 lbs., 13½@14; 150 to 300 lbs., 14½  
@15; 300 to 400 lbs., 14½@14½.

POTATOES

Wholesale selling prices at wharf:

New, cwt.....2.25@2.50

Salinas Burbank, cwt.....2.60@2.80

Sweets.....3½@4

ONIONS

Wholesale selling price on wharf:

Australian Brown.....1.00@1.10

Green, bx.....50@60

Garlic, lb., new.....3@4

VEGETABLES

Wholesale selling price:

Beans, string, lb., 4@5; skt.....75@1.00

Fy. Garden, 3@5; Lima.....5@6

Celery, San Pedro, cr.....3.00@4.00

Corn, Green, skt.....1.50@2.50

Cucumbers, large box.....25

Egg Plant, lug.....50@75

Okra, 10-lb. box.....75@85

Peas, Halfmoon, skt., 1.25@3.00; lb., 6@7

Peppers, Bell, lug.....30@45

Chili, lug.....25@50

Squash, summer, lug.....25@30

Italian, lug.....50@60

Tomatoes, lug.....50@1.25

Bay, lug.....1.00@1.25

CITRUS FRUIT

Wholesale selling price:

Lemons.....2.00@7.50

Lemonettes.....3.50@4.00

Grapefruit.....2.00@3.00

Limes, Mex.....4.50@5.50

Valencias.....2.65@3.25

FRESH FRUIT

Wholesale selling price:

Apples—

Bellflowers.....1.00@1.25

Red Astrachan.....50@1.00

White Astrachan.....75@1.25

Gravenstein, box.....1.25@1.75

Alexander.....75@1.00

Crabapples, small box.....60@75

Bananas, lb.....5

Grapes—Tokays, cr.....75@1.25

Seedless, sm. lug.....75@1.00

Muscat, cr.....1.25@1.50

Blk., cr.....60@75

Huckleberries, lb.....17½

Malaga, cr.....1.00@1.25

Nectarines, cr.....75@1.00

Peaches, sm. lug.....40@65

Santa Clara, lug.....50@75

Strawberry, Freestone, box.....65@75

Mountain Freestone.....40@60

Pears—Bartlett, No. 1, box.....1.50@2.00

Ton, 50; cull, ton.....10.00@12.00

Pineapples, doz.....4.00@5.00

Plums—Burbank.....75@1.00

Green Gage, ton.....40.00@50.00

Damson, ton.....55.00@60.00

Prunes, lug.....50@85

Blackberries, chest.....3.50@4.50

Strawberries, chest.....5.00@6.00

Raspberries, chest.....8.00@10.00

Watermelons, lb.....1@1½

DRIED FRUITS

Manager Niswander of the California  
Peach Growers advises that a limited  
quantity of peeled peaches, either in as-  
sortments or carload lots, will be sold.

BEANS

Jobbers' prices, cwt. recleaned:

Limas.....12.00@12.75

Bayous.....8.50@9.00

Garbanzos.....6.00@6.50

Small Whites.....12.50@14.00

Mexican Red.....9.00@9.50

Large White.....12.00@13.00

Pinks.....9.00@9.25

Black Eyes.....8.00@8.50

Cranberry.....10.00@10.50

GRAIN

Grain Exchange prices, ctl.

Wheat, Northern Bluestem.....4.35@4.50

Corn, California Yellow.....3.75@4.00

Oats, Red Feed, 2.75@2.90; seed 3.00@3.25

Barley, Feed.....2.35@2.37½

FEEDSTUFF

Wholesale prices per ton:

Bran.....41.00@42.00

Cornmeal.....33.00@34.00

Cracked Corn.....33.00@34.00

Middlings.....51.00@53.20

Alfalfa Meal.....28.00@30.00

Cocaoanut Meal.....38.00@40.00

Rolled Barley.....49.00@50.00

Citrus Fruit Market

Los Angeles, Sept. 5, 1917.

Well up toward 100 cars of Valencias  
daily are going forward. The best of it  
is the market receives them all gladly.  
Especially fine stock covered around  
\$5.00. Sales made in the auction range  
from \$2.00 to \$4.75.

Lemons continue rather dull. They  
have dropped the abnormal prices,  
though some sales are made well up to-  
ward \$7.00. The greater number, range  
from \$2.60 to \$5.00.

Shipments

Shipments of oranges from Southern  
California since November 1, 1917, 37,397  
cars, lemons 7356, total 44,753; to same  
date last season oranges 29,292, lemons  
6385, total 35,677. From Central Califor-  
nia to date this season oranges 5044, lem-  
ons 164, total 5208; to same date last sea-  
son oranges 5398, lemons 146, total 5544.  
From Northern California this season or-  
anges 845 cars; to same date last season  
oranges 610, lemons 1.

WEATHER CONDITION

San Francisco, Cal., August 25, 1917.

Rainfall—

Wk. Season Norm. Temp. Max. Min.

San Francisco, Cal., Sept. 1, 1917.

Eureka......00 .22 60 50

Red Bluff......00 .00 63 54

Sacramento......00 .01 90 54

San Francisco......00 .00 84 52

San Jose......00 .04 76 56

Fresno......00 .00 98 60

San Luis Obispo......00 .05 74 50

Los Angeles......00 .00 80 54

San Diego......00 .00 72 62

CHESTER WHITES

BILLIKEN BRAND

"BILLIKEN"

Bred by C. B. CUNNINGHAM - - Mills, California

Call around at our pens at the State Fair and look at Billiken. We  
will be glad to show him to you and tell you why.

Unedda Herd Duroc Jerseys

Our sows are rich in the blood of Crimson Wonder, Colonel Golden,  
Model Perfection, the best blood of the breed. We are using Unedda Wonder,  
second prize boar at Nebraska State Fair, 1916, whose sire was second at  
Iowa and Nebraska, 1909, whose grandsire was first and Grand Champion  
Iowa State Fair, 1906, and whose great grandsire was Champion at Iowa  
State Fair, 1904.

WE ARE NOW BOOKING ORDERS FOR PIGS

H. P. Slocum & Son

WILLOWS - - CALIFORNIA

Shall Show Some  
of the York Kind  
at State Fair

"KEEP A PIG"

I know you like good Berk-  
shires and I think you will call  
mine good ones. Shall be glad  
to meet you and show what my  
breeding and feeding can do.

GEO. M. YORK

MODESTO - CALIFORNIA

Leddy Rose 22357

Alfalfa Land for Dairying

Land already checked, leveled and in good stand of alfalfa. For sale on  
easy terms in tracts of 20 acres and up. Also first-class orchard and bean land.

BRENTWOOD IRRIGATED FARMS

Sixty-three miles from San Francisco in Contra Costa County. For prices,  
etc., address

BALFOUR, GUTHRIE & CO., Land Dept., 350 California Street, San Francisco.



# The Premier Sire of the West



His Dam



Pontiac Clothilde De Kol 2d  
She is the greatest producing cow of the breed having more great sons and grandsons than any other cow. She was the first cow to make 37 pounds butter in 7 days, 145 pounds in 30 days and 1271 pounds in a year. No other bull in the West has as high a record dam.

His  
Sires Dam



Pietertje Mald Ormsby  
She has twice held the world's record for 30 days in her class making 35.56 pounds in 7 days and 145.66 pounds in 30 days. The average of the two nearest dams of it were world's records averages for 7 and 30 days in 1912 and 1913 and are still unequaled by any other bull in the West.

## The Merit of His Offspring

At the Steven Bros. sale 59 sons and daughters of "It," mostly calves sold for an average of \$579.83 apiece, six of his daughters bringing from \$1000 to \$4000 apiece. This average is unequalled by the offspring of any other bull in the world for a like number at the same age.

His first seven daughters to freshen have made splendid records, one 23.92 pounds, another 21.05 pounds, three others over 19 pounds and the other two 17 and 15 pounds, all as two year olds.

## His Opportunity

"It" has had an unsurpassed opportunity, being used for four years exclusively on all the daughters of King of the Pontiacs the greatest sire of the breed.

We are giving "It" the greatest opportunity of any sire in the West, using him altogether on all the best cows in our herd which include eight 30 pound cows and forty over 25 pounds.

## Important Announcement

In some of the fall sales we expect to offer a number of splendidly bred animals in calf to "It."

This is one of the most important announcements made in connection with public sales in California and should be borne in mind by every purchaser.

## Buy from a Producing Herd

In the last year we have made  
More 31 lb. Records  
More 25 lb. Records

More 20 lb. two year old Records  
More State Records than any  
other breeder in the State.

# McAlister & Sons

CHINO

CALIFORNIA



# CALIFORNIA CULTIVATOR

**THE LIVESTOCK and DAIRY JOURNAL** *Combined with* **CALIFORNIA CULTIVATOR**

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

September 15, 1917

SAN FRANCISCO



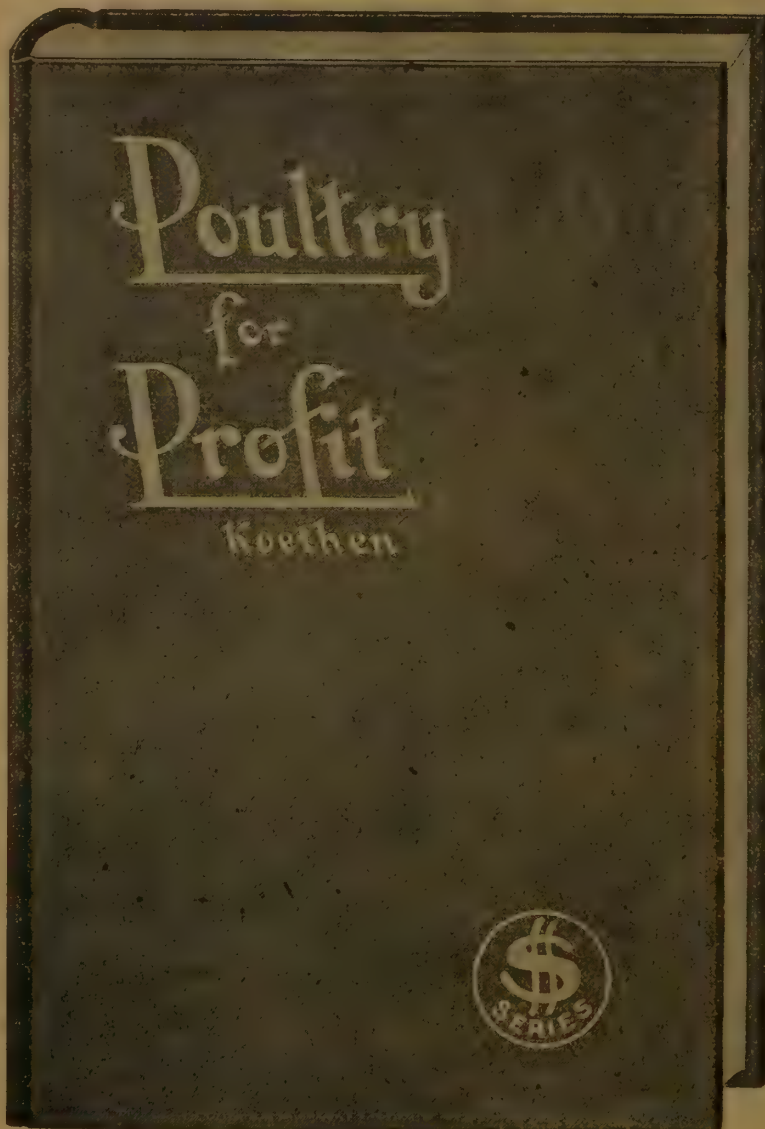
California Field Drednaughts in Action



## the Cultivator Poultry Book

## Poultry for Profit

by  
Jean A. Koethen



## PACIFIC POULTRYCRAFT SAYS:

A brand new book on poultry published by that old reliable Cultivator Publishing Co., Los Angeles. The author, Jean A. Koethen, has really written a poultry book worth while. The different subjects are treated with a directness that is refreshing, after reading so many books that say so much and mean so little. The book is intended for the beginner and farmer, but we commend it most heartily to anyone interested in poultry; whether for pleasure or profit; it is full of good things from cover to cover.

## THE LOS ANGELES TIMES SAYS:

The author of this manual has covered the subject fully, giving the salient features and practices of an enlightened poultry culture as it applies to California conditions, based largely on personal experiences, and intelligent compilations from recognized authorities.

## THE RIVERSIDE PRESS SAYS:

The Press is in receipt of a copy of this work, called "Poultry for Profit," and has no hesitation in commending it to either the "backlotter" who keeps a few chicks for his own pleasure, to the fancier who works to the "standard," and to the commercial poultryman who makes a business of poultry culture.

Before its publication, the manuscript of "Poultry for Profit" was submitted to practical poultrymen, to experts and simple poultry enthusiasts, and all agreed that it was more comprehensive, more readable and vastly more helpful than any similar poultry book yet published. It covers the widest range, discussing breeds, feeds, diseases, housing, marketing and answers the thousand and one questions that even the expert poultryman sometimes has to ask and the amateur is ever asking.

## THE PORTLAND OREGONIAN SAYS:

The Weekly Oregonian takes pleasure in recommending this book to its readers, for it is "the right stuff," told in the right way by the right woman.

## "Poultry for Profit"

Gives more practical knowledge of every branch of the poultry business in a more concise and simple manner than any similar book published. With the knowledge gained by a study of this work experience in the poultry business is not as necessary. Through its guidance obstacles are overcome before it is too late.

## An outline of its valuable information—

Making a Beginning	Housing and Yarding	Incubation
Brooding	Feeding	Breeding
Marketing	Sanitation and Hygiene	Fixtures, Conveniences
Diseases and Vices	Ducks and Geese	Turkeys

The book is 5½x8 inches and contains 12 chapters, with over 225 pages of text and 18 pages of illustrations, printed on eggshell book, binding full cloth vellum de luxe, at the price of one dollar postpaid.

\$1.00 Postpaid to any address.

\$1.75 with the California Cultivator, weekly, one year.

The Cultivator Publishing Co., Inc.

115-117 N. Broadway

Los Angeles, Cal.



## Will You Be There?

If you are you will see the result of years of experience in Tractor Construction. You will see a Tractor that does not cost a fortune to keep in repair; a Tractor that is only 53 inches wide, 45 inches high and 96 inches long; one that will turn in its own length pulling its entire load; a Tractor that will absolutely adjust itself to any ground no matter how uneven without strain on the machinery; a Tractor that is dust proof, all parts running in oil; the pulliest Tractor for its size of anything yet constructed. You will find all these vital points embodied in the New Lambert Chain Tread.

Wm. Gregory and Sons

602 N. Main St.

LOS ANGELES



## DITCHES

Make the New and Clean the Old—irrigation or drain, grade roads, build dykes—in any kind of soil, sand, rocks or gumbo, wet or dry, on side hill or level ground with

**The Martin Ditcher & Grader**

Reversible, Adjustable, No Wheels or Cogs

**SOLD ON  
10 DAYS  
TRIAL**

All steel. Made in 2, 4 and 6 horse and tractor sizes. Economical from first cost on. Over fifteen thousand satisfied customers. No farm or ranch outfit complete without a "MARTIN." Use one a day and you'll agree.

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TRACTOR IMPLEMENTS**

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Insures greatest resistance to rust and corrosion, and best protection from fire and weather. Specially adapted to farm buildings. Made from APOLLO-KEYSTONE Copper Steel Galvanized Sheets—highest quality sheets manufactured. The added Keystone indicates that Copper Steel is used. These sheets are also unsurpassed for Siles, Tanks, Cisterns, Culverts, Sheds, etc. Sold by weight by leading dealers. Send for free "Better Building" booklet.

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**Hauser's Digester Tankage**

GIVES GREATEST VALUE FOR LEAST MONEY.  
IT MAKES THEM FAT.

Hauser Packing Co.

Los Angeles



# California Cultivator

L. XLIX No. 11

LOS ANGELES: September 15, 1917

One Dollar Yearly

## California State Fair, 1917

First Look In of the Cultivator Bunch. Fine Fair. Some Classes Smaller Than in Former Years, More Larger and Some Entirely New Features

WHETHER it be because of natural growth of the state and its agriculture or whether because this is War Year and patriotic appeal and even other possible appeal has been to produce more, grow more to ourselves and allies and a starry world, or whether because of other because I know not, but it is this is California's greatest fair year. Its greatness may be somewhat enhanced by a swelled head and by sleeplessness and the most rascal racket ever listened to. This word (including that first out-erously long sentence) is being writ- at 1:40 a. m. (yes, in the morning) Sunday September 9, 1917), which says that it is somewhat after the of the ushering in of the birth- of the state of California and, be- me, (that isn't slang, I'm just- ing to be impressive) Sacramento's element has done some usher- It is likewise my own birthday perhaps I should feel honored at a reminder, but, honestly, the ket, now more than two hours old, somewhat wearing. There are now bands, one brass and one fife drum, with tin horn and old can

varieties, out on the street playing "Oh Johnnie," and both those bands are long on wind and water—or some- thing else wet.

But, more seriously, Sacramento was never so decorated and illuminat- ed and bedecked: soldiers, marines and things military are everywhere; airplanes are hovering over the fair

grounds continually, ready to spy out approach of the enemy—or may be a streak of hot weather. The weather yesterday (Saturday) was fine.

Every room in town is filled. It's now rooms in private residences or a bench in the park. This condition gave a couple of San Francisco men an opportunity to remark in a hotel

lobby last night that "This fair should be held in a larger center where the crowd may be accommodated."

San Francisco and the bay section has always looked at the state fair with longing eyes, but Sacramento has held its grip and probably al- ways will. But she should certainly build a bunch of barracks or some place to sleep its crowds.

First three days of the fair are given over almost exclusively to the Native Sons and Daughters—N. S. G. W. and N. D. G. W. This is announced as the last year in which other towns of the state are asked to withhold all local celebrations and unite with Sacra- mento in honoring the day and the fair.

The old "Main Building" horticul- tural building burned a year ago with all its exhibits. It has been replaced for this year with tents and frame buildings. They are far from impos- ing but answer well. They are filled with county and educational exhibits, much like those of former years, but there are new features and proofs of the state's productiveness which are now and then surprising.

The woman's fire proof building has Continued on Page 274



A Type of County Exhibit  
Photo by courtesy board of supervisors of Sacramento County.

## The Day of the Tractor

California Farms Need More Power and More Equipment. Interesting Observations Made at Eastern Tractor Demonstration. Tractor Improvement. Valuable Hints on Care and Management

THE father—and, we may add, the mother—of tractor demon- strations is Fremont, Ne- braska. For several years demonstrations have been held in that section and from their in- fluence many others in other sections of the United States. The tractor peo- ple this year, however, have largely entered their energies in the one great demonstration at Fremont. It is held in August and thousands of people attended and studied tractors and tractor drawn implements under such favorable conditions as are sel- dom offered.

California is a long way from this central demonstration, so this year in addition to the demonstration be- ing held in the state fair grounds this week the Southern California Trac- tor Engine and Implement Dealers' association will hold September 18-22 at the Vail ranch just outside of Los Angeles a demonstration which should afford the student of farm power and farm implements opportu- nity to get a wonderful fund of infor- mation. In view of this special value given to some of the facts develop- ed in the Fremont demonstration. We therefore quote from an article writ- ten by F. M. White of the Wisconsin college of agriculture as to lessons learned at that demonstration:

"The standard tractor has not ar- rived. There is, however, some ten- dency toward standardization, but not

as much as one would expect to find after the tractor demonstrations of 1916 and the experience of the past three or four years in the building of tractors. Just exactly how to define a freak tractor is not at all easy.

with every conceivable arrangement of the wheels. There were one, two and four wheel drive machines, all of which were doing excellent work in the field. There is, however, emerg- ing, and it is quite distinct, a resem-

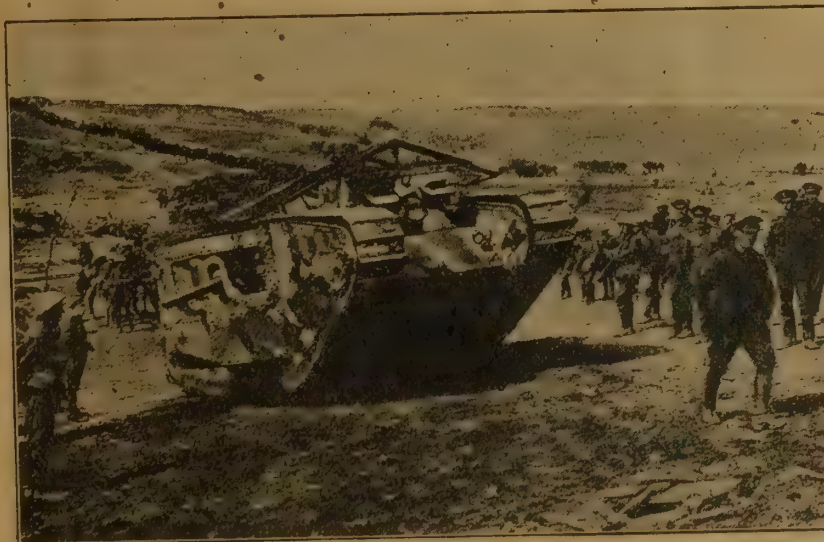
generally recognized as the standard type.

This year for the first time at a demonstration the four wheel drive machine was shown. It attracted considerable attention although it is quite doubtful if it has been perfect- ed. There are so many complications in transmitting the power to the wheels that it makes this sort of de- sign expensive although there is no question but that a four drive wheel machine has many advantages over other methods of driving.

"The writer believes thoroughly that every idea contributed to the tractor is a valuable asset to the tractor industry, but, no doubt, many ideas will be abandoned very soon. Farmers attending such a demonstra- tion cannot help but be confused by such a wide variety of types. At best, they are skeptical about the tractor's lasting qualities but when they are sure that a certain standard type is developed the majority of them will be prospective tractor purchasers. As one man expressed it: 'Farmers and horses are hard to part.' So the man- ufacturers of tractors must be par- ticular to build a machine that will stand up under the severe strain of farm work.

Tractors Well Built

"Anyone who has followed the trac- to situation can see that they are be- ing built better in every way than even



"Somewhere in France"  
A "Tank" on the Battlefield.

Perhaps what we may speak of as a freak tractor now may eventually prove to embody ideas worthy of very careful consideration. At any rate, more new ideas should be encouraged rather than discouraged in order to evolve the final tractor.

"There were shown again this year, two, three and four wheel machines

blance of the future standard type of tractor. It is the four wheel machine with two rear drivers and two front guide wheels. There are also a good many three wheel machines with two rear drivers and one front guide wheel. This differs so little from the four wheel machine that the three or four wheel machines are now most



last year. Better materials are being used throughout. Gears and other wearing parts are made of higher quality steel, and where necessary are enclosed in a tight case and running in oil. The tractor manufacturer who does not soon recognize the importance of enclosing the main gears in a dust proof case is bound to receive a severe jolt when this present big demand for tractors is over. There is no question but that most companies now can sell every tractor they can make. Just as soon as the war is over and nations readjust themselves, competition will be keener than ever before, so it behooves those in the tractor game at the present time to advance with the tractor industry. The fact that many dealers and farmers already are ordering tractors a year in advance, indicates that this year's supply is practically exhausted. This is a peculiar situation in such a young industry.

#### Plows Being Standardized

"Colonel Bradford Brinton says, in regard to the tractor situation, that he was the last man to give up horses when the automobile was developed

but that he expects the tractor to replace the farm horse and the tractor become the greatest manufacturing industry of this country. When asked regarding the most popular and prac-

the rigid beam construction type. Where there are more than four bottoms, each bottom should be independent of the other bottom so that they can conform to the uneven ground and



Tractor with Drag Harrow

tical size of tractor, he stated that the three and four plow machines were winning out.

"The construction of plows is being rapidly standardized. The two, three and four bottom plows are of

each plow maintain an even depth. There are a few cases where five plows can be built and rigidly fastened together, but this should be used for level ground only. The method of hitching to the plow should be stan-

dardized. The height of the bottom varies on some tractors. The companies have conformed in the majority of cases to the wishes of plow manufacturers so that the farmer will experience comparatively little difficulty in hitching any make plow to a tractor. Some of the new companies, however, think only of tractor and difficulty arises when attempting to use it for all types plows.

#### Power Implements

"Tractor cultivators, tractor plows, and tractors pulling manure spreaders and binders were a new innovation in this year's demonstration. An Illinois company demonstrated use of motor machinery in raising corn crop. One size tractor was used for plowing, a motor cultivator for disking and preparing the seed bed, followed by a motor cultivator plowing corn and another one plowing corn. These outfits handled remarkably easy and were of much interest to the corn belt farmer. They demonstrated the possibility of growing corn by the use of mechanical power only.

#### Use Tractor for Belt Work

"One important phase of tractor construction is being recognized by most of the manufacturers. That is the use of the tractor for belt work. Mr. Yerkes of the United States department of agriculture, addressing a meeting of more than 400 tractor manufacturers and newspaper men, said: 'From the investigations made by the United States department of agriculture, belt work for the tractor exceeds that of any other use. A tractor that was not used for belt work on the road very extensively—over three or four per cent.' Mr. Yerkes also stated that from the farmer's viewpoint service is the most important item for tractor manufacturers to consider at the present time; that the average farmer is a first class operator, and that so many manufacturers make very strong statements regarding how easy it is to take care of and to operate the machines.

#### Take Care of Tractor

"It is absolutely impossible for a farmer to depend upon the manufacturer for every little trouble which may arise with his machine. The operator should form a regular plan of oiling and caring for his tractor. The idea that a tractor does not need any care is false. It will pay any farmer to give about one-half hour each working day to see that everything is in first class shape, properly oiled, and that no parts are unduly worn. The tractor manufacturers are all under obligation to the farmer to assist in his education. Service is something that the tractor manufacturer will not give free. If he does not charge the owner of a machine for assistance when called upon, one can rest assured that this cost is contained in the original sale of the tractor. Some men will require more help than others. It is not fair to hold a good operator for a company to include in the sale price of his tractor money for service. In many cases one man would use nearly all of the service of two or three or maybe more tractor owners. There is no doubt but that the farmer will have to pay for service due to carelessness and lack of education in the handling of his machine. As the tractor industry develops dealers will be established and educated so that they may help instruct the owner of the tractor in caring for his machine.

# CATERPILLAR

Reg. U.S. Pat. Off.

## Lowest Cost Per Working Hour

Price, in the purchase of a tractor, should be a secondary consideration. Of chief importance are the tractor's dependability, its ability to do all sorts of work, under all sorts of conditions, with a low operating and upkeep expense.

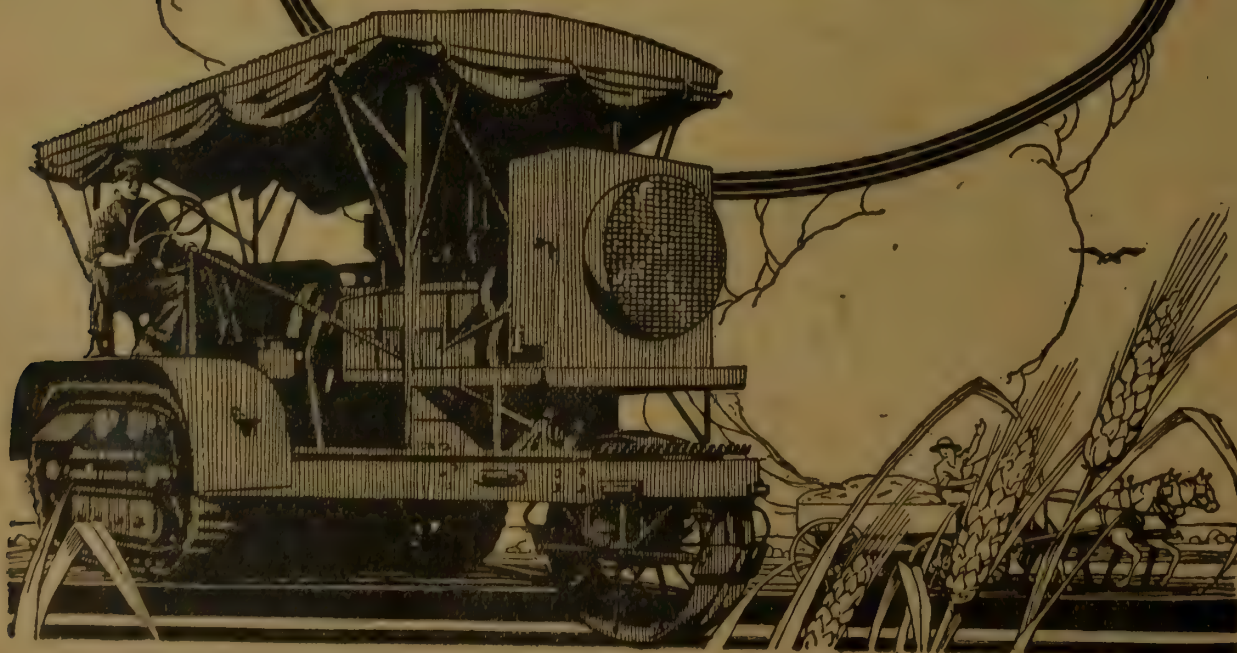
Many years of Caterpillar operation have proved its cost lowest, not only per actual working hour, but also per acre worked. Statistics from hundreds of Caterpillar owners prove this to be so.

Power to pull an unusual number of plows at an unusual depth, versatility in operation, construction that minimizes delays and expense for repairs, make Caterpillar costs lowest, and Caterpillar profits largest.

*We will gladly send you details on all models*

**The Holt**  
MANUFACTURING CO., Inc.

Stockton San Francisco Los Angeles Portland Spokane





"The tractor demonstration as conducted this year seems to have about served its purpose. Just exactly what will be the nature of future assemblage of tractors is impossible to state. Many engineers would be interested in a contest of some sort in

order to settle definitely some points regarding rating and fuels. Whether the arrangement of such contests can be made or not is doubtful. At any rate some definite information or comparative data on various tractors would be of interest to engineers and farmers alike."

tractor. Here there are vast acreages to till and labor is scarce. Full reliance must be placed upon the tractor for the heavy work of plowing, hauling, and harvesting and Western farmers know that in order to place reliance upon a machine it must be of the highest grade.

This is simply cited as an instance of the fact that quality pays. There is probably no piece of machinery that is subjected to severer service than the tractor, and cheap materials and cheap workmanship do not pay under such conditions. But, as already stated, the success of the tractor does not rest alone in the condition of the

tractor when it is sent from the factory. A tractor must be given a reasonable amount of care and attention. It must be lubricated frequently and lubricated with a good grade of oils and greases. Certain adjustments are necessary and all bolts must be kept tight to insure continued good service from the machine. Some of the tractor manufacturers, therefore, have gone so far as to follow up their machines with an elaborate degree of service. This service consists not only in supplying expert engineers or servicemen to make adjustments or repairs which the farmer feels that he himself is not qualified to make but also in supplying complete text books and bulletins of information by means of which the tractor operator may familiarize himself fully with the care and operation of the machine. Still further than this, a school is held annually at the factory. This school session lasts a fortnight, during which time the student may gain a thorough education in tractor operation. The training given is probably more detailed than the average operator would require, but the factory gives this training free to the owners of its tractors on the theory that the more a man knows about his tractor the better success and satisfaction he will have with it.

If a tractor is built for service and is backed by service on the part of

## Tractor's Importance in Agriculture.

Written for California Cultivator By G. M. Walker

**S**UCCESS in agriculture is yearly becoming more and more dependent upon the power equipment owned and the care taken of it and use of it.

The average farmer is too often at a disadvantage because of a lack of good equipment for carrying on his farm work. He knows that no matter how rich the soil, how good the seed, how favorable weather conditions may be, he can do nothing without power and implements. They are essential.

The fundamental importance of farm machinery is that it enables the farmer to produce his crops with less expense, and it also makes it possible for him to handle a much larger acreage. Agricultural authorities have proved that increased crop yields depend upon three essentials: Seed, Tillage and thorough tillage. The tillage, which is doubtless the most important, absolutely depends on power and machinery.

The first and most important essential in farming with a tractor is good business management. It is just as necessary in farming as it is in any manufacturing or business undertaking.

The first and most important part of the power-farming equipment is the tractor. The prospective purchaser should be very careful in buying his tractor to see that he gets one which will be best adapted to his own particular conditions. It is always well to invest with a reliable manufacturing concern so as to be sure of getting a good machine. Above all things insist upon quality. Rather let the price be a secondary consideration. By getting the best it will always be worth and to pay in the long run.

The tractor in the first place means a large investment. The farmer should aim to adapt it to as many different kinds of work as possible in order to make it pay for itself. A large number of the tractors in the field at the present time are used principally for plowing and harvesting. They could be made to perform other kinds of work, such as hauling, harrowing, seeding, road building, harvesting, running ensilage cutters, saw mills, feed grinders, and many other farm jobs. All the drudgery of farm work can be performed by the engine.

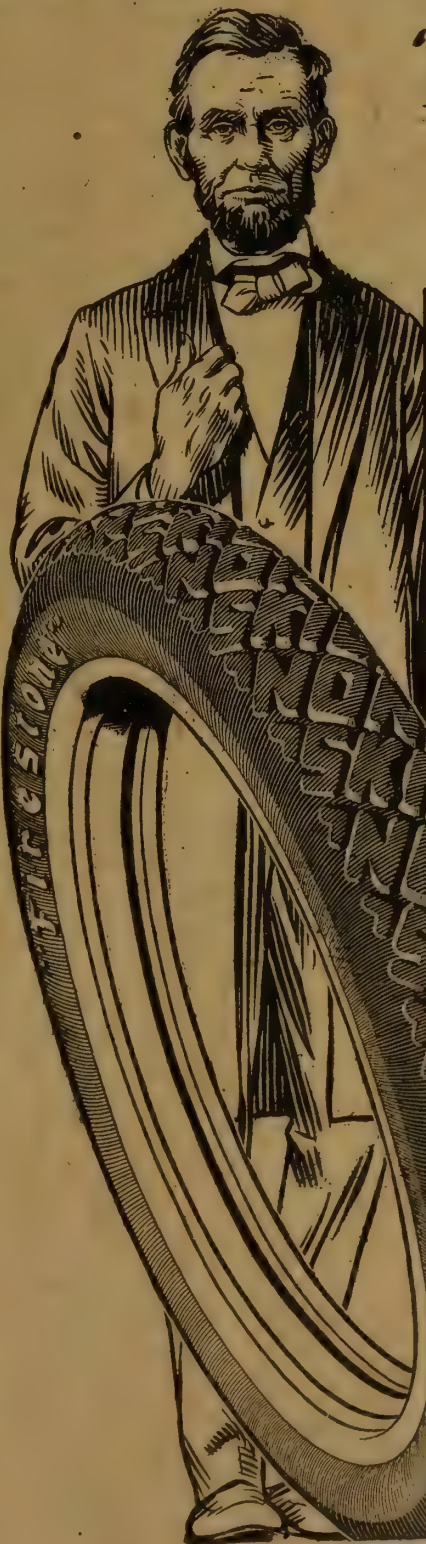
Of course there are many different kinds of tractors and many different kinds of men. Some men abuse or neglect machinery and could not make success of the finest tractor ever built, and some tractors, on the other hand, are so cheaply constructed and of such poor material that even the best of care cannot save them from an early trip to the scrap heap.

In the Eastern and Middle West states many of the farmers have been willing to "play" at the tractor game. They have followed the policy of "getting their feet wet" gradually; so, instead of buying a high grade tractor and relying upon it for their work, they have kept all or most of their horses, put a small amount of money

into a cheap tractor and thus have failed to give the tractor-farming proposition a fair trial. Out here in the far West farmers have had to put more complete reliance upon the



Some Plowing  
This is the way the plows look following the tractor.



*"In Union  
There is Strength"*  
A. Lincoln

**F**ROM the beginning of the Firestone business, Lincoln's advice was heeded by its founder and present head, Mr. Firestone. He saw the power in singleness of purpose, and the roots of Firestone success are laid deep in organization.

The Firestone factory and sales forces everywhere work together to produce highest quality at lowest possible cost. They want Firestone Tires to be universal in use, to reach all the people. They know that motoring reaches its best possibilities when on every machine in all seasons, the equipment is—

**Firestone**  
TIRES AND TUBES

Best from the mileage standpoint, toughness of tread and strength of body. And this toughness is combined with the resiliency demanded for easy riding and car protection.

With the true Abe Lincoln policy of "pull together," Firestone Branches and Dealers everywhere unite to give you maximum efficiency and economy of service.

FIRESTONE TIRE AND RUBBER COMPANY  
AKRON, O. BRANCHES AND DEALERS EVERYWHERE



its manufacturers, this tractor can surely do farm work at far less cost than horses or mules. Detailed figures might be given to prove this, as many tractor owners, particularly the large sugar companies and extensive land owners, have kept detailed comparative costs to prove the economy of tractors over horses. Figures, however, are rarely interesting and figures that might apply in one section would not apply to another and therefore would be valueless.

The best thing for a prospective tractor purchaser to do, who is still

skeptical as to the comparative merits of horses and tractors, is to go to some farmer in his community who owns a tractor and who he knows has given his tractor fair treatment and find out what the owner's experience has been. Better still, go to several owners so that the average of their experiences may be obtained. Almost any tractor agent or salesman would be glad to direct you to such owners, and if he does not you may rest assured he has something to conceal and is ashamed of the record his tractor makes in the field.

## The Day of the Tractor is Here

**E**VERY dog has its day" is an old but true adage. Oxen had their day and then were replaced by faster, more efficient, farm power—the horse.

Now, however, the call for even more efficient farm power to cope with an immensely increased demand for food-stuffs, due in large measure to war conditions, brings the tractor to the front with a rush on an errand not only of mercy for the horse but also to bring even greater production than the overworked horse is capable of producing.

The farmer who fails to consider and understand the trend of the times in this respect will no doubt soon be

classed with the farmer of by-gone days, whose sentiment in regard to the old ox team overcame his better judgment in replacing it with a span of good horses.

When our president told us that the result of the war might depend largely upon the ability of the farmer to produce more crops and that every means at the command of the farmer should be employed to increase production, it seems as if he said almost plainer than words "get a tractor."

Quite naturally the farmer of 80 acres or more is puzzled to know how the tractor can be employed profitably by him. He knows that unless

the tractor will be a profitable investment that he can do more for his country by not buying it than he can with its help.

These tractors make their strongest appeal because of the fact that they do 75 to 100 per cent of the farm work that horses formerly did, thus permitting you to eliminate a large per cent of your horses. When you

If you are a small farmer, keep your eyes open for the tractor that meets the requirements of your farm. Note how many horses the tractor you propose to buy will eliminate. Note how many of the things it will do that horses did before, see if it will cultivate as well as plow, if it will do at least 75 per cent of your farm work without horses and if it



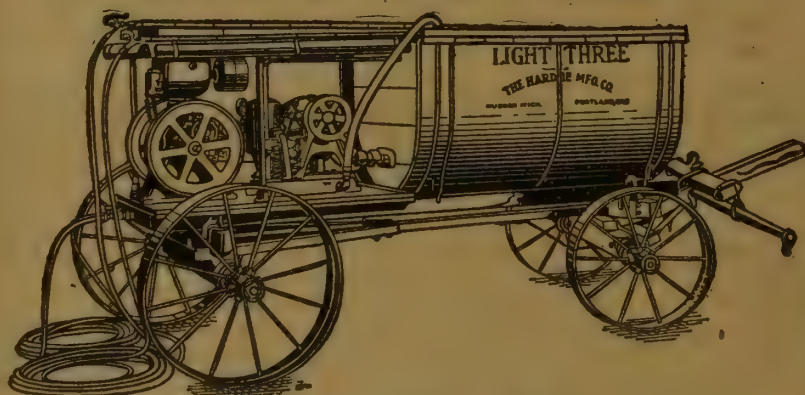
The Tractor Works Successfully in the Orchard

can get a tractor that cuts down feeding expense 75 per cent, to 100 per cent, one that eats only when at work, that starts with you on the first furrow in the spring and plows, discs, harrows, plants, cultivates, runs the mower and binder and fills your silo, you've got a tractor that is as much more efficient than the horse as the modern spinner is more efficient than the old spinning wheel.

man can operate it as easily as a team of horses.

These are the most important things the owner of a small farm must look for when he buys a tractor. If you get the tractor that actually meets your needs you'll agree that the tractor is now going to have its "day" and that when it does have its day, farming will not only hold fewer drawbacks and drudgeries, it will be far more profitable and pleasurable.

## The Hardie Sprayer is Measured by Results



During the past twenty years nearly 15,000 orchardists have purchased **Hardie Power Sprayers**

They have had time in which to test them; time in which to see the added value their use has given their fruit crop; time in which to prove their sterling value.

### Hardie Sprayers

do the big spraying work of the country because they are always dependable have the big capacity and the high pressure required built into them by the use of the best materials. Careful simple design has brought freedom from trouble and complications.

### WRITE for 1918 Hardie Spray Book today

It will tell of this modern, dependable sprayer. With the new Modern spray gun that will interest every fruit grower, this will be demonstrated at the Tractor Show, Los Angeles, Cal.

**HARDIE MANUFACTURING CO.** Portland, Ore. and Los Angeles, Cal.

## Will There be 100,000 Tractors in Use Next Year?

**T**HE best tractor authorities in America estimate that there will be over 100,000 tractors in actual use by the end of this year. Yet there are thousands of farmers who still believe that the tractor will never be perfected to a point where it will be a profitable addition to the equipment of the small farm of 80 to

do a large percentage of the work that horses now do so you can eliminate most of your horses. A tractor which will cultivate as well as plow that will disc, harrow, run the mower and binder, besides doing dozens of belt work jobs.

There's the point! The small farmer can't profitably keep both a tractor and horses, so the tractor to be



Where the Big Tractor has a Chance  
Virgin Soil on the Desert

250 acres. This most certainly is a mistaken idea, because even now there are tractors on the market which are fitted for use on the smaller farms and will prove a most profitable investment.

People once said the steam engine was an impossibility, that the telephone would never be of practical use, that Darius Green's experience with his flying machine spelled defeat for aerial navigation, but nevertheless all these things are now accepted as a matter of everyday life.

How much simpler and more probable then is the small tractor of light weight which can be operated by one man as easily as a team, that will

success on the farm of 80 to 250 acres must do a large percentage, or better, do all the farm work without horses.

When a tractor like this is offered to the small farmer he will recognize its great advantages instantly, he will want it without argument, because it will mean to him that the drudgery and most of the drawbacks of farming will be eliminated and that a new day has dawned which will mean bigger crops, greater profits and more pleasures in farm life than the farmer has ever before known.

"More fruit" is what the soldiers at San Pedro are appealing for.

## Fertilizers and Tractors

How can we grow greater crops with less labor on the same amount of land? That is the question to which the big fast-working, one man driven tractor is

### ONE-HALF THE ANSWER

—the other half is to fertilize all your soil with

### HAUSER'S ORGANIC FERTILIZERS

and increase the production.

Compared to prices of the crops they help to produce Fertilizers were never so cheap as they are today.

Authoritative tests have demonstrated that as high as 50 per cent increase in crop production may be expected from the proper use of fertilizer. Think what that means on an acre of LEMONS or BEETS or POTATOES.

A 5 per cent increase in most any crop will pay all the fertilizer expense. You can make your crop increase pay for both your tractor and your fertilizer and both will do your land good and help win the war.

### HAUSER PACKING CO.

Home Phone 10336  
Sunset Bdw. 5600

Ninth and Mateo Sts., LOS ANGELES



# Don't Miss the Tractor Demonstration

Written for California Cultivator

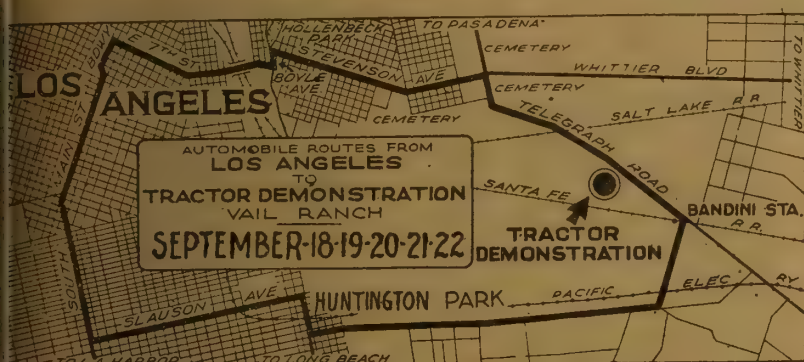
OMING events cast their shadows before," and the Second Annual Demonstration of the Traction Engine and Implement Dealers' Association is casting a big shadow on minds of thousands of wide awake farmers, agriculturists, purchasing agents and master mechanics. The event is selected, September 18 to 22, convenient as they fall at a time when there is a lull in farming operations everywhere. The location is meeting the approval of all as there are many routes which converge at the demonstration field on the Ranch on Telegraph Road, two miles east of the end of the Stephenson Avenue car line from Los Angeles. Not only are the railroads offering lower rates from all points in California, Nevada and Arizona, but also reaches the demonstration field admission is free, there will be parking space for thousands of automobiles, and, last, but not least, there will be free lemonade to those whose throats are parched from following the tractors over the 650 acre field. To avoid the necessity of making a long back and forth to town for lunch, there is to be a very good cafe on the grounds where regular meals will

living must be put on a strictly anti-waste basis, they also realize that this does not mean the curtailment of expenditures that will go toward putting money into reliable channels. If there is any one thing in the country that will tend to put every ranch and farm on this anti-waste basis, that one thing is a tractor. A man can cultivate more land at less expense and in less time than he ever before thought possible, and his yield will be astonishingly greater and of better quality.

These are facts that are being proven every day in the week, and this demonstration is being held for the purpose of bringing tractors, and tractor drawn implements before the public eye in such a way that everyone will realize the importance, and, one might almost say the necessity, of tractor farming to the agricultural world today.

The officers of the Traction Engine and Implement Dealers' Association of Southern California are O. H. Stevens, president; H. L. Marsh, vice-president; W. L. Cleveland, secretary; Alex McCluskey, treasurer; R. M. O'Neill, manager; directors, O. H. Stevens, Alex McCluskey, W. S. Gregory, F. Johnson, R. Dunsmore.

The members of the association are



served. The administration tent will have telephone and telegraph facilities, also a registration desk. Restrooms have been provided for women and children.

The exhibition tent will attract the greatest attention of everyone, for it will house a most comprehensive display of almost everything that might in any way be necessary or of educational value to the visitors. There will be booths for reputable realty firms, ready cut bungalows, food products, fuel and lubricating oils, motor trucks, automobiles, electric motors, radios, and many other varied industries will be shown.

The whole affair will be of intense educational value coming as it does at this crucial time when every true American citizen is imbued with the spirit of "doing his bit." To the farmer this means but one thing—to increase his production and his cultivated acreage to the fullest extent. This can only be done by introducing tractor farming on every ranch in the country, and at the public demonstration that will be given every afternoon of the five days the visitors will be shown just how the work is done. Prospective visitors are urgently requested to bring their list of doubts and questions with them, and they will find a corps of efficient farm and tractor men who will be able to clear up most of their difficulties.

Every ranch has certain peculiarities of soil that require radically different treatment from that given, perhaps, to the neighbor's land. These local and locality differences should all be considered before buying a tractor. There is many a man who has purchased a tractor and then become disappointed because it did not come up to his idea of what a tractor should accomplish, simply because that man did not exercise ordinary common sense in the purchase of the machine, and its care later on. The upkeep and attention required by a tractor is negligible in contrast to that given to horses, but no one can expect a dirt clogged or unrolled machine to do good work. Come to this demonstration and see how easy the new farming is, how much better returns you will get from your crops, and you are sure to join the ranks of tractor boosters. While Americans realize that their

C. S. Anthony, handling the Avery tractor; Arnott & Co., implements; Advance-Rumley Thresher Co., Rumley; C. L. Best, Gas Traction Co., C. L. Best; Bean Spray Pump Co., Bean tractor; E. P. Bosbyshell Co., implements; California Moline Plow Co., Moline Universal; California Implement Co., implements; Carter & Jacobs, Beeman Tractor; J. I. Case, T. M. Co., Waterloo Boy; W. L. Cleveland Co., implements; Dauch Manufacturing Co., Sandusky tractor; Dixon & Griswold, implements; L. M. Davenport Co., implements; Wm. Gregory & Sons, Lambert tractor; A. F. George Co., Yuba Ball Tread tractor; Holt Manufacturing Co., Caterpillar; International Harvester Co., Mogul & Titan; John Deere Plow Co., implements; Johnson & Howe, implements; Killefer Manufacturing Co., implements; L. A. Auto Tractor Co., auto attachment; Samson Sales Co., Sieve Grip; Union Tool Co., Sure Grip; F. T. Briles, Cleveland tractor; Hughson & Merton, Wallace Cub, Jr.; Fredlund & Co., Garden tractor; C. L. Meacham, Pony tractor attachment; Smith Form-a-Truck, tractor attachment.

In addition to the members of the association the following firms are making exhibits: Damon Specialty Co., Denby Truck Co., Golden State Cement Co., Warren Oil Co., Consolidated Plaster Co., Pacific Rubber Co., Troy Motor Sales Co., Four Wheel Drive Truck Co., Wienstock Nichol Co., Oldsmobile Co., Panama Lubricating Co., Nelson Price, Pacific Auto Sales Co., Truxton Truck Co., Pearl Motor Truck Co., J. A. Pearl Novelty Co., Whiting Mead Co., Star Piano Co., Olive St. Electric Co., California Ready Cut Bungalow Co., Calhoun Co., Mullen Electric Co., Hauser Packing Co., Dukes Oil Engine Distributing Co., Fairbanks Morse Co., Keaton Tire Co., Valvoline Oil Co., Ensign Carburetor Co., Union Oil Co., Nichols Loomis Co., Savage Tire Co., Cambria Spring Co., Splittorff Electrical Co., Southern California Wrecking Co., Rural World, United Motors Co., Guy M. Rush, Lexington Automobile Co., Riverside Cement Co., Lichtenberger Ferguson Co., Studebaker Automobile Co., Standard Oil Co., Republic Truck Co., Mack Truck Co., Auto Car Co., Sperry Flour Co., Overland Auto.

## Second Annual



# Tractor Demonstration

The greatest opportunity ever offered the Rancher, Orchardist and Grower on the Pacific Coast to see 40 types of Tractors under all working conditions.

## SEPT. 18-19-20-21-22

—AT—

# Vail Ranch

Located on Telegraph Road, 2 miles east of the end of the Stephenson Avenue car line. Auto busses from car line direct to Demonstration Feld.

This demonstration will be just as interesting to the man who owns 2 acres as it will be to the one who operates in the thousands.

Purchasing agents and master mechanics can get loads of valuable hints on the Tractor and Tractor-Drawn Implements.

**No Admission Charge**  
**Free Auto Parking Space**  
**No Competitive Test**  
**No Prizes to be Awarded**  
**Daily Public Demonstration from 2 to 4 p. m.**  
**Private Demonstration upon Request**  
**Every Convenience at hand for the Visitor**  
**Make this your Vacation**  
**Spend all 5 days with us**

Exhibits by well known Automobile dealers, Auto Trucks and their accessories, Lubricating and Fuel Oils, Electrical Appliances, Household Goods, Food Products; in fact, everything for the Ranchers' uses.


REDUCED RATES ON ALL RAILROADS, of a fare and one-third for the round trip, from all points.

**Traction Engine and Implement Dealers Association of Southern California**

**115 So. Los Angeles St., Los Angeles, Cal.**



**can not CRACK or CHIP**



The SPLITDORF Plug is different from all porcelain plugs in this—the insulation is made of imported India ruby mica which will not chip or crack like porcelain. This removes frequent cause of scored cylinders and also makes the SPLITDORF Plug practically indestructible.

**Make Your Engine Easy to Start**

The SUMTER Plugoscillator on medium and large size stationary and marine engines or the SUMTER Starter-Coupling on trucks, tractors, marine and heavy-duty engines will make starting sure and easy. Your manufacturer will give you the equipment if you INSIST.

**SPLITDORF ELECTRICAL CO.**  
NEWARK, N. J.

**SPLITDORF SPARK PLUGS**

## The Redemption of Hard Soil

Written for California Cultivator by William M. Bristol



VER a major portion of Southern California during some period in the remote past there was spread a deposit of red soil varying in depth and texture. It is obvious that it was deposited by water, and there are reasons for believing that it was deposited under water, that is to say at the bottom of an ocean or lake. Earthquakes and erosion have wrought havoc with this continuous red plain, and only remnants of it now remain. Pretty good sized remnants, it is true, in the case of the Redlands and Riverside areas; but the bulk of it in the great east and west valley of Southern California has been either cut and swept away or covered by wash deposits occurring since the sea receded from the region.

The details of the process by which this extensive deposit of red soil was formed do not vitally concern the man who today is tilling it. It is not strange, however, that he should wonder why it is so hard in places; and why, even where it is known to be

would run across it and go all undiminished into the waste of the top soil was so hard that when it was cultivated at just the right moment it would break up into brick-like clods; and these when forming the down-hill side furrow, would permit the water to flow through between them and cause a break. Even with constant attention this piece was never irrigated without a score of breaks and portional annoyance.

In the course of time the furrow came into bearing, but the fruit about one-half normal size—came to be known at the packing house as "Bristol's little oranges." Plainly something had to be done—and was. In a word the whole refractory five acres was covered six inches with a loose, gravelly soil containing little or no clay. And, presto, it was a transformation.

In order to understand just what happened it is necessary to consider what occurs in the process of furrow irrigation. When water is run across



A Productive Tree

Orange or other long-lived trees call for careful handling of soil over a period of many years. If soil conditions are right the reward to the owner is great.

a hundred feet deep, there should be a stratum of it just below the surface so desperately compact as to require the designation of "hardpan."

I say that the wherefore of it is not important; but I must immediately add that the remedy for its resistance to water and to tillage is of vital concern to everyone who is seeking to take from it through the medium of agriculture the vast store of latent wealth that it contains—for analysis has proved that in all elements of fertility except nitrogen it is exceedingly rich.

I had, and still have, on my place on the East Highlands mesa, about five acres of this puzzling soil. At a depth of ten or 12 inches a stratum of hardpan is encountered, varying from a few inches to three feet in thickness. The soil on top of the hardpan is quite hard also; and, lying as it does on a round and sloping hillside, the conditions of the centuries have not favored an accumulation of humus or sediment, although the indigenous grass and brush protected it from erosion. Under the hardpan is a deposit of rather compact gravelly red soil of unknown depth, the three classes, top soil, hardpan and underlying soil, each showing about the same chemical contents.

Twenty years ago this piece, together with the rest of the place, was set to oranges. And then the nightmare began. It was almost impossible to get any water into the ground. A stream the size of a lead pencil

fine grained soil on any grade except a very light one—say one per cent—cuts and carries the soil; in other words it runs muddy. Every irrigator knows that muddy water will penetrate readily because the soil particles carried in solution clog the pores of the soil over which it flows. Even on a grade of one per cent—mine did not exceed that—if a stream in the furrow was a little large it would cut where a small stream would not. On gravelly soil the grade may be two or three per cent without cutting—and the water will run clear. It follows then that when I had covered my hard soil with the gravelly loam—and the plow, the way, has never been allowed to bring up the red and mix it with gravel—the water no more runs muddy; and, sinking in the gravel, it reaches the red in its clear condition. It penetrated that much more readily than when it ran across the red itself. Then, too, it spreads under the gravelly blanket so that only two furrows to the land are required and in many places it will during a hour run creep down through the tree row to the land below.

Well, the joke about the little oranges is forgotten at the packing house. From half a dozen standpoints the gravelly blanket is a good thing: absorption of water, retention of moisture, ease of cultivation, freedom from breaks in irrigating and some other things. Those who have seen the crops produced since the loose soil was put

We Manufacture Levelers for Any Power From 6 Horses to a 75 H. P. Tractor

## A Schmeiser Leveler of the "Giant" Type Will Work Wonders on Your Farm



Moving immense amounts of dirt daily, and working on ground too tough for horses and Fresno to tackle, SCHMEISER POWER LAND LEVELERS are now being used with utmost success by a great many ranchers, large and small—also by contractors—saving their owners time, labor and money.

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So extremely simple, a child could operate one as a simple twist of the wrist raises and lowers the bucket or holds it stationary, as the case may require.

Send today for full information and our latest catalog of earth moving machines.

## Schmeiser Manufacturing Company

22 Mechanic Street - - - Davis, Cal.

Manufacturers of Sure Pop Almond Huller and Separator, 3 sizes; McGarvin Fruit and Olive Graders, any size; Schandoney & Harrington Equalizing Hitches, any size; Diamond Special Harrows, Baker Clips, Clevises; Martin Farm Ditcher and Road Grader, and Schmeiser Portable Automatic Hay Derricks.

# LIME

Our Ground Limestone Will Increase Your Soil Production. Write for Booklet.  
**RIVERSIDE-PORTLAND CEMENT CO.**  
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LOS ANGELES, CAL.  
"Fertilizer Dept."

When writing advertisers, mention The Cultivator.



that my nightmare was transformed to a pleasant dream. I do not know what it cost; the work was done many times when the ranch teams were not busy at anything else. The scheme did not originate with me. I have heard each of two men in a neighboring community who had tried it claim it as their invention. But then I heard a Los Angeles farmer 25 years ago proclaim himself the father of irrigation, in spite of the fact that in Genesis about the stream that came out to water the garden. Per Adam himself had a patch of soil too and covered it with sand. When his task with the hose and the hoe—who knows? But from whatever age or clime it hails the scheme is a good one. The cost is, whatever it was, has been reduced and the improvement, so long as one does not plow up the red soil and mix it with the gravel, will be permanent. There are hundreds and

thousands of acres of oranges elsewhere in California that would be benefited by the treatment—orchards that without it and an increase in their humus content promise to bankrupt their owners.

I have said that these hard soils are rich in the mineral elements of fertility, and that is equivalent to saying that for many years no fertilizer except a nitrogenous one need be applied. I believe cover crops and manure to be the best form in which to apply nitrogen to hard soils, and I further believe that the cover crops should be permitted to mature in order that their roots may make holes for the penetration of both water and air; and this belief is based on years of practice. One advantage that a hard soil has over a loose one lies in the fact that no fertility can be leached out of it into the underdrainage; it can only be depleted by sluicing it away from the surface, and

there is no excuse whatever for that.

I am reluctant to find fault with any of the work of Nature in Southern California, but the Old Nurse of Earth, while doing much for man in the

rather arid region, has left much for him to do for himself if the best results are to be attained. My five acre tract of hard soil I regarded as the worst on the place, but now I am wishing that the rest were like it.

## Cooperator For Quarter of a Century



J. DREHER is soon to retire from the active management of one of the most successful cooperative organizations in California. For 22 years Mr. Dreher has been manager of the San Antonio Fruit Exchange, with headquarters at Pomona, Los Angeles County. Prior to that he had been closely connected with the organization of the Southern California Fruit Exchange, being at the first meeting which was held in Los Angeles in 1893. When the San Antonio Exchange was first organized W. E. Collins was made man-

ager. His service continued only a couple of years, when the matter of a successor was discussed. The present editor of the Cultivator, at that time a member of the Pomona Fruit Exchange, opposed the selection of Mr. Dreher, but when he was finally elected was the first to move that the selection be unanimous and, we believe, none joined more heartily in the early days of the Exchange in the endeavor to make Mr. Dreher's administration a success and to make the citrus cooperative movement succeed in bringing to the growers fair returns for their labor. Our work of

# as the sled slides over snow

so the Yuba moves over the ground.

The steel ball race castings are the runners of the tractor. They slide over the freely rolling balls of the Ball Tread as the steel shod sled over snow.

The upward pull of the sprocket on the manganese chain furnishes the impetus for the Yuba.

The Yuba has a rigid track. Most other "track" machines lay a so-called "track" of flexible links and roll over it on flanged pulleys or wheels.

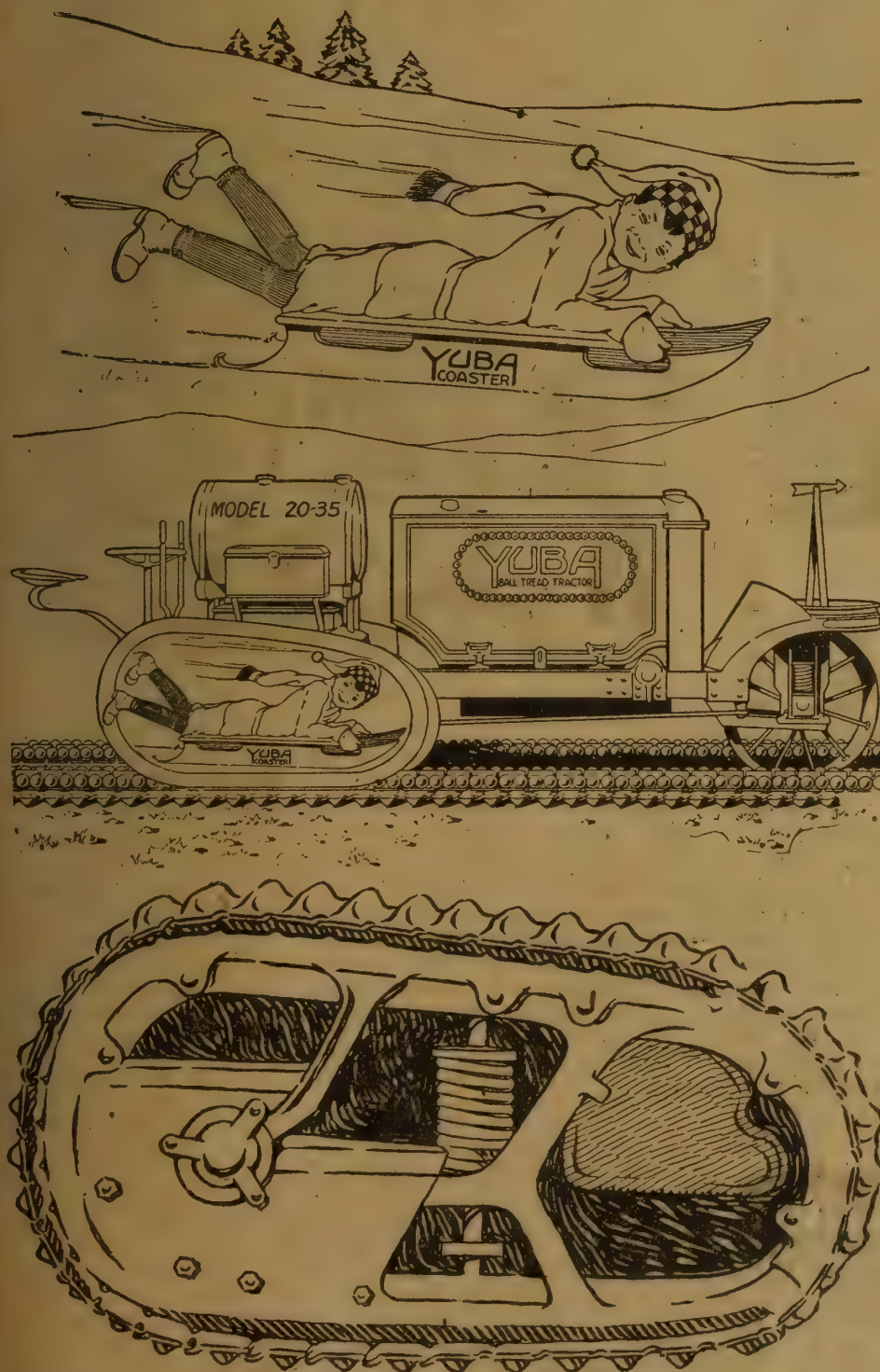
Such a track is no better than the ground on which it is laid—often it is more of a corduroy road than a track.

The rigid track of the Yuba does not kink nor cramp to minor irregularities of the ground. It follows the general contour smoothly and easily. The shock of meeting any obstruction is evenly distributed.

The Yuba slides over a ridge just as the sled takes a "Thank-ye-marm."

Like the sled the Yuba will coast of its own weight on a 3% grade!

for long life and low upkeep cost:



Yuba Manufacturing Company, 433 California Street, San Francisco  
(Formerly The Yuba Construction Company—change in name only)

Yuba Manufacturing Company Dept. B-1  
433 California St., San Francisco, California  
Gentlemen: Kindly send me catalog and prices on the Yuba Ball Tread Tractor.

I am interested in Model 12-20 \_\_\_\_\_ Model 20-35 \_\_\_\_\_

Name \_\_\_\_\_

Town \_\_\_\_\_ State \_\_\_\_\_

P. O. Box \_\_\_\_\_ Size of farm \_\_\_\_\_

[ Check main crop raised ]

\_\_\_\_\_ Fruit \_\_\_\_\_ Rice \_\_\_\_\_ Grain

\_\_\_\_\_ Grapes \_\_\_\_\_ Hops \_\_\_\_\_ Alfalfa

and there have just been issued new Pump and Plow Catalogs which we will be glad to send prospective buyers.



commercial orange growing ended many years ago. Since then Mr. Dreher has continued his work at the head of the San Antonio Exchange.

It has grown from the 300 or 400 cars handled at that time by the entire exchange—in the meantime permitting many local associations to break away and form their own exchanges—until the year 1916-17, when nearly 2,000,000 boxes of fruit were shipped through the organization, returning \$4,000,000 in gold coin, or 50 per cent more than any preceding year.

After these years of strenuous la-

active business life for more than 50 years. In presenting to his directors request for relief from active work in the exchange Mr. Dreher says:

"The foundation for cooperative handling and selling of citrus fruits was laid twenty-five years ago when I took an active part as president of the Claremont California Fruit Growers Association, which was the parent organization of your Indian Hill Citrus Association. At that time the citrus industry was in the clutches of speculators—it was the pioneering of the small band of growers who composed that organization that enabled

"The San Antonio Fruit Exchange and its associations are the most advanced of the cooperative organizations on true principles of cooperation, granting strict and equitable justice to all and special privileges to none. These organizations inspire the enthusiasm, support and devotion of all who are privileged to be their members and to enjoy their benefits.

"In the past decade your increase of output and development in equipment has been marvelous. That you have at all times taken the lead in development and progress is evidenced by the many large packing, handling and precooling plants that have been erected by your various associations. You have the largest, most modern and most complete cooperative organization in the world and nowhere else is there such a spirit of cooperative work and progress. Standing in the very foreground of cooperative organizations you occupy a commanding position and I look with confidence to see you carry even farther forward the work so well begun."

#### CALIFORNIA STATE FAIR

Continued from Page 267

been partly taken over for Secretary Paine's office but a portion of the lower floor is given up to needle work exhibits, parlors, nursery and rest rooms. The second floor has been given over to fine arts. One collection of water colors of wild flowers of Cal-

not hold them and another is put up and filled before it's up.

This is just a starter. More week. The Cultivator is here in the prize winners.—C. B. M.

An advance word on livestock given by

W. S. Guilford

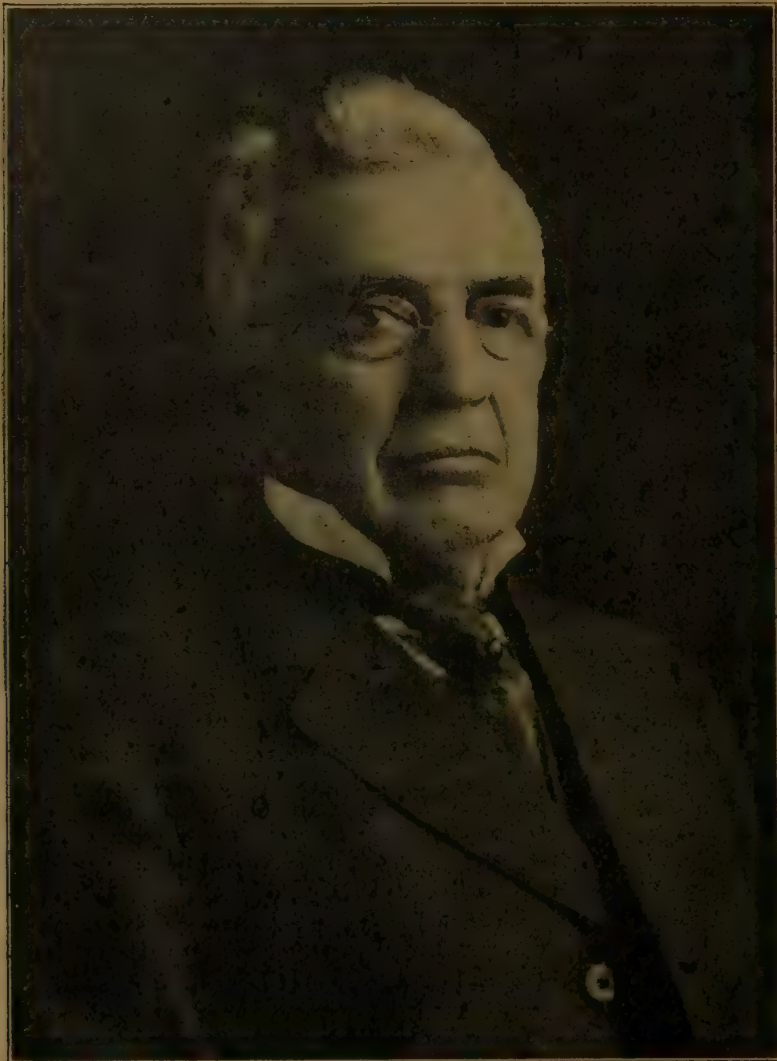
Never before in the history of the state and the nation has the livestock industry been of such great importance as now. It is necessary now that more animals be produced that these animals be of better quality. They must be able to convert grain and grass into animal product in the most profitable manner.

There are more accommodation for livestock this year—many additional barns have been built. And all full to overflowing.

The beef cattle show is the largest ever made in California. There are eleven herds of Shorthorns represented, all good ones. Herefords shown by four exhibitors—and there are some Angus.

There is a big show of dairy cattle, and while some exhibitors have been on hand for years and showing, their places are taken by newer breeders. Eleven breeders showing Holsteins; eight Jersey; four Guernseys; three Ayrshires and two Dutch Belts.

The sheep show is not large



P. J. Dreher

bor Mr. Dreher feels he is entitled to retirement and has announced that after November 1st he will no longer serve the orange and lemon producers of the Pomona section.

Mr. Dreher is a native of Germany. He came to the United States when a child, living in Illinois for some time, coming to California in '86. When he terminates his work with the organization he will have been in

the cooperative system of marketing and selling of citrus fruits direct to the trade to develop to the point where the growers assumed control of their own affairs and brought about the freedom of the industry. To the little association formed at Claremont 25 years ago belongs the honor of being the parent of the present exchange system of marketing.

"The foundation of your exchange and its associations was laid and has been maintained on a firm, solid, safe and equitable basis, and as a result they have withstood the tests of time and the full weight of the great business built thereon. During the past season you have marketed the largest crop of fruit ever produced in this district and you have obtained therefor the highest price per box ever realized with the single exception of the season of 1905-1906.

Headquarters  
for  
**IRRIGATION**  
SUPPLIES  
PUMPS, ENGINES,  
SPRAYERS, HOISTS ETC.  
Catalog FREE on Request  
**Smith-Booth-Usher Co.**  
LOS ANGELES.

#### IRISES

August to November is the time to plant for best results next flowering season  
The DEAN IRIS GARDENS, Moneta, Cal.

### BEAN THRESHERS THE TWO STANDARDS

Built Especially for California Conditions

Past the Experimental Stage  
Eleven different models, with or without engine, mounted complete  
Ranging in Price from \$210 to \$1,000  
All Repair Parts Carried.

**THE FARQUHAR**  
VIBRATOR SEPARATOR  
Guaranteed by "The House of ARNOTT"  
Ask The Grower Who Owns One  
Write for Folder, Specifications, Prices Etc.

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BEAN THRESHER HEADQUARTERS  
112-118 So. Los Angeles St. Los Angeles

**THE AMERICAN**



Tractors and Farm Implements

The California Tractor and Implement Association has a great show, all under its own tent.

California is worth a trip to Sacramento to see.

Manufacturers building has the usual showing of household appliances. Many a valuable hour may be spent there by the home maker.

Machinery building is not yet filled. Irrigation pumps especially are short of former years. Spray outfits, electric lighting, drainage, irrigation appliances and many farm necessities and labor savers are shown.

Silos, feed cutters, dairy supplies—next week.

Farm implements and tractors have the southern addition to the grounds all to themselves. "How can one grow more for less?" There are many answers: One is, spend a day in the tent of the California Tractor and Implement Association. There are plows, disks, seeders, cultivators, harrows, harvesters, binders. There are tractors with one cylinder, two cylinders and four cylinders, with two wheels, three wheels and four wheels, big wheels, little wheels and no wheels. They all are labor savers and the buyer has some job to pick the best.

"Autos?"—one monster tent would

numbers but a lot of sheep of quality are on exhibit. The same is true of the horse show.

In no part of the grounds is there more interest than in the swine vision. With hogs nearing the cent mark producers want the best. Classes are well filled and competition is keen in Duroc-Jerseys, Poland Chinas, Berkshires, Hampshires, Chester Whites and Yorkshires.

"Charlie" Paine is a great man. He is a clever manager and stockmen of the state "swear by" him. He is ready and willing at all times to do everything in his power to advance the interests of the livestock business.

F. F. Stonerod

Livestock is ready for the close of the judges. In many respects this year's fair is remarkable. Entries are fewer than last year in several classes, notably dairy and swine. Considering the acute labor situation and the dairy farms of the state it is a wonder indeed that the breeders are so well represented. The total number of dairy cattle is about 75,000.



less than in 1916; swine are about 250 head short, but beef cattle are far ahead of any previous state fair both in number of animals and exhibitors. Sheep were somewhat of a surprise as early reports indicated a poor showing, but the exhibit is normal. Bishop Bros. and the Knollin Sheep Company

expects an increase in yield from 12½ to 20 tons per acre, but few are equally optimistic. The establishment of new canneries, the enlargement and improvement of old canneries, and a general increase in acreage all around will, no doubt, mean a corresponding increase in the tomato pack, unless la-

cases. There was not only a good acreage but also a good yield, and a larger quantity of peas were purchased outright over and above the contracted acreage than usual. The principal acreage was located in Alameda, San Mateo, Santa Clara and Stanislaus Counties near the canneries. There was also about two hundred acres grown across the Stanislaus County line in San Joaquin County.

#### Cucumbers

The cucumber crop in Central California is the best in several years. There is much less disease than usual and the vines are producing heavily. The crop came on late and much difficulty has been experienced in securing adequate and desirable labor for picking. On account of being short handed, growers have not been able to pick as fast as the cucumbers grow. This has resulted in the development of many large cucumbers which are not acceptable to the pickling works. The markets have been oversupplied with these large cucumbers and the vines have been somewhat weakened by the production of the large cucumbers. Many have gone to waste in the fields. Alameda County is one of

#### THE ONION SITUATION

The unprecedented increase in the acreage of onions in the San Joaquin delta whereby the area devoted to that crop jumped from 3700 acres in 1916 to 8300 acres in 1917, has caused a corresponding increase in the volume produced. The yield per acre has been equal to the average of former years averaging about 250 sacks of 100 pounds each per acre, and running as high as 400 sacks in some instances and in many cases exceeding 300 sacks. The size is not quite so good as usual and somewhat more smut is to be found, but on the whole the product is good. A decided shortage of Asiatic laborers, which are chiefly depended upon in this locality, together with a shortage of cars, a later maturity of the crop, and a poor demand have delayed the marketing of the crop. The great bulk of the crop is still in the fields and the movements to date do not begin to compare with the movements a year ago.—United States Bureau of Crop Estimates.

#### EXHIBITING POTATOES

Do not try to hide poor potatoes in the bottom because the judge will certainly dump out all the potatoes. See that they are all even sized and perfect. Uniformity is a big factor in an exhibit.

#### Kind of Potato to Grow and Exhibit

In selecting potatoes for exhibit keep in mind the following things:

Smooth, even potatoes, weighing 10 to 14 ounces, that will give the least possible waste in paring, are the most economical for the consumer to use and are consequently the best potatoes. Keep utility always in mind.

There should be no deep eyes, heavy eyebrows or warts.

There should be no tapered ends or rough spots.

There should be no signs of scab, rot, or any other disease.

Have all the potatoes in the exhibit as nearly alike as possible. Select one perfect potato as a model, and then pick all of the others as nearly like that one as you can.

Wheat is reported selling in Polk County, Oregon, at \$2.08.



Where the Big Horticultural Building Stood

The building burned in 1916 and has not been replaced but will be before another fair with the \$300,000 appropriated by the last legislature. The ground is now covered with tents and frame structures, not handsome, but housing some fine exhibits.

were unable to show, but several new breeders made up the deficiency.

Poland-Chinas, Durocs and Berkshires are strong this year, and if their numbers fall below those of last year the quality is better on the average. Yorkshires and Hampshires are out in full force.

#### A. Briggs

Bob Moore was so busy he would not stop to look at a Cultivator man. He was judging Bants. He said after I threatened him): "Greatest poultry show ever at California State fair!" "Anconas largest class with 1 entries; S. C. Rhode Island Reds 4 entries; Barred Rocks third with 0; pigeons, Bants and fancies, also rabbits, great in quality and numbers. A busy—good night!"

#### VEGETABLES CANNED

The assistant truck crop specialist for the Pacific Coast reports on crops grown for canneries in California as follows:

#### Tomatoes

There is still much difference of opinion as to the probable yield of tomatoes for canning this season, but interviews and field inspections made by the assistant truck crop specialist for the far west, have convinced him that prospects are bright for the largest pack of tomatoes yet put up in California. The pack of 1916 was the largest in the history of the state being estimated at 2,647,300 cases, yet the season was not favorable and the acreage was much less than it is this year. Much depends upon the length of the packing season, the date of killing frost, and the absence of heavy rains, but with a substantial increase in acreage, greater capacity of canneries, and no unusual amount of blight there is a good outlook. It is true that the season did not start favorably. Beetles cut down the plants in Central California, severe winds did much injury in the San Joaquin Valley, cool weather delayed growth, frost occurred in certain districts, and later intense heat blasted the first blossoms, but in spite of these difficulties, the stand in most fields where the heaviest plantings are located is very fair and the vines are fairly well set with tomatoes. Canners will start on tomatoes a week to ten days later than usual but with good ripening weather the yield per acre should be at least as good as last year, which was limited by an early frost and heavy rains necessitating a considerable loss by waste. One canner, after a careful investigation, states that he

bor difficulties or unforeseen disaster interferes.

#### Peas

The largest pack of canned peas on record for California was put up in



The Playground

Even the children are cared for in a nursery in the Women's building and the playground tent covered and filled with swings, teeters, slides, punching bags, etc.

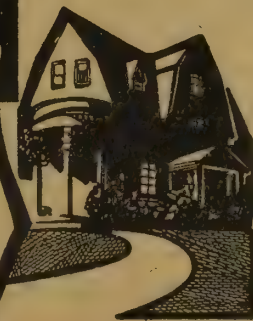
1917. Up to this year, 1916 held a second place with approximately 227,000 cases. It is roughly estimated that the pack this year will be 275,000

the principal producers of cucumbers.

The Saticoy Bean Association is building a new warehouse.

## Building Material

Plumbing Supplies, Hardware, Paints, & Oils.  
FROM OUR BUILDING TO YOURS  
At Wholesale Prices. All Grades



### LUMBER

Thousands of satisfied builders can testify that we have saved them from ten to twenty per cent on their lumber bills. Bring us your estimate sheets,—it is easy to convince you that we always sell the "BEST FOR LESS."

### PAINTS

What do you think of the following paint bargains? Sherwin-Williams House paint \$2.50 per Gal. All colors but white. (Limited number of gallons to each person) Standard house paint \$2.25 a Gal. All colors including white. White lead 10¢ cents per pound. All varnishes 25 per cent off.

### PLUMBING

Oh! Yes! We admit it. Largest stock of plumbing goods at the lowest prices. We don't have to prove it. Prices speak for themselves. Laundry trays \$9 up. High tank toilet combinations (Complete) \$15.50. New recess lavatories with lift waste \$5.50.

### HARDWARE

Prices on building hardware? Well! C us last. Fine coal oil lantern 75 cents. "SPECIAL" Good sheet iron "Air Tight" Heaters \$2.00. Regular \$30 Wall Board \$28. Inside door locks 85 cents. Atkins Saws \$1.50 to \$2.50. Padlocks 20 cents to \$2.50.

We Ship Large or Small Orders to any Point on the Pacific Coast.

**Whiting-Mead Commercial Co., "BEST FOR LESS"**

9th & Maple Ave., Los Angeles, Cal.



## "Splendid Lubricating Qualities"

### PAIGE

McKinney-Cord Motor Co., Phoenix  
"we cannot speak too highly of  
the splendid lubricating quali-  
ties of Zerolene."

### WINTON

The Winton Co., San Francisco  
"We use Zerolene extensively.  
It is giving entire satisfaction."

### CHEVROLET

J. W. Leavitt & Co., Los Angeles  
"Zerolene is our choice for  
Chevrolet cars."

### FORD

Fahy-Atterbury Sales Co., Los  
Angeles—"settled on Zero-  
lene after extensive tests."

# ZEROLENE

*The Standard Oil for Motor Cars*

Endorsed by Leading Car Distributors

—because the records of their service departments show that  
Zerolene, correctly refined from California asphalt-base  
crude, gives perfect lubrication—less wear, more power,  
least carbon deposit."

Dealers everywhere and at  
our service stations.

STANDARD  
OIL COMPANY  
(California)

For tractors, Zerolene  
Heavy-Duty is espe-  
cially recommended.



"HE ALSO FIGHTS, WHO HELPS A FIGHTER FIGHT"  
A SURE WINNER

## The Waterloo Boy One-Man Tractor

A FINISHED AND STANDARDIZED MACHINE OF PROVEN EFFICIENCY



SIMPLE  
COMPACT  
POWERFUL  
ECONOMICAL

RELIABLE  
EFFICIENT  
MADE RIGHT  
STAYS RIGHT

WORKS RIGHT  
SELLS RIGHT  
PRICED RIGHT  
IS RIGHT

Nearly four years of demonstrated success in the fields and orchards  
of California.

The Popular Tractor—every seventh tractor made and sold in  
America last year was a Waterloo Boy.

SEE THIS SPLENDID TRACTOR AT

Demonstration and Tractor Field Meet  
LOS ANGELES, Sept. 18-22

W. L. CLEVELAND CO.

209-211 No. Los Angeles St. Los Angeles, Cal.

**P I P E**

For Every  
Purpose  
NEW  
Threads and  
Couplings  
Hot  
Asphaltum  
Dipped

2nd  
Hand  
and  
NEW

Screw  
Casing  
Fittings  
and  
Valves  
Guaranteed  
for  
Pressure

Pacific Pipe Co. Main and Howard Sts.  
San Francisco

To keep thoroughly posted subscribers should read every advertisement  
in the California Cultivator columns.

## Attend the Fall Fairs



EVERY farmer should plan to  
attend his county fair and if  
possible, his state fair. He  
should not only attend per-  
sonally, but he should plan  
on taking his family with him, be-  
cause there is much of value to be  
learned at a good fair, small or large.  
We sometimes think that agricultural  
fairs are not appreciated as much as  
they should be. Many do not seem to  
realize that large sums of public mon-  
ey have been expended to make these  
institutions of value to the farmer in  
putting him in touch with the progress  
that is being made from year to year  
in his business.

The state fairs where big displays  
of grains, garden products, live stock,  
farm machinery and manufactured  
products are on exhibition are the uni-  
versities of the practical farmer—the  
clearing houses for new ideas. The  
man who stays at home, carries out  
his business day after day and year  
after year in the same old way, and  
doesn't come in touch with the men  
engaged in his own line of work who  
may be doing greater things is rob-

his needs. Gasoline engines, tractors,  
ensilage cutters, home lighting outfit  
and farm sewage plants may be stud-  
ied with much profit at the fairs  
where several makes of the same kind  
can be compared with each other and  
where experts can be consulted on  
practically every piece of machinery  
the farmer uses. Similarly, the best  
breeders in the country have their  
live stock on exhibition and are al-  
ways ready to discuss anything and  
everything pertaining to their busi-  
ness. From these experts much can  
be learned in regard to the safest  
methods of founding pure-bred herds  
or of how to manage registered cattle,  
hogs, sheep and horses to the best ad-  
vantage. The very fact that the fair  
affords the visitor an opportunity to  
get personally acquainted with the  
best breeders of live stock the coun-  
try over is worth many times the cost  
of attendance.

When you go to the fair, whether it  
be county or state, national or inter-  
national, go with an open mind; be  
prepared to ask questions and tell  
your children to do the same. When



Cultivating Cotton in Imperial Valley

bing himself of the great privilege of  
drawing inspirations from the activi-  
ties of others.

If we had never had horse races  
and speed contests, the American  
trotter wouldn't have been developed.  
Had there been no agricultural fairs  
where the great breeders of the coun-  
try could exhibit their live stock and  
have it judged to determine who had  
been the most successful, there would  
have been no great breeds of cattle,  
horses, sheep or swine.

If you are a breeder of hogs or of  
cattle and you wish to exhibit some  
of your stock, by all means, make  
your first attempts at a county fair.  
There the competition is not so se-  
vere and you will stand a better  
chance of winning a prize; besides,  
you will also have a better opportu-  
nity at the smaller fairs to learn how  
to exhibit your stock and other farm  
products. There is only one way to  
learn to exhibit live stock, grains or  
vegetables at a fair and that consists  
in going there and making some mis-  
takes. No one can fully tell you just  
how to show off your live stock to  
best advantage. You must make a  
beginning and learn by experience;  
that experience can best be obtained  
at a county fair. When you have been  
successful at your own or other coun-  
ty fairs you will be ready to graduate  
and make exhibitions at state fairs.

The man who is in the market for  
new machinery, especially such ma-  
chinery as is being improved from  
year to year, finds a splendid oppor-  
tunity at a well organized fair to  
study the various makes on the mar-  
ket and to find out for himself what  
kind of machine would best serve

you get there keep your eyes and ears  
open and don't be afraid to seek in-  
formation from those who are in po-  
sition to give it. Agriculture is a big  
business; no one man knows all about  
it. The most experienced can always  
learn something and those who at-  
tend fairs with that idea in view will  
get the most out of them. Support  
your county fair and your state fair in  
every way possible. They stand for  
progress and the betterment of agri-  
culture.—Farmer and Stockman.

### HOW TO HULL CORN

By Claudia Murphy

In grandmother's mother's house  
freshly hulled corn was a most pop-  
ular breakfast and supper dish, and it  
is now being prepared in many homes  
and meeting with a very generous  
welcome.

It is usually eaten in milk and is a  
most wholesome, economical and nu-  
tritious food, suitable for children and  
adults. The food value of hulled corn  
is: Water, 74.1 per cent, fat, .09 per  
cent, mineral matter, .5 per cent, pro-  
tein, 2.3 per cent, carbohydrates, 22.3  
per cent, calories, per pound, 490.

There is an undeniable tendency to  
revert to the delicious and wholesome  
foods of the last century and hulled  
corn is rapidly becoming most popu-  
lar. The hulled corn vender is reap-  
pearing on the streets and in the mar-  
kets of southern cities. Many women  
are finding in its preparation a gain-  
ful occupation, for they can easily sell  
it to their neighbors at a good profit.

### How to Prepare

Dissolve half a ten cent can of lye  
in a quart of water and dilute to three  
gallons with more water in a large



kettle. Put in four quarts of  
led corn and keep slightly below  
boiling temperature, until the  
s have started to break. Then  
into a large pan of cold water and  
with the hands thoroughly to  
en the hulls. Take off the hulls  
scum from the water and add  
h water several times during the

simmering. Stir well with wooden  
spoon. Change the water five or six  
times and wash and rub until the corn  
is white and clean. Keep it in cold  
water over night, then wash four of  
five times with hot water.

The California Ripe Olive Company  
at Oroville has begun its canning op-  
erations, working first on tomatoes.

## Electric Blasting Machine for Firing Stump Charges

Written for California Cultivator By J. R. Mattern

BETTER way than the time  
honored cap and fuse method  
of setting off the charge of  
powder in removing stumps  
is to detonate (or fire, as it  
is expressed) the charges with  
electric blasting machine. Such a  
ine is just a small affair, say ten  
as high and six or eight inches  
re, and it consists mainly of a  
machine something like a mag-  
on a gasoline engine or an auto-  
le, operated by a handle you pull  
nd push down. There are many  
em on the market. They may be  
ht from almost any big hardware

one big thing about the electric  
ing machine is that with it you  
fire several charges instantane-  
e. This is of great advantage in  
case where the thing you want  
ast extends more than 12 or 15  
in any direction from the  
ge. In removing big stumps with  
charge placed deep under the  
r, there is a big waste of powder  
of force in moving all the earth  
is loosened and thrown out. The  
way is to put a smaller amount  
ce, just enough to lift the root  
under each of the main roots at  
t the point where it joins the

stump body, or even farther out where  
it is anchored tightest by the ground.  
This will require several charges, say  
three or four. If they are detonated  
at the same time the result will be  
to lift the stump right out of the  
ground without tearing up the earth  
much, and most of the loosened dirt  
will fall back into the small cavities.  
If there is a tap-root you should place  
one charge right against it or two  
charges, one on each side if it is very  
big, and it will break off instead of  
pulling when blasted. Be sure to  
place the charges at a sufficient depth  
so that the remaining root will be  
below the plow line.

If you think the stump will not be  
split up enough for easy handling and  
burning by these small charges, place  
another one right under the center,  
against the wood. It will not require  
much powder in a charge so placed  
to break up almost any stump.

The advantage of the electric blast-  
ing machine will be plain to anyone  
for removing stumps that are hollow.  
It is almost impossible to blow these  
out satisfactorily with one charge.  
When cap and fuse is relied on sev-  
eral charges must be fired, one after  
the other, under the different roots,  
with a great waste of energy.

## Protect Snake and Owl

OPHER snakes and barn  
owls are staunch friends of  
the farmer. Protect them  
and they will repay the kind-  
ness by defending orchard  
garden against the costly ravages  
e gopher.

ch is the championship of the  
er snake and the barn owl given  
e University of California in a  
tin on "The Control of the Pocket  
er in California."

e gopher does more damage in  
ornia than any other animal, not  
oting the ground squirrel or the  
e. People should not make the  
ake of killing the mole which is  
lpful creature living on worms,  
s, and insects. But the gopher  
er deserves a sentence of death.  
other gopher may rear anywhere  
three to a dozen children in a  
and often two families in a year.  
breeding season begins when the  
ria and the malva, the gopher's  
ite foods, furnish an abundant  
supply after the first fall rains.  
best time to trap and poison  
ers is soon after the green vege-  
l starts in early winter or spring.  
destruction of a female then  
a, perhaps a dozen less gophers  
season.

poisoning gophers, the bulletin  
amends a bait mixed in the fol-  
g proportions: to eight quarts of  
ed sweet potatoes, parsnips, or  
ts, add a half pint of flour paste,  
arter of an ounce of powdered  
anine alkaloid, and a sixteenth of  
nce of saccharine — to conceal

the bitterness of the strychnine. This  
poisoned bait should be in pieces  
large enough so that the gopher must  
eat it at once, instead of putting it in  
his fur-lined cheek-pockets to carry  
to his storehouse, where the poison  
would soon lose its strength. The  
poisoned bait should be placed in the  
main runway.

Traps, also, should be placed in the  
main runway, and not in the lateral  
which leads to the surface. To pro-  
tect himself against his natural  
enemy, the gopher snake—nature's  
own gopher trap—the gopher closes  
the lateral with earth and so is likely  
to throw out poisoned bait placed in  
the lateral or to spring a trap placed  
in a lateral by pressure of the earth  
which he pushes ahead of him in  
blocking the open hole. After putting  
poison or traps in a runway the tops  
of the gopher mounds should be kick-  
ed off so that newly-made mounds will  
show next day where the gophers  
have not been destroyed.

Carbon bisulphide may be used to  
destroy gophers, but caution is need-  
ed, since it is inflammable and explo-  
sive.

To flood alfalfa fields from irrigat-  
ing ditches is a good way to fight  
gophers, but the farmer and his dog  
must stand ready to attack any  
gophers which seek to escape from  
the deluge.

Barn owls are efficient enemies of  
the gopher. A pair of nesting barn  
owls will catch from three to six  
gophers a day for their brood.

While the gopher snake or bull  
snake may steal eggs occasionally, his  
main diet is small rodents, chiefly  
gophers.

# PLANT Germain's HAIRY PERUVIAN ALFALFA



Germain's Hairy Peruvian Al-  
falfa was thoroughly tested out all  
over the state, and the entire South-  
west, last year—and it HAS MADE  
GOOD.

It is the HEAVIEST PRODUC-  
ER known—and it is bound to dis-  
place all other varieties. It grows  
vigorously in all climates—does well  
at 5000 feet or at sea level.

Germain's Hairy Peruvian Al-  
falfa produces a great mass of leaves  
from the top to the crown of the  
plant, and as the leaves contain the  
greatest amount of food value, this  
type of alfalfa gives the farmer the  
greatest yield.

To insure perfect results buy  
ONLY Germain's PROVEN SEED.

*Germain*  
Established 1871  
Seed & Plant Co.  
325-328-330  
SOUTH MAIN STREET  
LOS ANGELES - CAL.



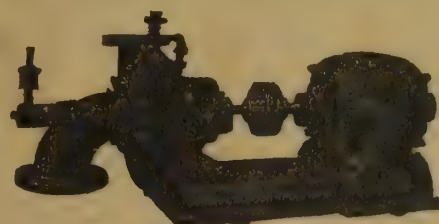
and get 20% More  
tonnage to the acre

## DEEP WELL TURBINES

No valves to pack or plunger rods to get out of  
order. For use in any well ten inches in  
diameter or over.

A complete line of irrigating pumps of  
all descriptions, horizontal and vertical for belt  
drive or direct connection to electric motor.

Prices as  
low as are  
consistent  
with good  
quality and  
workman-  
ship.



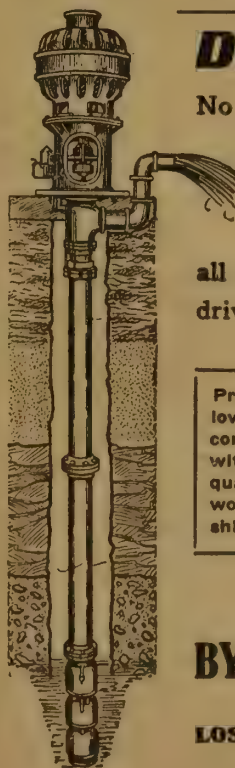
"Write for Catalog No. 48"

BYRON JACKSON IRON WORKS, Inc.

SAN FRANCISCO

LOS ANGELES

VISALIA





Established 1888. Twenty-eighth Year

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**Saturday, Sept. 15, 1917****OUR ADVERTISERS RELIABLE**

We guarantee our subscribers against loss through dishonesty of any advertiser in the Cultivator. We do not attempt, however, to adjust trifling differences between subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within 30 days from date of the transaction, and the subscriber must have mentioned the Cultivator when writing the advertiser.

**THIS WEEK'S COVER**

On the third page of this issue may be seen what is said to be a common sight in eastern France, one of the land dreadnaughts which is proving an important agent in the work of the Allies. On the cover page is a still more striking picture and even more important in the winning of the war—California dreadnaughts. They are plowing the land deeply; they are plowing the land swiftly, and 90,000 acres of wheat where there was no wheat before, have been made possible by their aid. California is a great factor in the feeding of the world, more than many of our people realize.

This scene is one which is appearing in the movies in all sections of California. It was taken in Sacramento County and the photo from which the engraving was made is used by courtesy of the Sacramento chamber of commerce. Secretary Maddox of the chamber writes:

"This is a squadron of seven combined harvesters threshing in a 22,000 acre field of grain in Sacramento County. These threshers are drawn by 200 horse power tractors and cut a total swath of 238 feet as they move along, and the whole outfit harvests, threshes and transports to the warehouse nearly 300 tons of grain daily. The crop of the 22,000 acres is valued at nearly \$1,000,000. The threshing outfit is said to be the largest ever assembled."

**CHILD LABOR LAW**

The new federal child labor law has been in effect since September 1. It requires that no child under 14 may be employed in any factory, mill, workshop, or cannery in the United States whose products are to be ship-

ped in interstate commerce, and no child under 16 in any mine or quarry. The working day of children 14 and 15 years of age in factories may not be longer than eight hours and they may not be employed between 7 p. m. and 6 a. m.

**LAND SETTLEMENT**

A letter from Dr. Elwood Mead informs us that the land settlement board has organized with Dr. Mead as chairman and D. N. Morgan as secretary. Headquarters of the board will be at the University of California at Berkeley. A meeting was held in the capitol at Sacramento last Tuesday and an outline of work mapped out. Information will be given in the Cultivator later as to this work which means so much to the future welfare of our state.

**SOMEWHERE IN FRANCE**

"Somewhere in France" on the third page of this issue shows a land dreadnaught of a different type from that shown on the cover page. California prefers the constructive rather than the destructive type. If needed California factories could doubtless manufacture these fighting machines in great numbers. As to whether they will do it or are doing it we don't know. This illustration is from the London Illustrated News and is used in this tractor issue as showing the versatility of this modern farm appliance and it's proof that modern war is machine made.

**FEED THE STARVING**

We have from the Belgian minister of state appeal to the people of the United States and Great Britain for aid in feeding the broken down Belgian people in Holland and wives of war prisoners, in supplying comforts for Belgian soldiers in the trenches and others who are suffering because of present war conditions. Many have the idea that since America declared war the United States government is relieving the destitution of the Belgians. This is true as to Belgians in Belgium, but not in all sections. Hence the appeal. Any who wish may write Workman's Belgian Fund, 32 Grosvenor Place, S. W. 1, London, England.

**TRACTOR DEMONSTRATION**

A wonderful degree of enterprise is shown by Pacific Coast tractor and implement manufacturers and distributors in answering the appeal of our country for greater production. None have done more than our tractor and implement people. They have labored under all kinds of difficulties. The labor situation is serious; it is impossible to get steel or crude materials in anything like the quantity required. The food commission has been appealed to to secure through the war board release of some steel to manufacturers of farm machinery and implements. No decision has yet been reached, but food is necessary and to make food cultivated lands are required and cultivated lands require farm implements and farm power.

**LAST WEEK**

Did our readers notice that last week's Cultivator felt somewhat more bulky than ordinary? It was a great issue in amount of matter it contained, in number of copies printed, and in calling attention to a great state fair.

In printing that issue over five and three-quarters tons of white paper

was required—to be exact 11,520 pounds. When placed in the mail sacks the bulk of the papers was so increased that four drays were required to take it to the post office.

Beside calling attention to the state fair some idea was given of the growing magnitude of the livestock industry. Then there were advertisements of tractors and silos, fire arms and all kinds of farm implements and machinery, nursery stock and seeds, poultry and poultry supplies, sprayers, gas engines, farming lands, fertilizers, rodent exterminators, even a hotel for sale, tractor demonstrations, microscopes for seeing things large in California, and many other things the farmer needs. Also we may be permitted to add that there was some good reading matter on various cultural practices, history of the state fair, farm loans, cover crops, apple packing, prune dippers, silos and all kinds of livestock information, a couple of dozen illustrations, besides dozens of others in the advertising matter. Notice that we have given the advertising matter precedence here; it is intensely interesting.

**FERTILIZE**

Now is the time to consider next year's crop production limitations and overcome them so far as possible. California soil is rich and this supposed richness has been permitted to prevent the fullest production. When the writer came to California it was a common sight to see sandy stretches of highway paved with stable manure; but few producers were hardy enough to "poison" their lands by hauling out stable manure, and so it was a perplexing problem what to do with the stuff.

This seems so improbable that modern day farmers assert such a condition was not possible in any farming section. It was a fact, nevertheless, and many a farmer flatly refused to have stable manure spread on his place.

In explanation we may say that in the earlier days of grain farming the sandy lands were given liberal applications of stable manure of a more or less coarse, strawy nature. This was plowed under, the ground was sandy, and a year with only a moderate rainfall following was almost certain to "poison the crop," this merely because of the drying out of the soil caused by the coarse manure plowed under. But that condition seldom will obtain.

Today the handling of manure is better understood; the application of commercial fertilizer is better understood. It is also well known that prices have advanced during the past two years, and this may discourage some producers from even considering the securing of fertilizers for next year's crops, but with the longer prices to be secured from all food crops, one can well afford to pay even present day fertilizer prices.

But how to secure the goods, even with money in hand—there's the rub. Hence this early hint. Secure fertilizers early; supply, transportation, and other factors all demand it.

**SHOW THE COLORS**

We have seen a new definition of a pessimist. It is: "One who figures out how much additional gasoline it takes to carry a small flag on his auto." Fortunately there are not many pessimists of that kind in California for the colors are shown on almost every machine. While we believe there is more patriotism in raising a few extra beans than in flying flags, yet we fail to see the necessity for comparing the two manifestations of patriotism, but we do think that some of the flags which have been flying for weeks should be freshened up a bit.

**Agricultural News Notes**

Denmark has prohibited export of all fish, fresh, dried, salted or smoked.

Hawaiian sugar companies report that most of the sugar crop has been shipped.

Western New York is ready to a 9000 car apple crop—if labor can be secured to handle it.

The New York State Fruit Growers' Association opposes the passage of a food control bill by the state.

Europe has learned to eat peas and beans since the outbreak of the war, large importations have been made from the United States, India and Egypt.

In company with beans elsewhere soya beans raised in Manchuria have gone up in price. Heavy speculation with short stocks are responsible for drought and floods have damaged plantings.

Another lesson of the war learned by France is the value of cold storage. Since the war broke out a number of cold storage plants have been established in France by the British army and the French people are beginning to realize their necessity.

Sugar planters of Hawaii have been turning their clocks ahead anywhere from 15 minutes to an hour to working hours of the summer. Now a concerted movement has started to standardize the day saving scheme by turning all clocks back the same number of minutes.

Citrus fruit cars, not needed a year in California because of a small crop are wanted by North American apple growers to move their fruit East. The Fruit Growers' Association has had representatives in Washington, D. C., for some days working this problem with the authorities.

According to the food bill which came a law this month, "it is hereby made unlawful for any person willfully to destroy any necessities for the purpose of enhancing the price or restricting the supply thereof; knowingly to commit waste or willfully permit preventable deterioration of any necessities in or in connection with their production, manufacture or distribution; \* \* \*"

A new exporter of beans is the state of Sao Paulo in Brazil, which this year will ship nearly 200,000 pounds. The Brazilian brown bean and a white "navy" bean are the principal varieties raised. Two crops are harvested during the year, the first in December and January; the second in May and June. The December-January crop is inferior to the May-June crop.

Tractors as an agricultural necessity are beginning to take their place in many countries. The first tractor motor plows was made in Switzerland in March of this year on sugar lands. The plows were of American manufacture and made a very favorable impression. Twenty-nine American tractors were imported to Spanish agricultural districts in the first five months of 1917.

The Canadian Northern Railway has passed to government ownership. It has 9500 miles of railway with 10 grain elevators at Port Arthur and steamships on the Great Lakes. In addition the finance minister stated that the Dominion government will make a loan to the Grand Trunk Pacific Railway Company of \$7,500,000 and it was intimated that at some future time action may be taken looking toward the nationalization of the road.



# Agricultural News Notes of the Pacific Coast

## Northern California

The Gridley cannery is now running on tomatoes.

Anthrax is proving serious in the herds of Yolo County.

Bartletts have been selling in the Eastern markets around \$3.00.

Jap rice in Butte County has proved a remarkable crop this year.

Colusa County has 25 per cent more and planted to beans this year than last.

Sacramento Valley harvesting operations are larger this year than ever before.

Hogs have reached the 15 cent mark in San Francisco packing houses.

A new olive processing plant is to be erected at Fair Oaks, Sacramento County.

Anderson, Shasta County, is appealing for 100 pickers to aid in the prune harvest.

Davis, Yolo County, hopes to have established in that section a milk condensary.

Deputy State Veterinarian Guldager is inspecting dairy cattle in Sonoma County.

Hop pickers in some sections have been raised from \$1.00 to \$1.75 per hundred pounds.

Glenn County's preparation for a great fair at Orland, September 26-29, is practically perfected.

There are about 2000 acres of broom corn in Sutter and Colusa Counties. The crop will be very short.

The Humboldt County fair held at Ferndale was given an attendance this year far in excess of any former year.

J. P. Dargitz, one of the appraisers of the farm loan bank at Berkeley, has been appraising lands of Sutter County.

Appeals by canners and others have caused delay in opening schools because of the labor situation in Alameda County.

The Durham, Butte County, Almond Growers' Association held its annual meeting August 27. The crop will be exceptionally short this year.

A meeting with representatives from many cooperative organizations of the state was recently held in San Francisco and a vote declaring for a state federation was passed.

Governor Stephens has called a meeting for Monday, Tuesday and Wednesday at the state house in Sacramento to discuss the question of greater production in California during 1918.

Grape dryers of Sutter County are busy. The crop is running exceedingly light, the Sutter County Farmer reporting only about 40 per cent of average. Grapes for drying are selling at about \$30 per ton.

At the annual meeting of the Sonoma County Fanciers and Breeders Club at Santa Rosa George A. Beshaw was elected president and D. Harkness Currier, secretary. The dates of the next show are December 12-15.

President Stephens of the Pacific Rice Growers' Association predicts that the coming year's crop of rice grown in the Sacramento and San Joaquin Valleys will be worth \$12,000,000. Butte County has the largest acreage planted, 21,000 acres.

## Central California

The picking of Muscats has begun.

There is prospect of a casein plant being established at Dos Palos.

Tulare County canneries are putting up a heavy pack of tomatoes.

Santa Cruz County produces 51 per cent of the apple crop of the state.

The Prune and Apricot Growers' expects to handle a 200,000,000 pound crop.

One Visalia rancher has sold over \$450 worth of tomatoes from a half acre.

The cannery at Selma, Fresno County, is paying out \$2000 daily for labor.

There was never such a general campaign against ground squirrels as this year.

Kern, Tulare, Fresno and Kings Counties will join in a squirrel poisoning campaign.

It is estimated that the bean crop of the Delta region around Stockton occupies 50,000 acres.

Ripon, San Joaquin County, is one of the busiest places in the state handling table grapes.

Turlock will make an exceptionally large exhibit at the Stanislaus County fair, September 17-22.

Owing to shortage of labor the peach drying season is being carried over into raisin season.

The Kern County grape crop this year will aggregate 1000 tons as against 885 tons in 1916.

California Malagas and Muscats in drums are proving popular and liberal orders are being received.

The Southern Pacific has put on two beet runs, one from Kings City and the other from Watsonville Junction.

County Horticultural Commissioner Howard of Kings County announces that he is ready to test grapes for their sugar content.

The bean crop of Northern San Joaquin County is valued at close up to \$2,000,000. There are over 85,000 acres planted to beans.

The first 11 cars of Malaga grapes shipped from Modesto returned 25,090. Most of the sales were made in Chicago and New York.

A vigilance committee has been formed in Tulare County. It is proposed to stop the setting of fires and destruction of property.

The Oakdale Irrigation District will hold a special election at an early date to consider vote on raising \$60,000 with which to concrete the canals.

The California Peach Growers estimate that they will be able to handle 35,000 tons. A larger quantity of fruit has been handled green this year than formerly.

Sugar beet harvesting in the section west of Turlock is yielding exceptionally well. There are 4000 acres of beets which will be shipped to the Spreckels sugar factory.

Sawdust delivered for packing Emperor grapes has contained so much moisture this year that most of it has to be rejected, some running more than one-fourth moisture.

A vineyardist of Reedley, Fresno County, has sold \$600 worth of Thompson Seedless grapes, from five acres and estimates he will have \$500 worth of raisins from the same ground.

## Southern California

Practically all peach drying yards are now running full handed.

Lompoc Valley, Santa Barbara County, is harvesting beans.

Milch goats will be a feature at the Riverside county fair, October 9-13.

California is shipping about 1000 carloads of deciduous fruits monthly.

The walnut harvest has begun in the Mound district of Ventura County.

Riverside's shipments of oranges to date are 37,114 cars, of lemons 429 cars.

Limas are being cut in Camarillo and Conejo sections of Ventura County.

The Banning cannery handled 1000 tons of apricots. It is now busy on peaches.

Escondido celebrated Admission Day with her tenth annual Grape Festival.

Improvements and additions are being made to the olive packing house at Riverside.

A Ventura County potato grower has invented a new evaporating process for potatoes.

Pomona, Los Angeles County, shipped nearly 2,000,000 boxes of oranges during the past year.

Imperial County is hoping for a delay in fall frosts until the immense cotton crop now maturing fully ripens.

Several hundred acres of sugar beets are being grown in the section near Victorville, San Bernardino County.

Many orchards will be planted the coming season in the neighborhood of Paso Robles. Many grain lands will become orchards.

The directors of the California Lima Bean Growers' Association have decided not to set any date for entering the market and not to deal in futures.

Creameries are finding it necessary to materially increase prices to producers if they are to secure sufficient milk for keeping their plants open.

"Some beans" is what the sections around Covina and Puente are remarking when they figure up between 700,000 and a 1,000,000 as the season's returns.

Notwithstanding feed shortage in Imperial Valley they were still able to take outside feeders, and 20 cars were recently received from San Joaquin Valley.

It is now thought that relief will be given to ranchers in the Malibu Ranch, Los Angeles County, by securing for them an outlet through a good road to market.

The Carpinteria Valley of Santa Barbara County is busy harvesting its beans and walnuts. Remembering the damage from early rains last fall bean growers are rushing their beans under cover.

M. F. Baumeier has been appointed farm adviser of San Bernardino County. Mr. Baumeier is a graduate of the Colorado agricultural college and has recently been doing farm adviser work in Australia.

Returns from cantaloupes of the Imperial Valley were materially cut because of lateness of the season, increased labor cost, car shortage and a number of other factors. This will give cotton farmers who are offering long rentals for next year an advantage over cantaloupe people.

## The Coast

Latah County, Idaho, has started a road building campaign.

Washington farmers are holding their alfalfa for \$20 a ton.

Farmers of Las Animas, Colorado, have built a cooperative alfalfa mill.

Okanogan County, Washington, will spend \$100,000 on its highways this season.

The Northwestern section of Washington will produce 400 carloads of apples this fall.

The Skagit County Association of Milk Producers will build a \$200,000 milk condensary.

Settlers of the Talent irrigation district in Oregon have voted \$600,000 bonds for improvements.

The Interstate Fair at Spokane last week opened its doors on the first day to a crowd of 15,500 people.

The Spokane Interstate Fair was held last week. More than 1000 head of live stock were exhibited.

There is reported to be an abundance of pickers in the hop fields of the Willamette Valley this season.

The Maricopa County, Arizona, Poultry Association met in Phoenix September 8 to plan for winter shows.

The Cochise-Graham Cattle Growers' Association held its semi-annual convention at Douglas on September 3.

Polk County, Oregon, reports a wheat crop of from 20 to 30 bushels to the acre, beans and potatoes only half a crop.

Farmers of Mesilla Valley, New Mexico, have subscribed a fund of \$10,000 to drain their lands from seepage from irrigation canals.

President Johnson of the Chandler, Arizona, Cotton Growers' Association announces that there are plenty of pickers to handle the cotton crop.

The government has just awarded the contract for 3,000,000 pounds of potatoes to a Seattle firm for the use of the American Lake cantonment.

Members of the Mescalero Indian tribe near Tularosa, New Mexico, bought \$4600 worth of liberty bonds. The widow of Geronimo bought a \$100 bond.

Many of the farmers of Klickitat County, Washington, are installing grain elevators of 5000 bushels capacity with lifts operated by gasoline engines.

Japanese farmers in the Mesilla Valley of New Mexico have been receiving \$50 a ton for cabbage and report a profit of \$800 per acre, less their labor.

The University of Arizona is compiling a directory of poultry breeders in the state. All names should be sent to C. R. Adamson, University of Arizona, Tucson.

Serious fires have occurred throughout all sections of the Northwest. In Montana and Northern Idaho 2000 men are fighting fires under direction of forest rangers.

The first carload of cantaloupes shipped from the Salt River Valley of Arizona this season brought \$40 a ton F. O. B. They were sold in Gallup, New Mexico.

A farm bureau has been organized in Dona Ana County, New Mexico. The Mesilla Valley is the largest agricultural territory in the county. It receives its water from the great Elephant Butte dam.



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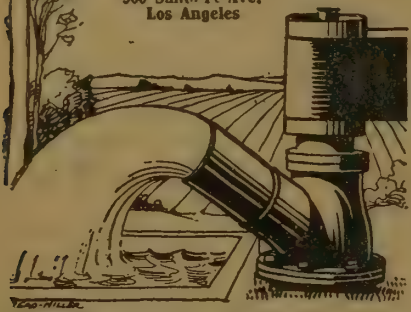
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## The Iris

Written for California Cultivator By Mrs. J. Dean

**T**HE iris is becoming more popular every year. The formation is most interesting, the fragrance of most varieties delightful and the soft restful colors of so many are a delight to the eye, or is it the soul, for as one writer in describing the natural beauties of a certain location remarked; "There are those who see all this wonderful display from year to year and yet it has no apparent attraction to them. Clearly it is not the eye but the soul that sees."

Probably no one who has attempted to interest the public in the iris in a commercial way but has often met with a rebuff in one way or another. "Flags are so common — they grow wild back East where I lived." Offer some large gorgeous flower and it will appeal to those people. We have often thought when we have heard someone speak almost disdainfully of "flags," that the common name should have an added charm, and we were delighted recently when reading the description of the blue flag by that student and lover of nature, Gene Stratton Porter. After describing the wonderful formation of the flower, she says: "Nature is very frank, and these marvels are spread closely over her face for any one who cares to learn. I think those who understand and really appreciate these delicate processes among the flowers never again doubt that there is a Supreme Being. The Creator said, 'And a bow shall be set in the cloud; and I will look upon it, that I may remember the everlasting covenant between God and every living creature of all flesh that is upon the earth.' So he evolved the rainbow. On the painted lily faces the botanists of early Greece saw reproduced these wonderful colors, and so they named the plant 'iris,' the rainbow."

"Because the sky is blue, eternal and never changing, men have adopted this color to express friendship, which also should be eternal and never changing. True blue is dear to all hearts and conveys an express meaning; so again these wonderful flowers are baptized with truth. And as if no honor might be lacking, to the blue is added 'flag.' Never was other flower more highly honored in its naming. Sometimes beautiful plants and vines are insulted by scientists applying to them careless, contradictory, and incongruous terms. Here is one embarrassed by riches both in its scientific and common name. Think what his flag symbolizes to a man! It means so much that for it he severs the dearest ties of earth, leaves a home of comfort and faces untold hardships, exposes his body to sickness, wounds, and many forms of death. For it he sacrifices everything else on earth, yielding with smiling lips life itself."

"So when the slender, exquisite leaves of the iris waved on the free winds of the marsh with the abandon and grace of the flag, some one caught the resemblance, and to the symbol of eternal truth was added that of liberty, and the rainbow lily became the blue flag, the true flag."

The West does not seem to be keeping pace with the East in the cultivation of the iris, and it seems the more strange when we consider that our climatic conditions are much better suited to their requirements, particularly the fine large Asia Minor and

Eastern species and their hybrids. It is doubtful if there is another location where they grow to greater perfection, producing fine large rhizomes with no root rot trouble; no drenching rain to ruin the blossoms; and an unusually long blooming period. Some varieties too bloom more than once; most of the true Germanicas make three crops of bloom; in early spring and late spring or early summer and again in the fall or early winter. By proper selection we can have irises a greater part of the year.

One of the most valuable for Southern California, as well as for locations that are not so mild, is the Unguicularis group, more commonly known as *I. stylosa*. They are natives principally of Algeria and Greece, are delicately beautiful and possess perhaps the most delightful fragrance of the whole genus. They have a pretty grassy evergreen foliage, two feet in length in some varieties, shorter in others, and a well developed clump will occupy a space some two to three feet in diameter. This iris can scarcely wait for the cool weather, and we occasionally see blossoms in the summer, but usually by September it can wait no longer if watered and then flowers at more frequent intervals until in December-January it is at its height, and a large clump will be a mass of bloom nestling among the foliage. The stem is very short, but the perianth tube is very long, six in-

ches and sometimes even 12 inches in length, so that answers for a stem. In gathering it is best to gather just before the flower opens, grasping the tube firmly and pulling gently so as not to pull up the immature buds which will develop later. They come in various shades of lilac, purple and white, and have a central band of orange or yellow. The markings of some are much finer than others. Both plant and flower resemble somewhat many of our native Californian irises although the flowers average somewhat larger in most varieties. After January they gradually decrease until March or a little later. Some varieties, *speciosa* for instance, do not come into bloom so early and consequently bloom later. It does not seem possible that anyone who cares for flowers would not like this iris, and the fact that it blooms in mid-winter when flowers are scarce, makes it so much more valuable. It is a fitting companion to the violets, and the two combine very nicely for table decorations.

Again in our climate some of the Asia Minor irises of the Germanica type come into bloom in March, others in April and May, and it is the last of June before they are all gone.

During July and August we do not expect to see many irises as that is their natural resting time. In the fall and early winter however quite a number bloom.

We have referred only to the large flowered Germanica type as these are the most popular perhaps of the genus, and the pretty *stylosa* which because of its blooming habit is doubly valuable.

## Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

### Red Ants and Poultry

Regarding query as to poisoning of poultry by eating beef heart covered with red ants, M. H. Mendleson of Piru writes:

"If these were the common red ants of medium size they have a sting which causes severe prolonged pains. I'd rather be stung by a hundred bees than by one of these red ants. I generally stand a great amount of bee stings with no bad effects, but a red ant sting causes the most severe and prolonged pains that I have ever experienced from insects, making me almost sick. In fact I was affected nearly a whole day by one sting. It might have been the internal ant stings which killed the poultry, for it would be more severe on poultry than on man."

### Poisoned Rabbits for Feed

Would it be safe to feed jack rabbits that have been poisoned with strychnine to chickens, dogs and hogs? I thought I would soak them in strong salt water to draw the blood out and cook them. We put a little strychnine on apples and carrots on the rabbits' trails. Have been burying the rabbits for fertilizer but would like to use for feed if safe. The cat eats them with no bad effects.—Subscriber, Nipomo.

We know that cats which have eaten poisoned gophers and birds have died from the effects but in this case since the poison is taken into the stomach of the jack rabbit and this is removed and the flesh cooked we think there would be no danger. However, we have had no experience and

would ask subscribers of the Cultivator to write of theirs. Meantime our only suggestion would be to try it on an animal of little value.

### Commercial Fertilizer for Potatoes

Would like to know how and when to apply commercial fertilizer to potatoes. My soil is a silt about four feet deep.—Subscriber, Santa Ana.

Any good commercial fertilizer which is rich in potash is satisfactory for potatoes. As a rule it is applied in the fall at time of planting.

### Grafting Peach Trees

Have several thrifty peach trees which are not of a variety suited to this locality. Would it be advisable to graft them over and when is the best time?—Subscriber, Long Beach.

It is very difficult to satisfactorily graft stone fruit trees. It is possible to graft them, however, either to peach, almond or apricot. If it is desired to make the attempt the operation should be performed in winter when the trees are dormant and just before or at the time of beginning of the spring growth. We would prefer to grub out these trees however, and reset with thrifty nursery trees.

### Wild Oat Seed

Is it possible to secure the seed of wild oats?—Subscriber, Winters.

We do not think that wild oat seed is carried by the seed houses.

### Roots of Trees

My yard is full of roots, a specimen of which I am enclosing. The soil is adobe and whenever a plant is irrigated these roots reach up and sap the soil. Are they from sugar gums outside the fence or are they wild morning glory? What would be the best way to get rid of them?—Subscriber, Olay.



The roots sent are not those of the young glory and if sugar gums are thin 100 feet of the ground in question presumably these roots are seeking for the limited amount of water which is available. They may be controlled in part at least by trenching at the trees in such a way as to cut roots running into the garden.

#### Pit of Peaches

Send a peach pit from a tree on which nearly all of the peaches are rotten at the pit. The fruit seems perfect on the outside with the exception of the stem end, which is open. What can be done to prevent this trouble another year? — Subscriber, W.

This trouble is very common, some are much worse than others, and is very perplexing for there is no satisfactory remedy. As the university experiment station terms it, it is a "physiological phenomenon" and not a disease. Some orchardists have claimed that it may be caused by lack of irrigation followed by excessive irrigation, or by other unsatisfactory conditions.

#### Keeping Beans

Please advise best way to keep dried beans through the winter. — Subscriber, Covina.

Now free from weevil store in any way free from that pest. If in large quantities they may be closed tightly and of the pest by using carbon bisulphide, five pounds to 1000 cubic feet space. This may be used after the beans are in place and any weevil in them reached by this method. If one has but a small quantity, glass fruit jars, crocks or jars, barrels or other airtight receptacles may be used.

#### Sorghum

Would like to learn how sorghum molasses is made. — Subscriber, Galt. The University of California has issued information on this subject. In short, the process consists of crushing the "juice" from the plant between large iron rollers, then evaporating—the same as in the making of maple syrup—in ordinary cauldrons the more modern evaporating pan. The molasses reaches the proper consistency almost constant skimming necessary.

#### Winter Hog Feed

Would you advise best crop to sow for the coming month for winter feed for hogs on land which can be irrigated? Have been considering turnips or carrots but do not know which makes best feed, nor best variety of either. — Subscriber, Santa Clara.

Changel wurzels, sugar beets, carrots or kale. The seedsman from whom the seed is purchased will inform you as to best varieties for the different seasons.

#### Drying Prunes

What is the best way to dry prunes for preparing them for market? — Subscriber, Glendora.

Soak in lye solution for a minute or a fraction of a minute, according to the hardness of the prune. If the prunes are fully ripe or partially dried and the water is not boiling some use as strong a solution as one pound lye to five gallons of water. When care is taken to keep the water at boiling it may be used as weak as one pound to five gallons. Rinse in clear water and spread on trays. When nearly dry turn over trays so that they will not be in direct sunlight.

#### Seasoning Lumber

Have a large camphor tree which I would like to make into a chest. Can you give me information regarding the method of curing or seasoning same

to prevent checking? — Subscriber, Anaheim.

The only suggestion we can offer is to stack where heat or sun is not too great. Lay strips across the ends of the boards in the pile. If cured in the open sun checking and warping is more serious.

#### Shavings for Scratch Litter

Could you tell me if there would be any harm in using shavings such as you get from the lumber mills as litter to put scratch feed in for chickens? Straw is rather expensive and shavings very cheap. I have tried using them about two inches deep and it seems to work all right but would like your opinion. — Subscriber.

We can see no reason why shavings should not be entirely satisfactory.

#### Pruning Peaches and Plums

Should peach and plum trees be pruned in summer or winter? I have some late Crawford's that do not bear well. — Subscriber, Inglewood.

As a rule summer pruning of stone fruits is not practiced. Winter pruning will induce young growth which the second year after will usually bring a good crop.

#### Capacity of Tank

Kindly inform me through your paper of the capacity in cubic feet of a tank to hold 1,000,000 gallons of water. — Subscriber, Los Angeles.

There are approximately 7.5 gallons in one cubic foot. Dividing 1,000,000 gallons by 7.5 gallons gives 133,333, number cubic feet capacity required.

#### DO YOU KNOW THIS MAN?

The farmer gazed with heavy frown Upon his mower broken down; Then hastened to the nearest town To buy repair.

He told his dealer of his woe, And how much grass he had to mow, But not a number did he know— Nor seemed to care.

"The part I want," he wisely said, "Is hollowed out and painted red." "I had the number in my head" "But I forgot."

"It holds the thing-um-bob in place" "Steen inches from the long iron brace" "That holds it to the big main base" "And keeps it set."

"You surely know just what I mean," "It broke before on this machine." "That what-you-call-ums it's behind" "And just between."

"That thing that moves along like that," "About as big as this old hat" "Would be if you would mash it flat" "I think you'll find."

The dealer sighed and shook his head, "I don't know what you mean," he said. "We'll have to search the extra shed," "So come along."

"If you would only tax your brain" "So that the number you'd retain," "Or bring the old part in, 'tis plain" "You'd not go wrong."

From end to end he searched the bins, Clawed over castings, bolts and pins And skinned his fingers and his shins, It made him cuss.

But still he searched with sinking heart, (He'd seen two customers depart), And in the last bin found the part, 'Twas ever thus.

"That's it," the farmer cried in glee; "I thought 'twas number thirty-three." "Now what's the price of that to me?" "Great Jumpin' Frogs."

"Not forty cents? An awful rate." "For a thing that hasn't go no weight" "Oh well, just put it on the slate" "Till I sell my hogs." —(C. A. L.) in Tractor Farming

As wages for farm labor and feed for horses go up in price, motor power on the farm becomes more and more important. The state council of defense announces that the University of California will at the Short Course for Farmers at the university farm at Davis from November 5 to 15 offer classes in the operation, repair, and management of gas tractors with special demonstrations of the use of motor-cultivators.

Ben Franklin says: "Plow deep while sluggards sleep, and you'll have corn to sell and keep." If Franklin had seen a tractor plow, he'd have said: "Don't wait, go buy one now."

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tions for orchard soil improvement.

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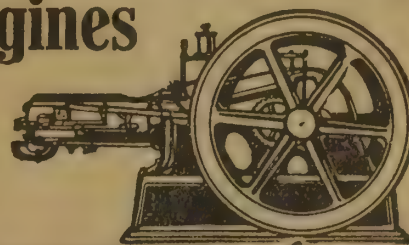
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## Register of Merit Jerseys

There will be more Register of Merit breeding in the Stanislaus Jersey Breeders' Sale than has ever before been offered in a single sale in California, and the cows to be sold are mostly young, many of them not yet of mature age. A great Register of Merit cow, three of her daughters, and one granddaughter, all with good Register of Merit records, will constitute the greatest Register of Merit family ever sold at either private or public sale in the whole West.

### 22 Fresh Cows and Heifers

make an especially attractive feature of this sale, and there is a large number of heavy springers besides.

### A Few Good Bulls

Stanislaus County Jersey breeders are well sold down on bulls, and only six will be offered in this sale, but every one of them is a good one. There are two service bulls that are worth going a long way to buy. One of them has a great bunch of daughters in the sale, part of them in milk, and you can see for yourself the sort of daughters he gets.

Place of Sale: MODESTO FAIR GROUNDS

**Modesto, California**

**TUESDAY, SEPTEMBER 25, 1917**

#### Contributors to the Sale

Guy H. Miller, Modesto.  
Fred B. Wulff, Modesto.  
M. W. Brady, Modesto.  
Riverina Farms, Modesto.

W. J. Hackett, Ceres.  
O. J. Ames, Oakdale.  
Jno. A. Orr, Ceres.  
C. W. Hackett, Ceres.

An especial effort has been made in this sale to offer clean, well bred, dependable cattle that will do credit to Stanislaus County breeders in other herds. A feature of the tuberculin test covering these cattle is that while each animal over six months of age has an individual certificate the buyer will also be permitted to tuberculin retest any such animal purchased and if any react the seller agrees to receive them back at the full purchase price.

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W. F. Young, P.O.F., 244 Temple St., Springfield, Mass.

## Who's Who

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photograph and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Other sketches and portraits will appear in the next and following weeks.

Written for California Cultivator By F. F. Stonerod

#### W. J. BEMMERLY



HERE is a typical Western cattleman, the kind we read about in fiction, only in real life he is far better than if painted in the story book.

For instance; he does not like to be

boots on. There are the big bro Stetson and flowing mustaches too, making a vivid picture which fits properly with his chosen calling breeding beef cattle, particularly Herefords.

He has been in the business more than 25 years, but it was only ten years ago that he bought the nucleus of his present large herd of registered animals. He got the first one from the old Sparks herd in Nevada and from the late Jack Splawn and from the late Jack Splawn North Yakima, Washington. His favorite animal is old Ruby Splawn really the most valuable and faithful individual in the entire herd.

The one place where Mr. Bemmerly differs from the story book cattleman is that he is a college graduate, having California as his alma mater. He is one of the large Yolo County families of Bemmerleys whose estates comprise a considerable part of the county. He is just fifty and, as he puts it, good for another fifty. If there is a better judge of a "cow critter" in the state we do not know who it could be. A survey of his big herd at any time will bear out this statement.



W. J. Bemmerly

called "Mr." just plain "Bill" suits him best. His fellow cattle breeders at a recent convention affectionately gave him the title of "Hereford Bill," and "Bill" he is to all who know him. Then he does not like to wear ordinary shoes. He has been wearing cowboy boots since he was in short trousers and he says he will wear them till he dies, which is merely another way of saying that he intends to die with his

Probably the best insight into the character of the man can be had from the following verse which the writer copied from its place in a frame hanging above his desk unknown to him:

"The thing that goes the farthest,  
Toward making life worth while,  
That costs the least and does the most,  
Is just a pleasant smile."

## Field Notes from the Live Stock Men

Guy H. Miller of Modesto, Stanislaus County, writes:

"Several cows in Venadera Herd of Jerseys finished official year's tests in August, and I wish to report same: Lora of Venadera, a two-year-old heifer sired by our leading herd sire, Altama Interest, produced 8242 pounds of milk, making 386 pounds of fat, equal to 454 pounds of butter 85 per cent fat. She was 24 months old at time of starting on her year's test. Her dam is the well known cow, Lorna of Venadera, test 691 pounds of butter in one year.

"Lora is the heifer that won the California Jersey Breeders futurity stake for 1916 and won the five-day butterfat contest for heifers under 30 months old at the state fair last year. She is the ninth daughter of Altama Interest to qualify for the Register of Merit with official yearly test.

"Ramona of Venadera, a two-year-old heifer sired by Owl of Belleview, started her year's work at 24 months old and produced 556 pounds of milk, making 333 pounds of butterfat, equal to 392 pounds of butter. Her dam is Gazelle of Venadera, one of the Register of Merit daughters of Marigold's Exile King. Gazelle has a test of 403 pounds of butter in a year as a two-year-old.

"Constantia of Venadera, a two-year-old by Owl of Belleview, started her year's test at 27 months old. For the year she gave 4640 pounds of

milk, making 302 pounds of fat, equal to 355 pounds of butter. Her dam, old Signora Bruce, test 573 pounds of butter in a year, grand champion the state fair in 1908, and winner the five day butterfat contest.

"Cygnia of Venadera, a two-year-old heifer, also a daughter of Owl of Belleview, started her year's test 23 months of age. For the year she gave 4711 pounds of milk, making 314 pounds of fat, equal to 314 pounds of butter. Her dam, Astrea of Venadera is one of the Register of Merit daughters of Altama Interest and has a test of 435 pounds of butter in a year made as a two-year-old.

"While none of these heifers has made a phenomenal test they are very creditable records, and like the other official yearly tests made in Venadera Herd, they were made under practical dairy conditions, the cows being milked and fed but twice daily and running with the herd.

"Owl of Belleview, sire of three of these heifers, is a very richly bred bull that heads the Jersey herd at the University Farm at Davis. He was used in Venadera Herd a year before being selected by Professor True to head the farm herd, and the heifers are his first daughters to be tested. The three entering the Register of Merit qualify their sire for entry in the Register of Merit also and he has four other daughters in Venadera Herd on test and making good.



## Breed Leaders

Every breed of live stock has its outstanding character the same as the human kind. A great dairy cow has proved her ability to produce anywhere up to 15 tons of milk annually; the trotting horse has secured his record around two minutes; the beefmaker has shown his ability to make the least amount of feed into the greatest amount of food; swine, sheep and others of the live stock family have shown themselves great characters. In addition—and here is where their worth is proven—these animals can transmit their productive power to their offspring.

Beginning with the issue of August 4 the Cultivator gave an account of Pieterje Bloom of the university farm dairy herd. Some things she has done and more that her daughters have done were chronicled. She was a most worthy leader in this series of articles. Others of her kind follow. More of the "handsome is as handsome does" type of animals will be given in the columns of the Cultivator during the next few months.

Written for California Cultivator By C. A. Briggs



Ciruela Josephus

**A** MODESTO bull owned by A. M. Bibens, a fine upstanding fellow, well marked as to color with good lines, back and other points, Ciruela Josephus 91717, born December 18, 1911, reflects credit on his owner and his breeding.

His sire, Josephus of Ceres, is the sire of five A. R. O. daughters. His dam, Hermana Mechthilde Ciruela 3rd, traces back to Ignaro De Kol who is the sire of ten A. R. O. daughters. His great grand dam is that wonderful world's record cow, Aralia De Kol, with a record of 21408 pounds of milk and 563.2 pounds of butter in one year. He is getting fine calves and proving very satisfactory as a herd sire.

**AYSHIRES HEEDING THE CALL**  
The Ayrshire Breeders' Association sends the following:

America calls for increased production. Man and beast are putting forth their utmost efforts. East Newton Nellie, Imp., an Ayrshire cow owned by the L. A. Reymann Estate, West Virginia, has just completed a yearly Advanced Registry record, producing 18,156 pounds milk, 774.70 pounds butterfat. She was dropped April 1910 and has already an official two year old record of 9440 pounds milk, 407 pounds fat, unofficial three year old record of 9603 pounds milk, 433 pounds fat, unofficial mature record of 10,392 pounds milk, 438 pounds fat, previous to her official record of 18,156 pounds milk, 774.70 pounds fat just completed. She is an easy and persistent milker. Her biggest day's work was not more than 60 pounds and she finished her test with more than 40 pounds, showing a fluctuation of only 20 pounds between her high and low mark. This record of East Newton Nellie is the second record of over 18,000 pounds milk made by the Reymann Estate herd within the past few weeks, August Lassie, also a seven year old, having just completed a record of 19,582 pounds milk, 831.50 pounds fat.

### CARE OF KIDS

Writing in the Milk Goat Bulletin Winthrop Howland says:

"It is unwise to separate very young kids from their dam unless for an urgent cause, or in the instance of the kids being bucks, in which case they

are frequently raised on a bottle. Should it become necessary to take the kids from their dam it is best for both parent and offspring to separate them immediately as the longer they are together the stronger becomes the attachment. Let the kids nurse the colostrum in order to insure free movement of the bowels and then take them entirely away from the dam. If another doe recently fresh is available she may be used as a foster mother, and if she will not adopt the kids she must be held for them to nurse at least five times a day until the kids are about three weeks old, after which from four to three times a day is sufficient. Very young creatures require frequent feeding and but little at a time. Kids compelled to go on too infrequent nursing will overfeed and suffer in consequence from digestive disorders, whereas if permitted to nurse at will they seldom if ever have any such trouble. The earliest age at which a kid should be weaned is three months, but if good, lusty stock is desired the young should not be fully weaned until five months of age. If no foster mother is available young kids may

be nursed on a bottle. It is profitable to give them goats' milk, but they can be raised on cows' milk. The milk should be blood-warm when given them. The nursing bottle and nipple must be carefully sterilized by boiling before being used again. By placing the bottle in cold water and letting it come to the boiling point the risk of cracking the bottle is avoided. On no account should kids be fed milk otherwise than by the bottle, as drinking it from a pail or pan causes serious digestive disorders."

The secret of permanent success in farming hinges around the ability of the farmer to buy and sell, to manage, to produce the majority of the grain and roughage which he feeds and to walk his crops to market. The farmer who converts his long feed and grain into pork, mutton, beef, milk, cream, butter, and the like, walks his crops to market in a more concentrated and valuable form. Dairying means dollars when one gets well started in the business. It is a business of immediate returns.

Imperial County will exhibit at the San Francisco Land Show.

## Are You Starting in Registered Holsteins?

If you are just starting in Registered Holsteins, or if you are an old-time breeder in Registered Holsteins, you will no doubt want to study the pedigrees of the Registered Holstein Cows and Bulls offered at the Auction Sale at Kent, Wash., October 3rd and 4th, 1917. Most of the cows are bred to Herd Sires—the pedigrees of which are also given. All of these cows are of good conformation.

**VISIT SEATTLE AND PLAN TO ATTEND THIS**

**Two Days  
Sale**

**Auction Sale**

**160 Registered Holsteins**

**KENT, WASH. (Near Seattle)**

**Oct. 3-4,  
1917**

On the above dates Auction Sale will be held in Carnation Stock Farm Sales Pavillion, Kent, Wash., by Carnation Stock Farms and John L. Smith, Hazelwood Farm, Spokane, Geo. A. Gue, North Yakima, Wash., Auctioneer.

This space will permit only giving the general announcement.

Holstein breeders should send for catalogues and study the pedigrees of the animals offered, as the future of most of these animals is quite promising.

### CARNATION STOCK FARMS

#### 75 Registered Holstein Cows

of good breeding—most of them in calf, bred to Johanna McKinley Segis (the 40 pound bull), King Segis 10th, Matador Segis Walker and Dutchland Governor Sir Colantha—will be offered by the Carnation Stock Farms at this sale.

#### 10 Registered Bulls

All of which have been raised on our farms. Among them is Korndyke Rag Apple Milla, 163749, a son of the famous Rag Apple Korndyke 8th, and carries 75 per cent of the same blood as the bull that sold for \$20,000 at the Detroit sale in June, 1916.

#### Health Guaranteed

All animals offered by Carnation Stock Farms will be guaranteed for Health by Inspector of United States Bureau of Animal Industry. Special Catalogue gives full details.

### HAZELWOOD HOLSTEIN FARM

#### 70 Registered Holstein Cows

will be offered at the sale by Mr. John L. Smith of Spokane.

Holstein breeders will remember the class of animals owned by Mr. Smith's Hazelwood Farm, among which were many prize winners at State, Interstate and National shows.

#### 5 Registered Bulls

will also be selected from Mr. Smith's herd—and offered at this sale.

Full description of Cows and Bulls is given in Special Catalogue—sent free upon request.

#### Don't Miss this Sale

This sale promises to be one of the most interesting on the Pacific Coast—to breeders as well as dairymen.

**SEND TODAY FOR CATALOGUES**

(One of Each List)

**Address: CARNATION STOCK FARMS**

**1080 Stuart Bldg., SEATTLE, WASH.**

**Or JOHN L. SMITH, Hazelwood Farm, SPOKANE, WASH.**

**Or GEO. A. GUE, NORTH YAKIMA, WASH.**





## Elliott-Brant Rancho Guernseys Are Persistent Producers

The results of our first two years of official testing show our herd to average 10,172.28 Pounds of Milk and 507.97 Pounds of Fat. One half of these cows were heifers with first calf who averaged 8,670.24 Pounds of Milk and 436.01 Pounds of Fat (only 7 pounds under the average of all A.R. records). Our mature cows averaged 12,710.5 Pounds of Milk and 621.52 Pounds of Fat (120 pounds over the average of the mature cows of the breed).

A bull from these cows will increase the production of almost any herd.

**Elliott-Brant Rancho, - Owensmouth, Cal.**



## Santa Anita Rancho

Anoakia Breeding Farm



**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by imported Stallion Ibn Mahruss, head of our Arabian stud. Dams are the choicest thoroughbred mares of Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahruss, world renowned imported desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle Stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the very best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted Lorna of Rico Vegas, and bulls from one World Record cow and two California State Record Cows. Write for details.

Correspondence Invited

**Anita M. Baldwin**

W. H. TAYLOR, Superintendent

Santa Anita, Cal.

## Closing Out Sale of Live Stock at a Bargain

An Opportunity to Secure a Choice Lot of Young Holstein Heifers Sired by Registered Bulls from Full Blood Unregistered Dams.

- 30 Head of 15 to 18 months old Holstein heifers now being bred to Registered Holstein Bull.
  - 4 Head of Grade heifers.
  - 7 Head grade four and five year old cows.
  - 1 Registered two year old Holstein Bull, Segis Paul Pontiac de Kol Burke.
  - 1 Two year old Guernsey Bull, sired by May King of Fern Ridge, a bull that took third at the San Francisco Exhibition in 1915, Dam Imported Lady of the Forgettes.
- Wish to sell in single lot and will make special price, on the above stock.

ALSO a choice lot of brood mares, Jacks and Jennets at a bargain price.

**El Cerrito Rancho Company**

CORONA

CALIFORNIA

## ABORTION IN CATTLE



PREVENTED AND CURED PERMANENTLY  
YOUR COWS MADE PROMPT. REGULAR BREEDERS BY  
**STERILOID**

### STOP LOSING CALVES

**TREATMENT:** If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for FREE BOOK. It explains the causes and symptoms of Abortion and tells how to cure Abortion, and make your cows regular healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

**GUARANTEE:**

**MARTIN REMEDY CO.**

We will refund money in every case when STERILOID FAILS to make good. Price \$1.00. Mail postpaid, in plain wrapper.

Dept. L, 598-408 Columbus Ave., New York City.

Reference, Colonial Bank

## Prize Winning HAMPSHIRE

The farmer who wants a hog that puts on 200 lbs. of firm meat at six and a half months of age buys the Hampshire.



Boars, gilts, bred and open, for sale from the P.P.I.E. Champion Hampshire stock, just as nearly perfect as they make them.

F. A. Langdon  
Manager

Llano Vista Ranch, Perris, Cal.

F. V. Gordon  
Owner

## One of the Good Ones

Written for California Cultivator By C. A. Briggs



**JERSEY** heifer owned by C. D. Hayworth of Modesto has recently completed a test that puts her in a place of honor as a producer. She was one year nine months and 28 days old when he began the test on July 2, 1916.

Her records by months were:

July 815.3 pounds milk 29.986

fat. A total for the year of 7300.7 pounds of milk and 337.138 pounds butter.

An examination of the above figures will show a remarkable uniformity of monthly production over the entire year, the twelfth month showing less than two pounds of butterfat below the record of the first month. This heifer weighed on the day of finish-



Lorna of Rico Vegas, 360977

pounds fat; August 843.6 pounds milk 33.111 pounds fat; September 736 pounds milk 36.579 pounds fat; October 682.6 pounds milk 33.925 pounds fat; November 591.4 pounds milk 32.467 pounds fat; December 545.4 pounds milk 32.996 pounds fat; January 512.9 pounds milk 31.44 pounds fat; February 494.6 pounds milk 31.802 pounds fat; March 560.4 pounds milk 33.231 pounds fat; April 520.9 pounds milk 32.087 pounds fat; May 500.9 pounds milk 30.805 pounds fat; June 496.7 pounds milk 28.709 pounds

fat. She was treated at all times in the same manner as the rest of the dairy herd of which she is a part. From July to the middle of November she received a small feed of grain, the balance of the time only corn ensilage and alfalfa hay. She is the first daughter of Lorna Altama Interest, Mr. Hayworth's herd bull. Her grandsire is Altama Interest who has a long record of grand championships to his credit. Her granddam (dam of Altama Interest) is Lorna of Venadera with a record of 691 pounds of butter in a year.

## Live Stock Classifications



**S**OME most interesting material—of special interest to attendants at the fall fairs—is given in a newly issued federal bulletin, "Farmers' Bulletin 822." It says:

One of the principal objects of a livestock exhibition is to bring before the stockmen and the public a standard of excellence toward which all may strive in the improvement of domestic animals. The educational value of such an exhibition will depend largely upon two things, namely, the classification of the animals to be exhibited and the judgment of the official who passes upon the merits of the exhibits. The two are absolutely dependent upon each other in presenting the lessons which the exhibition should teach.

The classification of livestock used at many of the county fairs is such that it is of little instructive value to the public and often causes criticism alike of the judges and of fair officials. As an example, the following class is not uncommon: "Best aged stallion, any breed." In this case all aged stallions, regardless of whether they are of the pony type, saddle type, light-harness type, or draft type, are brought into competition without any qualifications whatever. Should a pony stallion be placed first, a saddle stallion second, and a draft stallion third, there is sure to be confusion in the minds of the audience and criticism of officials. Each class at a livestock show should represent a definite type of animals which have some definite function or purpose.

The chief value of livestock exhibitions or shows, whether under the auspices of community, county, state, or larger organizations, lies in their educational features. Livestock shows and fairs have been an important factor in the improvement of farm animals, since it is the show ring which designates the types and standards that breeders of animals strive to produce. These standards generally are based on market and economic demands.

The absorbing interest of competition in the show ring stands as the chief incentive for the breeder to exhibit his animals. If he annually enters into competition with other breeders, he will surely improve the quality and type of his herd or flock. The great value of the livestock show ring for the less experienced breeder, however, is in the demonstration of standards which may be followed. The best qualified persons obtainable are found officiating as judges at the large exhibitions. These men know the requirements for the animals which they judge, and through them breeders become better acquainted with the standards for the breed in which they are interested and also with the faults and good points of their own exhibits.

While the chief value of exhibitions is educational, the livestock exhibits at county fairs are often so poorly classified that frequently the educational value is largely lost. It is the purpose of this bulletin to discuss in a general way some of the factors which, if properly handled, will help





## Farm Sanitation

Will Increase Your Profits  
by Keeping Live Stock  
and Poultry Healthy.

## Kreso Dip No. 1

Easy to Use. Efficient. Economical.  
Kills Sheep Ticks, Lice, Mites and Fleas.  
Helps Heal Cuts, Scratches and  
Skin Diseases.

## Prevents Hog Cholera.

Experiments on live hogs prove that  
a 2% dilution of Kreso Dip No. 1 will  
kill virulent Hog Cholera Virus in 5  
minutes by contact.

We Will Send Free Booklets on  
The treatment of mange, eczema or  
itch mange, arthritis, sore mouth, etc.;  
How to build a hog wallow which  
will keep hogs clean and healthy;  
How to keep your hogs free from  
insect parasites and disease.

WRITE FOR THEM.

Kreso Dip No. 1 in Original Packages.  
FOR SALE BY ALL DRUGGISTS.

**PARKE, DAVIS & CO.**  
Department Animal Industry.  
DETROIT, MICH.

## HOLSTEIN-FRIESIAN CATTLE

Registered young bulls from best  
milkers. Some of serviceable age.

## REGISTERED BERKSHIRE PIGS

Masterpiece, Longfellow and Robin  
ood Strain. Fine individuals of  
both sexes—we pay registration fee.  
Careful attention given to mail  
orders.

**Whittier State School**  
Whittier, Calif.

## Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count  
Glory, 426982, grand champion at  
the California State Fair, 1916.  
Berkshire herd won Premier Ex-  
hibitor's banner at P. P. I. E.

513 Hearst Bldg., San Francisco  
Carruthers Farms, Mayfield, Cal.

## Holstein Bulls

Well bred, vigorous, registered  
Holstein bulls of good type for sale.  
Steady sales have moved all our  
bulls of service age, but we have  
a few unusually good calves to offer  
at moderate prices.

**The McCloud River  
Lumber Company**  
McCloud, California

## Bemmerly HEREFORDS

Perfection and Beau Donald breeding.  
ed for their size, bone and quality.  
ow booking orders for service bulls  
future delivery.  
visitors always welcome.

**J. BEMMERLY, Woodland, Cal.**

utte County is discussing the farm  
iser question.

to increase the value of the livestock  
exhibit.

According to the premium list of  
the California State Fair the follow-  
ing are:

### Base Dates

Ages of livestock are computed as  
follows:

Horses, asses and mules from Jan-  
uary 1.

Beef cattle, from September 1 and  
January 1.

Dairy cattle, from August 1 and  
February 1.

Sheep and goats, from January 1.

Swine, from actual date of farrow-  
ing.

Poultry, from January 1.

## Jersey Resolutions

The American Jersey Cattle Club  
has formulated resolutions from  
which we take the following:

I will not kill, nor permit to be kill-  
ed, a productive Jersey cow, nor any  
of her promising female offspring.

I shall bring my heifers to maturity,  
not only because this is now a pa-  
triotic duty, but because a good Jersey  
cow has the earning capacity of \$1000  
securely invested at five per cent;  
and surely it is folly to sell for \$125  
or less a machine which equals the  
earning capacity of \$1000.

I will not keep or use a poor bull in  
my herd. My resolve is to breed up,  
not down, to the end that each gener-  
ation of my herd shall be an improve-  
ment on the preceding one, because  
my country needs better stock as well  
as better and more bountiful produc-  
tion.

I will intelligently study feeding so  
that the production of my herd may  
be equal to its capacity

I will use every endeavor to pre-  
vent the waste of skim milk, as it  
constitutes a fine food for human be-  
ings.

I shall plan intelligently to grow my  
cattle feed on my own farm as far  
as possible and thereby lower the  
cost of production to my customers  
and increase my own profits at the  
same time. As in all other lines of  
work the nation has the right to de-  
mand efficiency and low production  
cost on my part.

I will do all in my power to main-  
tain the fertility of the soil in my  
care, realizing that I simply hold my  
lands in trust for coming generations.  
The welfare of my country in the fu-  
ture depends upon the conservation of  
the fertility of the soil, and I resolve  
that I will do my part along this line  
so that I will be enabled to give a  
good account of my stewardship and  
hand on to my successors lands better  
and not worse from my having lived  
upon them.

## About Dairying

**F**ROM a series of questions  
and answers issued by the  
agricultural extension de-  
partment of the I. H. C.  
service we note the follow-  
ing points:

There are about twenty-one million  
dairy cows in the United States, val-  
ued at \$596,000,000.

The most important points in suc-  
cessful dairying are:

Interest in the work, proper feed  
and care, the Babcock test, good  
sires, promptness, regularity, and  
sanitary conditions.

Every farmer should have some  
cows because the cow produces the  
most and best food at the least cost;  
brings in a steady income; converts  
cheap roughage into profit; makes the  
farm worth more; builds up the soil;  
means living at home; puts farming  
on a cash basis.

Dairy communities are prosperous  
because the cow will earn a greater  
per cent profit for the money invest-  
ed in her than it is possible to get out  
of any other investment on the farm.  
She converts cheap roughage into  
high priced food products, builds up  
the soil, means more thickly settled  
communities, leads to live stock  
farming which is the basis of per-  
manent agriculture.

The five leading dairy breeds are  
Holstein, Jersey, Guernsey, Brown  
Swiss, Ayrshire. A Holstein, Skylark  
Ormsby, produced 1205 pounds of  
butter fat in one year, about 1440  
pounds of butter, 27,761 pounds of  
milk.

The average dairy cow in this coun-  
try produces about 4000 pounds of  
milk a year and approximately 160  
pounds of butter fat.

The cow is the greatest producer  
of human food. Analysis made by  
the Missouri experiment station  
shows that the actual food value in  
the carcass of a 1250 pound steer was  
548 pounds of protein, fat and min-  
eral matter, and that the actual food  
value of the milk produced by one

cow in a single year amounted to  
more than 2200 pounds of food matter  
in the way of protein, fat, sugar and  
mineral.

A pure bred animal is one the an-  
cestry of which, for many generations,  
has been selected for some definite  
purpose, in the case of the dairy ani-  
mal for the production of milk and  
butter.

A grade animal is one, the ancestry  
of which, on one side, is of pure  
breeding and the other of mixed or  
unknown origin.

A scrub animal in stockman's par-  
lance is an inferior animal, the off-  
spring of an inferior ancestry and of  
mixed breeding.

The sire is half the herd; improve-  
ment must come through pure bred  
sires.

The experience of many dairymen  
has proved that it is not good busi-  
ness to depend entirely upon stock.  
The better way in general is for the  
dairyman to raise his own stock and  
improve the herd by breeding the  
best heifers to pure bred sires, select-  
ing the best cows and disposing of the  
ordinary stuff. It is better to grow  
into the dairy business than to go  
into it.

The per cent of improvement which  
will be made in the first generation  
of the offspring by breeding common  
cows to pure bred bulls is approxi-  
mately: First cross, 50 per cent; sec-  
ond cross, 75 per cent; third cross, 87  
per cent; fourth cross, 93 per cent;  
fifth cross, 96 per cent; Sixth cross,  
98 per cent.

Four things necessary for the im-  
provement of the dairy herd are good  
feed, good care, pure bred sires, and  
selection of the best cows for breed-  
ing purposes.

The chief advantages of the Bab-  
cock test are that it puts dairying on  
a business basis, points out the star  
boarders, shows up the poor stock,  
and enables the dairymen to select  
cows that pay a profit.

A cow testing association is an or-

## Abortion In Cattle

**High Meat and Milk Prices  
Make Abortion Control  
Doubly Necessary**

Authorities are alarmed at the in-  
creasing losses caused by contagious  
abortion. Some state it is causing  
more damage to livestock than tuber-  
culosis.

Careful breeders are realizing that  
meat and milk products will continue  
to mean more money to them. They  
are accordingly taking active steps  
to systematically and efficiently  
stamp out abortion from their herds.

Research men of the United States  
government and other institutions as-  
sert that there is no absolute abor-  
tion "cure," but all authorities agree  
that abortion can be controlled and  
the losses stopped.

No serum or vaccine has been found  
that gives any protection. These au-  
thorities all recommend that a thor-  
ough system of sanitation be followed  
on every farm, including treatment of  
bull, cows, calves and buildings. This  
is the only certain means of control-  
ling and preventing abortion—steril-  
ity, premature birth, retained after-  
birth in cows and white scours in  
calves. These all seem to be symp-  
toms showing the presence of abor-  
tion germs.

In the case of abortion itself, the  
germs inhabit and develop in the al-  
buminous matter in the tissue lining  
of the uterus and vagina, and here is  
where the fight for control must be  
efficiently and systematically waged.  
The germs produce an acid slime or  
discharge which eats the lining of the  
uterus and vagina and prevents heal-  
ing of the torn, raw membranes.

To correct this condition, B-K, the  
powerful antiseptic, used as a douche,  
kills the abortion germs, dissolves  
the albumin, removes the slime, neu-  
tralizes the acid, cleans the tissue and  
thereby puts the organs in a condition  
for natural healing.

B-K does not irritate, but is soothing  
and healing to torn membranes, and does  
not cause straining. Other substances  
such as carbolic acid, cresol, iodine, etc.,  
are more or less irritating, do not dis-  
solve albumins, but tend to coagulate or  
thicken them, thereby preventing de-  
struction of the germs and thorough  
cleansing of the infected tissues.

B-K is a powerful germ-killer. Its  
remarkable germ-killing strength is  
plainly marked and guaranteed on every  
package. B-K contains no poison, acid  
nor oil—it is clear and clean as water  
and as easy to use. B-K may be used  
freely in the drinking water, helping to  
destroy the germs which accumulate in  
the tanks; may also be used effectively  
to disinfect the bull and wash calves at  
birth.

B-K is handy. You have in one jug, all  
ready for use by simply mixing with  
water, your treatment for calves, cows  
and bulls; also the best disinfectant you  
can possibly have for general use—no  
special mixing of various ingredients—  
saves trouble and mistakes—insures  
promptness, accuracy, convenience and  
successful results.

Contagious abortion is being success-  
fully controlled in many herds by follow-  
ing our simple plan with B-K. One man  
writes: "I have been using B-K accord-  
ing to directions and the results have  
been very gratifying. My cows have ev-  
ery one passed the time for aborting and  
are calving all right in a natural way.  
I had lost \$1,500.00 on my cows and feel  
that B-K has cleaned up the trouble en-  
tirely."

B-K is sold by dairy and farm supply  
houses, druggists, general stores, etc.,  
everywhere. If your dealer does not have  
it, send us his name.

**Clean and Clear  
as Water**



Write for testimony  
of users and rea-  
sons why B-K is  
used so successfully  
in this work.  
Send for these use-  
ful booklets.

**Bulletin No. 52**  
Contagious Abortion—  
Prevention and Control

**Bulletin No. 136**  
Calf Scours—How to  
Save Every Calf

**Awarded Gold Medal at the Pan.-Pac. Expo.**  
**GENERAL LABORATORIES**  
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## Hembree Jersey Herd DISPERSION SALE

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October 10, 1917

One of Oregon's Most Famous Show and Production Jersey herds consisting of 46 bulls, cows and heifers sold at Public Auction as above stated. Individuals rich in blood of Champion Flying Fox through the great sire of show stock, Undulata Prince; Noble of Oaklands through his sons Noble Peer and Rochette's Noble; Oxford Lad through Stockwell the \$11,500 bull—An Outstanding herd which those who attended the 1915 and 1917 fairs at Sacramento will remember.

ORLAND, the place; OCTOBER 10 the time. Send today for sale catalog.

**C. P. HEMBREE**  
Owner  
MONMOUTH - OREGON

## Abortion In Cows and Mares

May be Prevented If

### HOOD FARM ABORTION REMEDY

Is given promptly and freely on the first sign of abortion. Hundreds of breeders have saved valuable animals with this Remedy. By its use, with Hood Farm Breeding Powder, Abortion has been stamped out of many herds when other remedies failed. Write for full information and prices. Mention this paper.

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From my herd of 75 registered Holsteins, can spare ten yearling heifers and heifer calves splendidly bred, closely related to 30 and 40 pound cows.

One bull calf, whose eight tested nearest dams averaged 31 pounds weekly butter record.

One service bull from 29 pound dam. 102 pounds milk one day. His two nearest dams through sire yearly record average 21,000 pounds milk and 812 pounds butter.

Write me for low prices and further information.

Frank Reed Sanders, Mesa, Ariz.

## El Dorado Holsteins

Headed by  
SEGIS PONTIAC DE KOL BURKE  
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Out of a 32.76-pound 4-year-old. His sire is a son of Riverside Sadie De Kol Burke, 32.29 pounds butter in 7 days. Herd officially tested for 7 and 30 days.

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Pure Bred Stock Sales a Specialty  
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ganization of farmers or dairymen, usually from 20 to 30 members, organized for the purpose of increasing their profits. The dues in the association are usually \$1.50 per cow per year.

The cow testing association takes the "guess" out of the dairy business, accounts for profits and losses, culls out the unprofitable cows, gives a record of each cow, means intelligent feeding and care, and causes a better community spirit among the dairymen and breeders.

A tester goes once a month to the homes of each dairyman belonging to the association, weighs and tests a sample of milk from each cow, and weighs the food which each cow consumes. The tester also advises the dairyman in the matter of food and care of his cows and the improvement of his herd.

In 90 per cent of the cases it is more profitable to grow the feed on your own farm than to purchase it. It may be necessary however, to purchase concentrates, such as cotton seed meal, gluten feeds, etc.

The essential points of a good dairy barn are good light, proper ventilation and sanitation.

Above all have a silo. Too much cannot be said of the importance of the silo in the dairy business. The silo prevents waste in feeding, enables the farmer to keep more stock, makes cheap milk, saves storage space; enables the farmer to utilize cheap roughage and insures succulent feed.

The one great essential to success in the dairy business is interest in the work and determination to win out. When we have an interest in the work we are determined to take advantage of the things which mean success. We should see that the stock is kept healthy and comfortable, that they receive the proper feed and water, and they are housed in clean and well ventilated stables. Cleanliness is essential to successful dairying. Utensils should be kept clean. We should use the Babcock test and belong to a cow testing association.

## Alfalfa

J. M. Bomberger Writes for California Cultivator  
Readers of the Wonder Plant and Its Culture

THE general shortage of alfalfa in all parts of the United States west of the Mississippi River is the direct cause of present hay values, and the prospects are for still higher prices during the next few years because the acreage of alfalfa will not be greatly increased so long as other field crops command war prices.

Such are the writer's conclusions

that there will be any general seeding of land to alfalfa, here or elsewhere, as long as summer grown crops remain at such attractive prices, there are many fields planted to such crops that are not profitable because the land is not adapted to their culture.

Much of this is adapted to alfalfa though, and because of the clean culture practiced all season such land is in ideal condition for fall alfalfa



Wealth in Alfalfa

On the ranch of Frank M. Wilkinson, Salt River Valley. Description of methods followed on this ranch was given in article by M. E. Bemis in Cultivator of August 11.

after four months of extensive traveling through the alfalfa growing sections of the Middle West, Northwest and Southwest.

I found that conditions in all of the territory named are similar to those in our own alfalfa growing sections of California, that a great many fields have been plowed during the last two years to make room for wheat, barley and other small cereals, corn cotton, beans, etc.

In eastern Nebraska and eastern Kansas the supply has been materially reduced because of winter-killing of the plants last winter.

While I have seen no figures regarding the decrease of the alfalfa acreage in California the past year it is very apparent that beans, corn and other summer crops occupy much land previously seeded to alfalfa. This too in spite of the fact that even at present market prices alfalfa is yielding more profit than most summer grown crops, and it is a permanent, sure crop while many of the others are highly speculative and uncertain.

While it does not seem probable

seeding if rain or irrigation is available between September 15 and November 15.

Fall seeded alfalfa, if not planted too late, secures a good start by spring, and I know of numerous cases where it has produced almost as heavily as old stands the first season.

A little more seed to the acre should be used in fall seeding so that the ground will be well occupied by alfalfa plants. This makes it more difficult for weeds to get a start in the spring.

Considering the market outlook for hay the decrease in acreage which is characteristic of all of the large alfalfa producing districts of the country and the further fact that alfalfa will produce more animal feed per acre than any other known forage crop, at a time when the entire world needs more meat animals and their products, it appears that the farmer who plants alfalfa this fall or next spring will enjoy prosperous times for the next five years.

The state fair is being held this week in Sacramento.

## Fair Dates

Stanislaus Live Stock Show and Exposition, Modesto, September 17-22.

Kings County Fair, Hanford, September 17-22.

Fresno District Fair, Fresno, September 25-29.

Napa County Fair, September 22-26.

Glenn County, Orland, September 26-30.

Antelope Valley Fair, Lancaster, September 26-29.

Kern County Agricultural Fair, Bakersfield, October 2-7.

Yolo County Fair, Woodland, October 4-6.

Riverside County Fair, Riverside, October 9-13.

Hemet-San Jacinto Fair, Hemet, October 16-19.

Coachella Valley Fair and Date Festival, Thermal, November 1-3.

Tulare County Citrus Fair, Visalia, November 16-24.

## CONTROL OF HOG TUBERCULOSIS

OFFICIAL figures show that nine per cent of the hogs slaughtered during 1916 establishments under federal meat inspection were

affected with tuberculosis in some degree. In certain dairying sections over 25 per cent had the disease. serious has hog tuberculosis become in some localities that buyers are avoiding certain regions known to be badly infected and some packers are buying subject to post-mortem inspection with the loss for tubercular hogs falling on the feeder. Other buyers who do not buy subject to post-mortem

inspection protect themselves offering a lower price for all hogs, which case the careful breeder suffers equally with the careless one.

The two principal ways of preventing hogs from becoming tubercular are by keeping them away from tubercular cattle, and by cooking or pasteurizing all skim milk and cooking all garbage before it is fed to hogs.

### A CHANGE OF BASE

"And now, Bella," said little Mary to her doll, "you must lay down for while and go to sleep."

"You should say 'lie down,' dear," put in little Mary's mother.

"Bella," said Mary impressively, "I'm going to lie you down, so do you cry."

"Lay you down," dear," came the second gentle correction.

Mary was much puzzled. Whenever she said, it seemed to be wrong. She declined to cope longer with the intricacies of the English language. "Bella," she announced, "I think you better sit up!"—Los Angeles Times

## Berkshire Hogs—Milking Shorthorn

Breeding Stock For Sale  
G. A. Murphy - Perkins, Co.



### WOOL AND MUTTON

In order to increase the wool and mutton supply of the country the sheep and wool bureau will endeavor to get an amendment through congress to the pending war revenue bill which provides a federal tax of \$1 per head on dogs. Such a law will yield up both revenue and dogs. Of the two the latter is more important. A buyer will be stationed at the different Missouri markets to bid on the breeding ewes and ewe lambs that otherwise would fall into the packers' hands, and send them to the country to farmers who will buy them.

We note in the "American Fertilizer" that Los Angeles will be headquarters for a \$150,000 sage brush potash plant, the organization of the company having been perfected. The plant will be located on the Mojave desert. It is said "The process of extracting potash from sagebrush is not entirely new and has been experimented with at various places. The process this company has adopted affords a higher percentage of results than ever obtained before. The price of potash at present justifies a large outlay of capital and it is not improbable that our plant will develop into twice the projected size. War or no war, the demand for potash for fertilization purposes will continue for a long period."

One of the problems in producing animals and animal products economically is the cost of protein feed. By protein feed is meant the feeds that supply a large per cent of protein. Usually a large amount of protein must be bought by dairymen and swine breeders because their facilities for producing these concentrates are rather limited. But farmers should produce as much of the protein feeds as possible, for they do not wish to buy any feed if it can be avoided.

Dairying to some farmers signifies dollars. To others it means drudgery. As a dependable line of farming that yields an attractive income each week or month, dairying is excelled by few branches of agriculture. If a farmer begins milking cows on good land the land will improve and the crop yields will increase. If he breaks into the business on a poor farm it will not be many years before the productivity of his fields will begin to spruce up.

## Veterinary

Answers in this column by Dr. Wm. Petrie, 2714 South Harvard Blvd., Los Angeles, are without charge. For immediate mail answer remit \$1.00. In writing questions give full symptoms or particulars of injury of animal. Unsigned communications receive no attention.

### Hard Milker

Is there any way of opening teats of a cow that milks hard? — Subscriber.

The opening in the teat can be enlarged by cutting or stretching the sphincter muscle that surrounds the opening. In cutting the muscle great care must be exercised or one is liable to cut too much and do more harm than good. It is better to stretch the opening by inserting an instrument that is made for that purpose. There are several different kinds that can be purchased from veterinary instrument manufacturers. Some are of the form of a small collar button. These can be inserted after milking and left until the next milking. The instruments are of different sizes and by using the small ones first and changing to the larger ones you can soon get the desired results. The instruments should be thoroughly cleaned every time before inserting them to avoid introducing any dirt that will irritate the parts and cause inflammation.

### When to Wean a Colt

Do you consider one time better than another to wean a colt? — Subscriber.

A colt should be weaned at four months. It should be fed a little grain on the side for some time before so the change from the mare's milk to dry feed will not come too suddenly. At four months it is best for the mare and colt to be separated. If the mare is giving much milk at the time you might milk her out once a day for a few days but that will usually adjust itself without any assistance.

### Cow Drying Up

I have a fine Holstein cow that I am feeding heavily on winter squash beside bran and beet pulp. I find that she is gradually decreasing in her milk. Can you tell if the squash is the cause?—Subscriber, Pacific Beach.

The squash probably has something to do with it. It is a very rich feed and should be fed sparingly. Some green corn fodder and other sloppy feed will probably bring her back all right.

### Barb Wire Cut

What can be done for a colt that was caught in a barb wire fence and cut on the front of the hind leg near the hock? The injury was deep enough to take out a good size piece of bone. The wound healed too rapidly and there is a bunch of flesh grown out about the size of a man's fist. The leg is still swollen.—Subscriber, Orland.

The tendon was probably cut and in healing it usually forms quite an enlargement. You can reduce it some by applying an ointment made of two ounces of tincture of iodine, one dram of iodine crystals and six ounces of lard oil or bacon fat. Mix. Apply once a day. To reduce the swelling of the leg feed laxative feed and put a teaspoon of nitrate of potash in the feed or water twice a day for a week.

### Melanotic Tumor

Following your advice earlier in the season I had a veterinarian remove a bunch from near the eye of one of my horses. He said it was a tumor that is common on gray horses but rarely found on dark colored horses. It was healing nicely but of late a small bunch has appeared in the corner of the wound and it is not healing so rapidly as it was. I have done a bit of surgical work myself but did not care to do this as it was so near the eye, but after seeing it done think I could do it myself. What shall I do with it now?—Subscriber, Santa Ynez.

It was a melanotic tumor and in removing it a little of the tissue was left and it started to grow again. It is made up of the coloring matter that goes to color the hair black and as a gray horse becomes nearer white the coloring matter may accumulate in a mass and form the black tumors. Cut it out yourself and burn out the wound with a red hot iron. That will probably stop the growth.

### Contagious Conjunctivitis

We have a ten months old calf whose eyes are affected something like a cataract. Water runs from them and the sight is affected. What can I do for it?—Subscriber, Nevada City.

This is a disease of the eyes that is contagious and is quite often seen in cattle and sometimes in hogs. It causes inflammation of the front covering of the eye (the conjunctiva). It

ter the suffering may be relieved and recovery hastened. They often become totally blind for a short time and are not able to find their feed. Also the light increases the pain and



### KORNDYKE RAGAPPLE MILLA

Korndyke Ragapple Milla 163749, is a little over two years old, having been born April 5, 1915. He is not only the brother of King Champion Ragapple, but carries 75 per cent of the same blood as this bull. His dam is Dam Fairview Milla Korndyke, who has a

record at one year 11 months and 12 days of milk 363.9 pounds, butter 15.755. She is a daughter of the great Pontiac Korndyke.

Korndyke Ragapple Milla will be sold at the auction sale at Kent, Washington, at the Carnation Stock Farm sales pavilion, October 3-4.

may affect part or the whole of a herd. Little can be done to stop it but by bathing the eyes once a day with warm water that contains one dram of copperas to the gallon of wa-

aggravates the trouble. They should be put into a darkened stable for a few days and fed succulent feed. They usually recover completely if cared for.

## Jerseys for Net Profits



You're in the dairy business for profit—the net profit that your herd has made you at the end of the year will determine the size of your bank account. Jerseys yield the largest returns from every ounce of feed—proved by tests at two great expositions. Jersey milk averages 5.3% butter fat, 9.1%



solids not fat—highest of all breeds. Buy a Jersey bull. Write the breeders advertised below for prices, pedigrees, etc.

The American Jersey Cattle Club, 356 West 23rd Street, New York City

### Young Jersey Bull

of excellent breeding at a fair price. Write for particulars to

**W. G. GURNETT**  
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FOR SALE

A fine straight one, bred right, priced right

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REGISTERED JERSEYS

Young bulls from proven dams in Register of Merit

**GUY H. MILLER**  
MODESTO, CAL.

ALL MY RECORDS are made under ordinary dairy conditions. The farmers cow is

### The Jersey

YOUNG BULLS FOR SALE

**C. D. HAYWORTH**  
MODESTO, CAL.

### Young Jersey Bulls

FOR SALE

One at the head of your herd will pay big dividends on his cost. Write to

**W. J. HACKETT**  
MODESTO, CAL.

### WHEN BUYING BULLS

Do you consider the dam's production?  
Do you value transmitting ability?  
Do you care if the bull's dam tests high in fat per cent?  
Do you like mostly white colored animals?  
Do you want something choice at a reasonable price?

If so, communicate with me at once, or visit my ranch and be satisfied. Herd sire: PRINCE RIVERSIDE WALKER, son of Prince Gelsche Walker, the greatest proven sire in the West, and whose dam made 808.82 pounds butter in one year and whose half sister made 1095.1 pounds butter in one year.

**W. J. HIGDON**

Tulare, California

# 150 Registered Holsteins

AT PUBLIC AUCTION

State Fair Grounds, Sacramento, October 30-31, 1917

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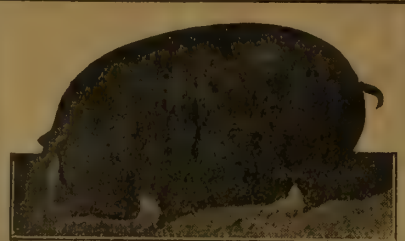
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Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain. 12 firsts, Junior Champion and Reserve Grand Champion Boar, Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

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Hanford, Kings County, Cal.



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when Feed is High

## CHESTERS

A Few Would Give You  
A Good Start

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Booking orders for a few bred sows, in service to Maplewoode Duke and Highwood Standard 91st.

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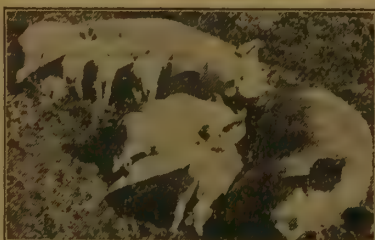
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on beef breeds of cattle in amounts from \$5000 up,  
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## MONTELENA HERD Large Yorkshires

Have large litters. Service boars of exceptional quality, in best breeding condition. They are strong, active, long, deep fellows, with big bone and splendid heart girth. Come and see them, or write to

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California Wonder

## KINGS COUNTY JACK RANCH

Breeders and dealers in American Jacks and Jennets.

Jacks and Jennets for sale at all times. Come and see them.

**John Burrell**

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Hanford, Kings County, Cal.

## Shorthorn Bulls and Heifers

We have twenty bulls and ten heifers for sale at present. This is the best lot that we have ever had for sale. Mostly two year olds, registered, tuberculin tested and all reds in excellent condition and splendid individuals. Write for prices or better come and see them.

**H. L. & E. H. Murphy**  
Six miles from Sacramento Perkins, Cal.

## Feeding Dairy Cows



THE feeding of a dairy cow should be governed by her capacity to produce milk. By keeping a daily record of each cow's production the skillful feeder soon finds that some cows in the herd respond to an increased allowance of feed and return a good profit on it, while others are limited in milk capacity and overfeeding them is unprofitable. Profitable feeding requires a thorough knowledge of the individual cows as well as of the values of feeds.

Under most circumstances the cow should be fed all the roughage that she will eat up clean, adjusting the grain ration to the milk production. Only when the cow tends to become overfat should the quantity of roughage be restricted.

A grain mixture should be fed in the proportion of one pound to each three pints or pounds of milk produced daily, except in the case of a cow producing a flow of 40 pounds or more, when the ration can be one pound to each 3½ or four pounds of milk. An even better rule is one pound of grain each day for every pound of butterfat produced by the cow during the week.

Feed all the cow will respond to in milk production. When she begins to put on flesh, cut down the grain.

For the most profitable milk production, the cow must be fed a balanced ration at the cheapest price such ration can be provided. By balanced ration is meant the combination of nutrients in such proportions and quantities as the cow requires to maintain her bodily functions and produce milk. These nutrients are classified as protein, carbohydrates, and fats. Protein is one of the prin-

cipal constituents of milk; fats and carbohydrates perform much the same functions, that is, produce energy and heat, and in the balancing of a ration are usually classed together. If the cow is given a ration containing an excess of either element the excess is liable to be wasted; hence the economical importance of a balanced ration.

Corn silage, corn stover, hay from the common grasses, straws of the various cereals, and cottonseed hulls may all be classed as low in protein content, while legume hays, such as alfalfa, the clovers, cowpeas, soy beans and oat and pea, are classed as roughage high in protein. Grain and concentrated feeds are the chief sources of protein, and the mixture should be made to fit the class in which the roughage belongs.

### Compounding a Grain Mixture

A few simple rules for making up a grain mixture are given briefly below:

Make up the mixture to fit the roughage available. With roughage entirely of the low protein class the grain should contain approximately from 18 to 22 per cent of protein, while with exclusively high protein roughage the grain ration need contain only about 13 to 16 per cent.

Select grains that will furnish the various constituents, especially protein, at the least cost, using home grown grains if possible.

Be sure that the mixture is light and bulky.

The mixture should be palatable.

See that the grain has the proper physiological effect upon the cow.

All these suggestions should be kept in mind in order to obtain the best possible combination of grains.

## Watch Pigs for Necrobacillosis



OUTBREAKS of necrobacillosis, a disease affecting pigs, are likely to occur in summer in insanitary pig pens. One form of the disease, commonly known as "sniffles," and another developing symptoms somewhat akin to hog cholera are the commonest expressions of this ailment which has many forms.

The form known as necrotic rhinitis may be recognized by lumps or swellings which appear on some part of the head or face of the pig, usually on the snout. Pigs so affected eat but little as a rule and sneeze repeatedly, often expelling a bloody material. Treatment for this form has to be applied in the early stage. It consists in opening the swelling, removing the pus, and applying in the opening made, with a syringe, either of these remedies: Glycerine 15 parts, carbolic acid one part; or nitric acid one part and water six parts; or a 50 per cent solution of iodine. If the swelling has become extensive treatment is of little value and the destruction of the animal is recommended.

Pigs affected with the second form of the disease, necrotic enteritis, show a lack of appetite, become unthrifty, emaciated and weak. The absence of red spots on the bellies and the normal or at times subnormal temperature of the animals differentiate this ailment from cholera. With this form, as in the first, the remedy must be used before the disease has made progress. Proper diet, physics, and intestinal antiseptics form the treatment recommended.

Frequent and thorough cleaning out of pens, troughs, feeding floors, sheds, and hog lots may prevent this ailment of pigs. A liberal quantity of lime should be applied in pens, houses and adjoining lots. Pigs, shotes, and older hogs should not be allowed to feed from the ground. Suitable feeding floors, preferably of concrete, and troughs of some non-absorbent material that can be cleaned out, washed, and disinfected frequently are recommended.

### HOW TO DOUBLE VALUE OF FEED

Many farmers are today feeding animals that return only 95 cents to \$1.00 or \$1.15 worth of marketable product for each dollar's worth of feed.

That is unpatriotic, declares the University of California, for it is just as essential to conserve animal foods as human foods, and by proper methods of breeding and feeding, steers, hogs, sheep, and dairy cows will return from \$1.50 to \$2.50 of marketable product for each dollar's worth of feed.

The University of California is going to cooperate with the nation's great food conservation movement by conducting short courses at the university farm at Davis from September 24 to November 2 in which the livestock growers of California will be given opportunity to learn the best modern methods of animal husbandry. In these short courses the latest results of research will be demonstrated as to how to produce better livestock at less cost, how to prune and spray fruit trees, so as to produce greater yield, how to cultivate the best advantage, and how to economize labor on the farm.



# The All Northwest Egg Laying Contest

By Helen Dow Whittaker

**W**E have been working in the All Northwest contest to answer the question "Is egg production practical patriotism in the Northwest?" In other words, "Does egg production pay?"

To answer the question we have taken six birds (five competing) from 186 flocks in the Northwest—from flocks much known and heralded from flocks unknown in out-of-the-way places; from trap-nest strains and Hoganized strains and strains that were frankly untested; from February hatches and May hatches and June hatches from hen brooders and room brooders; from 21 varieties and 11 states and provinces. We brought this average flock together at Pullman. We handled them on a strictly commercial basis (trap nesting excepted) not in individual pens of six birds specially catered to but in flocks of from 48 to 54. What you want to know is: "How has it paid?" "Can I make it pay on my chicken ranch?"

The birds in the contest have paid current feed and labor costs by the returns from market eggs and have left a margin over sufficient I think to take care of over-head charges. Just what that margin is I will tell you exactly when the contest is completed. I will give you some facts and figures to date but first I want to go on record as saying that I believe beyond a doubt there has been in the Northwest in the past year no boost for egg production so big, so vital and so far reaching to the fair minded poultryman as the feed and egg record summaries of the All Northwest Egg Laying Contest.

Now for some figures: In July 856 birds laid 11,067 eggs which sold at three cents each for \$332.01. It cost \$184.40 for feed and straw litter with corn bought at \$80 per ton, wheat at \$72, oats at \$50 and beefscrap at \$4.50 a sack and other things in proportion except straw for litter which is always cheap in the Palouse. The birds averaged not quite 13 eggs per bird and the feed cost per bird was 21½ cents. Any fair minded reader will admit I believe, that a good egg ration can be fed now at the rate of \$2.60 per bird per year and that 13 eggs per bird for July is not a phenomenal egg yield, yet on this basis 856 birds returned \$143.61 above feed and litter cost.

Further, let us look at some figures

for the average White Leghorn for the month of July. She laid 15 eggs which sold for 45 cents. Her feed bill was 20 cents leaving a profit of 25 cents. In other words 1000 of the average White Leghorn in the contest would have given just about 50 per cent egg yield for July. Their eggs at 36 cents per dozen would have sold for \$456.30. Their feed bill would have been \$202.30 and the return \$254.00 above feed cost.

If egg production at a profit needs a further justification here it is from contest reports from beginning to date. It has cost to feed the average White Leghorn from October 14, 1917 to August 1, 1918 approximately \$1.65 and she has returned in the nine and a half months since the contest started over and above her feed bill \$1.20.

I am anticipating that the next two and a half months will run the feed cost to about \$2.20 and judging from the present condition of the birds as to moult and rate of egg production the year's profit I think will run over \$1.50.

The second contest begins November 1, 1917. Forty-seven pens have been entered to date. The leading pen for the month of July was White Leghorns, which laid 115 eggs, an average of 23 eggs in 31 days.

Highest pens to date in each breed are:

## Minorcas

White Minorcas, B. O. Longsdorf;  
Black Minorcas, J. Bollenbacker, L.  
Boyd.

## Rocks

Barred Rock, Bliss and Bliss;  
White Rock, C. Daniels and Sons;  
Barred Rock, Oregon Agricultural  
College;

### R. 1. Reds

Auburn Poultry Farm, G. M. Brown,  
A. M. Williams.

## White Wyandottes

G. D. Adams, Rosecroft Farm, H.  
Ringhouse.

## Buff Orpingtons

J. Earhart, H. A. Hincks, J. A. Col-  
ling.

### Buff Leghorns

Rosecrest Poultry Farm, A. D. Larson, W. G. Moore.

## Brown Leghorns

Mrs. H. G. Moses, A. W. Wade, E.  
Corson.

feed mashes in the morning and grain at night. Practically every man feeds differently. Each feeds what is at hand and adapts himself to the circumstances.

"Mr. Brown thought that this war in the end would benefit the industry in many ways in this country. It would bring an end to many of the fads. People would study the business and proceed along saner lines. Each new condition that the country faces brings new problems, but we should meet and solve them in the same way as the English poultrymen have. The high prices of eggs are going to educate the people to the value of eggs, so that after the war the prices never will be as low again and the consumer will not object so much to paying reasonable prices for eggs in the future. The whole of Europe will have to practically be restocked with poultry at the close of this war, and they will have to depend largely on America for their breeding stock. He stated that in the present crisis and scarcity of food that England regarded her poultry highly, for it was proven that the hens of England were picking up \$45,000,000 worth of grubs and waste products from the soil which would absolutely be wasted and which no other animal would be able to use to turn into food.

"The only difference between the poultry business of today and a few years ago is this: Then feed was cheap and a poultryman could make a lot of mistakes and still stay in the business. He can make more money today than he did then, but he must know how. Feed prices are certain to go down some when the growing corn crop goes on the market. Eggs are certain to be higher than ever known. Many incubator companies are already booking more orders in advance than in any previous season. The worst is over, in my opinion, and those who have stock and eggs for market or breeding are certain to make some good money if the right methods are used in handling their poultry.

"There is no reason to be greatly alarmed or discouraged. American poultrymen certainly have as much backbone, as much patriotism, as much love for the business, and as much ability to adapt themselves and their methods to meet varying condi-

tions so as to solve poultry problems, as have the poultrymen of England or Canada. Don't sacrifice the Great American Hen. The facts and conditions don't justify it. Meet the issue with right methods and you are certain to find the business as profitable for the next 12 months as at any time in the past."

## Wonderful Egg Producer

Any poultry raiser can easily double his profits by doubling the egg production of his hens. A scientific tonic has been discovered that revitalizes the flock and makes hens work all the time. The tonic is called "More Eggs." Give your hens a few cents' worth of "More Eggs" and you will be amazed and delighted with results. A dollar's worth of "More Eggs" will double this year's production of eggs, so if you wish to try this great profit-maker write E. J. Reefer, poultry expert, 4266 Reefer Bldg., Kansas City, Mo., who will send you a season's supply of "More Eggs" Tonic for \$1.00 (prepaid). So confident is Mr. Reefer of the results that a million dollar bank guarantees if you are not absolutely satisfied your dollar will be returned on request and the "More Eggs" costs you nothing. Send a dollar today or ask Mr. Reefer for his Free poultry book that tells the experience of a man who has made a fortune out of poultry.



## The Best Feed on the Market

Has the highest protein at the lowest price, \$2.30 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or

**The Globe Mills, Los Angeles**



# Science Says Buttermilk



Bulletin 162, just issued by the Department of Agriculture, states that Buttermilk is the only preventative of White Diarrhoea. It has been proven that many birds apparently in perfect health have these germs in their system and that they are transmittable to their progeny. Science has discovered that the Lactic Acid Bacilli of Buttermilk kills these poison germs. Write to Berkeley for this important bulletin, free.

The Dry Buttermilk in GLOBE A-1 BUTTERMILK MASH contains 10,000 live Lactic Acid Bacteria to the cubic centimeter.

Globe A-1 Buttermilk Mash is a high protein feed, free from any filler.

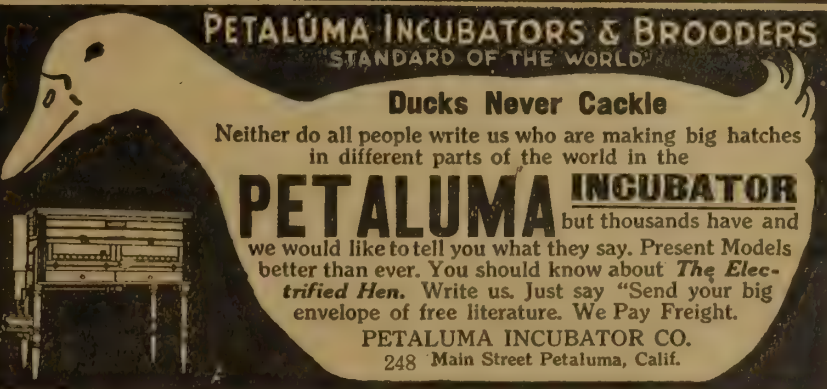
**Globe A-1 Buttermilk Mash** will prevent bowel troubles, keep your flock in glowing health, produce more eggs to market, better eggs to hatch.

Costs no more than non-buttermilk mash.

## GLOBE MILLS, Los Angeles

Write at once for valuable feeding information and sample, free.

# Buttermilk Dry Mash





## Classified Liners

The direct selling method from producer to consumer, and a clearing house for over \$1,000 readers, weekly.

Liner rates: Single insertions 3c per word; yearly contracts 2½c per word. 35c per issue minimum charge.

### TREES

Here is Your Opportunity to Secure All citrus trees. We offer several thousand 2-year-old lemons; Eureka and Villa Franca, also Washington navel; also several hundred Valencia on sweet root. We call these good trees and we know whereof we speak. **ALBERT JACKSON, Upland, Cal.**

By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator. The cost is only 1 cent per word per issue, with a minimum of 35 cents.

For Sale—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. **Randall Bros. Nursery Co., Whittier, Calif.**

Citrus Trees—All kinds, any quantity. **Butler's Morning Side Nursery, Laramie Park, Cal.**

Citrus Nurseries, **Murphy Oil Company, East Whittier, California.** Selected stock for sale; inspection invited.

### WANTED

Wanted—Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' work to right parties. Address **J. H. Yetter, Sales Department, 810 Santa Marina Building, 112 Market St. San Francisco, Cal.**

Wanted—Energetic young married man to take charge of herd of 140 registered Holsteins. Must be an all around practical dairyman, competent to do anything connected with a dairy and breeding establishment, including the making of weekly and yearly records. **Geo. A. Smith, Corcoran, California, Phone 241.**

Wanted to Purchase good second hand pipe and screwed well casing. I can furnish all sizes of pipe and casings in first class condition. Write for prices. **W. G. Leahy, 1002 Santa Fe Ave., Los Angeles.**

Wanted—A first class stock and dairy man to look after herd of Holstein cows. Good opening for a competent man. Address **Dairy, California Cultivator.**

Wanted—Position as head milkster and herdsmen. Familiar with testing, scientific feeding and treatment of disease. Good reference. **Box D, Cultivator.**

We Buy Weed Seeds—Mustard, rape, anise, bitter clover, etc. Send samples. Write us, stating quantity and price. **Globe Mills, Los Angeles.**

One of the Most perplexing problems to farmers and ranchers is that of help. A small liner ad in California Cultivator is the quickest and easiest means of securing farm help.

Weeds Wanted—Flowers, seeds, berries, leaves, barks, roots, 2c. to \$2.50 lb. **National Drug Co., Yakima, Wash.**

### POULTRY

White Leghorn Baby Chicks—We are hatching from 2 and 3 year old hens that are proven good layers. We did not sell our last year cocks but have them to breed from and are not forced to use young immature cocks. We are hatching a limited number of R. I. Reds. **Lyon Hatchery, Gardena, Cal.**

Day Old Chix—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. **Enoch Crews, Seabright, Calif.**

Poultry Wanted—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. **National Poultry Co., 607 E. Third St., Los Angeles, Cal.**

200-290 Egg Leghorn, Wyandottes, Rocks, Reds, Anconas, Orpington Pullets, Cockerels. Breeders. Hatching eggs, chicks for high-priced broilers. **C. Beeson, Pasadena, Cal.**

"Eastman's Bred-to-Lay" Barred Plymouth Rocks. Fall chicks, eggs, cockerels. **Fairmead Poultry Farm, Fairmead, Cal.**

### SEEDS AND PLANTS

Alfalfa Planters, fill your fall requirements NOW with GREEN-GOLD seed. High quality because of personal field selection. Low price because of direct dealing. Send for samples and prices. **Romberger Seed Co., Modesto, Cal.**

ORDER YOUR SEEDS NOW. If you are going to need any seeds for next season now is the time to render your orders. It may be impossible for you to buy what you need later. **V. A. Peterson Alfalfa Seed Co., Arbutus, Cal.**

ALFALFA SEED OUR SPECIALTY. Alfalfa Seed—Common variety. Hairy and Smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. **E. F. Sanguinetti, Yuma, Arizona.**

Rhubarb—\$112.00 from one acre. A crop every month of the year. Write to me and I will tell you how you can do as well. **J. M. Stone, Lodi, Cal., Route 4.**

Vetch Seed—N-w crop clean seed, \$4.00 per 100 lbs., on car. Alsike, Red Clover. Price on application. **Carlton Nursery Co., Carlton, Ore.**

20,000 Yellow Calla, Elliottiana; Pink Calla, Rhe-nani. Spotted Leaf White Calla. **William Richard Nursery, Santa Cruz, Cal.**

New Crop Alfalfa Seed now ready. Not the lowest in price, but high in quality. **Leo Turner, Yuma, Arizona.**

### PATENT ATTORNEYS

Patents that protect are secured through **The PACIFIC COAST PATENT AGENCY, INC., Savings & Loan Building, Stockton, California;** send for our little booklet on "PATENTS."

### HOGS

Registered Durocs—We offer for sale a choice service boar out of a daughter of Modesto King and by a grandson of Burk's Good E Nuff; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col; three young boars out of a great sow of Crimston Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. **Derryfield Farm, L. O. O. F. Building, Sacramento, Cal.**

Chester Whites, the Billiken Brand.—Your duty is to raise more hogs and increase the meat supply. The demand for pork exceeds the production. Get started with some of these Chesters: 3 bred sows farrowed in April, 1916, due to farrow in September, and October; 13 October gilts bred to farrow in October; 3 October boars ready for service. All first class in every respect and good enough to fit and show at the different fairs this fall. All are cholera immune and will be registered free. Write for price list and booklet. **C. B. Cunningham, Box C, Mills, California.**

Grape-Wild Farm Berkshires—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. **A. E. Humphrey, Escalon, San Joaquin Co., Cal.**

Large Yorkshires—Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. **Riverina Farms, Paradise Road, Modesto, Cal.**

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. **Rough's Greenfields, Arlington Sta., Riverside, Cal.**

Wanted—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

Duroc Jersey Boar for sale—Two years old, from Kansas City. \$50.00. Cost \$100.00 when pig. Excellent sire. Object, change of blood. Two Berkshire sows, one with pigs. **Jersey Queen Farm, San Jose, Cal.**

Duroc Jerseys—Our herd is noted for its sons and daughters of the breed's most popular champions, Grand Model and Great Wonder. **Peters, Lamson & Walker, Devore, San Bernardino County.**

Poland-Chinas—A number of magnificent young boars for sale, just ready for service. Don't overlook my offering of splendid sows at the Poland-China sale on October 17 at Hanford. **Will Bernstein, Hanford, California.**

Rancho Rubio Durocs.—Nothing to sell at present. A fine bunch of gilts and a few extra good service boars for this fall. **Elmer Lamb, Ceres, Cal.**

Big Type Durocs. Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. **F. M. Johnson, Napa, Cal.**

Most Money in Duroc-Jerseys. Bred sows and weanlings, either sex all the time. **Delta Farm and Live Stock Co., Colton, Cal.**

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. **A. L. Tubbs Co., Calistoga, Cal.**

Large Type Poland Chinas are prolific and profitable. Can furnish boars any age at reasonable price. **J. A. Crawshaw, Hanford, Calif.**

Large Type Poland-Chinas—Very best stock. Prices reasonable. Weanlings my specialty. **C. R. Hanna, Riverside, Cal.**

Model Herd Berkshires bred for size and quality. Weanlings and gilts. **J. L. Gish, Laws, Calif.**

Carruthers' Farm Berkshire Hogs. Our herd won Premier Exhibitor prize at the P. E. I. E. Exposition, Mayfield, Cal.

For Sale Poland-Chinas—Big type choice bred gilts from registered stock. **G. E. Sheldorf, Healdsburg, Cal.**

Poland-Chinas—A few good breeding boars. **S. F. Williams, Orland, Cal.**

### LIVE STOCK

Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. **Butte City Ranch, Box C, Butte City, Glenn Co., Cal.**

Registered Shires—Blackhawk Stock Ranch. Importers and Breeders. **Barton & Ward, Burlingame, Cal.**

### LUMBER

Lumber—Sash—Doors—Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. **A. R. W. Shingles 50c per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.**

### CATTLE

Pedigreed Bull Calves, Registered \$50.00, unregistered \$25.00. Service bulls \$75 and up. Good individuals from producers. Cows with yearly records at a profit. Tuberculin tested. Write or come and select. **Horses. N. H. Locke Co., Lockeford, Cal.**

D. O. Lively Stock Farm, Inc., 216 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. **Farm at Mayfield, Cal.**

Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. **Guy H. Miller, Route 1, Modesto, Cal.**

Registered Holsteins out of ARO Dams. Grandsons of Peterje Malt Ormsby, 25.55 pounds average 5.81. **Geo. Kounias, Modesto Farms, Modesto, Cal.**

Veramont Stock Farm Pure Bred Herefords. Location Plumas County. Ideal for stamina and vigor. Bulls for sale. Address **H. M. Barngrover, San Jose, Cal.**

Registered Holstein Bulls from high producing dams for sale at reasonable prices. Also a few choice females. **McAlister Sons, Chico, Cal.**

Thirty high-grade Holstein Cows and one registered Holstein bull. **Chas. Hubbard, Riverdale, Calif.**

Young Holstein Bulls, bred right, grown right, priced right. **Creamcup Herd, M. Holdridge, Modesto, Calif.**

Registered Jerseys—both sexes for sale. **J. R. Carhart, Fullerton, Calif.**

Holstein Bulls from record cows. Prices right. **A. M. Bibens, Modesto, Calif.**

### MACHINERY

WHY BUY NEW? SAVE HALF. Material guaranteed. It's second hand after used few times, but not worn out. Few engine snags; new 1½ h. Olds, cost \$75, for \$39; 6 Stearns, \$89; 8 Stover; 9 Foss, \$145; 12 White & Middleton, \$295; 34 Lambert, \$390. Many others.

NEW USED WOOD GALV. TANKS. All sizes, used heavy 1500 gal. galv. with metal covers, cost new \$75, for \$28; 100 gal. galv., \$7.50; 10,000 redwood, \$75. Fine, heavy 10,000 galvanized, \$135; 16,000 corrugated galv., \$195; 4x4x4 galv. tank, \$15; 25,000 gal. redwood with fine stand, \$135; 3000 redwood and stand, \$75.

WINDMILLS, SPECIALLY PRICED. 8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel; 12-ft. Samson and swell steel tower, \$88; 16-ft. aeromotor and tower, \$135. Many other snags.

PUMPS, CYLINDERS, PIPE. 2½-in. two-runner hor. centrifugal pump, \$50; 2-in. rotary, \$22; 5-in. two-stage Byron Jackson hor. cent. pump, \$150; 8-in. hor. cent., \$150, pumps 200 in. water; 7 vert. cent. Krough, deep well double-acting No. 2 Ames, \$145. 30 Ames double acting deep well pump, latest model, all steel frame, high efficiency, less power required, cost \$900, used less than year, our price \$295. Large Bulldozer jacks, \$68. Plunger pumps, \$2 up. 5x6 air compressor, \$29. 600 ft. 7-in. irrigating pipe, 35c. All kinds brass pump cylinders, rods, big pipe fittings of every description.

RANCH MACHINERY. Walking plows, \$2.75 up; harrows and cultivators, Fresno, \$9 to \$12; wheel barrows, \$2.50 up; 350 ft. ¾-in. cable 6c; water troughs, 4; bone grinder, \$6.50; feed mill; sprayer; mowers, buck rake, \$20; belting, all sizes; sundries too numerous to advertise. Material guaranteed as represented or money refunded. Down town office **DEMMITT CO., UPSTAIRS 120 N. Main, Yards, 816 Yale, Los Angeles. Phones 15191; Bdwy. 1984, Bdwy. 3650.**

Gasoline Engines, the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles.

For Sale—Exceptional Bargains. Gas engines, centrifugal pumps, concrete mixer, box nailing machine, friction clutch pulleys. Complete irrigation plants furnished. We also buy and sell all kinds of machinery for every purpose. Let us know what you have and what you want. We can meet your needs. Out of town machine work given special attention. **Commercial Iron Works, 497 Fifth Street, San Francisco.**

For Sale—Yuba Tractor No. 12 in A-1 condition. Plow and cultivator if wanted. Satisfactory reason given for selling. **P. O. Box 306, Colton.**

### MISCELLANEOUS

Famous Hairy Peruvian Alfalfa Seed—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. **E. F. Sanguinetti, Yuma, Arizona.**

Slacked Lime—Send for sample and information. Price right. Let me help you. **H. B. Matthews, 350 Woodberry Road Pasadena.**

Make Money writing short stories or articles. Good pay. Send for free information. **United Press Syndicate, Los Angeles.**

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. **Smith's Cash Store, 112 Clay St. San Francisco.**

For Sale, Small Hotel—On account of poor health. A bargain. **H. W. Luhrs, Chico, Cal.**

### FARM LANDS FOR SALE

NO PAYMENT DOWN. FARMERS ARE MAKING GOOD IN THE "PROJECT OF NO REGRETS" AT ORLAND, CAL. WATER FURNISHED BY UNCLE SAM. WE SUPPLY THE LAND AND ASK NO PAYMENT UNTIL YOU CAN MAKE SAME FROM CROPS. NO BETTER SOIL FOR ALFALFA, ALMONDS, OLIVES, ORANGES, LEMONS, ETC. WRITE US FOR U. S. GOVERNMENT REPORT AND BOOKLET "ORLAND FARMS." **F. D. BURR CO., 253 RUSS BLDG., 235 MONTGOMERY STREET, SAN FRANCISCO.**

Oregon, California Government Lands. Latest Green Booklet Free. Tell "How, Why, Where." Write **Joseph Clark, Sacramento.**

### HORTICULTURAL PRINTING

Catalogues—Good Printing. Specialists in preparing nursery, seed, poultry and live stock catalogues and all kinds of commercial printing. For prices and information address **WOLFFER PRINTING Co., 424 Wall St., Los Angeles.**

Our Printing Will Get Results for You. It will help to sell your goods and earn you profits. Send for samples and price list. **G. C. Gallagher, 441 Sacramento St., San Francisco.**

### RODENT EXTERMINATORS

United States Government Formula. Poisoned barley for killing rodents. In competition with other dealers we were awarded the contract to furnish this poison to the United States Government. How much do you need? Write for prices. **UNITED STATES SUPPLY COMPANY, MANUFACTURING CHEMISTS, NEW CALL BUILDING, San Francisco, Cal.**

### MARKET NOTES

Almond harvesting is in full swing in San Luis Obispo County, especially in the neighborhood of Paso Robles. The crop will run 60 to 70 per cent of normal. Navel orange growers are now hoping for more of a crop than it appeared they would secure soon after the June hot wave.

The apple crop of the northwestern states will aggregate, according to present estimates, 23,500 carloads.

The San Francisco market is now handling large quantities of raspberries, the third crop of the season. Twelve dollars per chest was realized for some of the earlier deliveries. The picking cost is becoming almost prohibitive, sometimes running to \$3.50 per chest. The strawberry picking price per chest is \$2.00, and for blackberries \$1.50.

Los Angeles flour prices recently dropped 40 cents per barrel.

Despite reports of the biggest bean crop ever, California stock is holding up to satisfactory prices and sales are being made continually. California's production of beans in 1915 was 3,868,000 bushels; in 1916, 4,175,000 bushels, and the estimate for this year is 7,268,000 bushels. Big eastern producing states are reporting a normal crop. (The above from United States Department of Agriculture reports.)

Weather which gave fears of early frosts in some of the corn states caused a flurry in the pit, but the "spell" has passed and promise of a big crop still remains.

War has cut the importations to the United States of some of the luxuries. In 1913 there were imported \$49,000,000 worth of diamonds, in 1915 the imports dropped to \$15,000,000. However, we are apparently "coming back," for the estimate is that this year's imports will aggregate \$48,500,000. Of laces and embroideries we imported over \$40,000,000 each year prior to the war; last year's imports aggregated \$27,800,000, while this year's estimates are \$22,800,000. Of fine arts before the war we imported \$50,000,000 annually, or thereabouts; the present year's imports will aggregate about \$22,000,000. Tobaccos, champagne, wines, etc. have all been reduced, but when it comes to perfumery we will receive more this year than any preceding year.

Eastern potato shippers are objecting to the increased carload minimum established to secure greater service from every car. The railroads are asking that the minimum now be placed at 60,000 pounds.

The committee of the International Apple Shippers' Association went direct from the national convention at Niagara for conference with Hoover to present the matter of storing, exporting and speculating in apples.

Shipments of dried fruits from California will exceed those of any preceding year.

Norway is open to receive shiploads of American apples if a way can be found to ship.

Italy manufactures ordinarily about 87,600 tons of tomato paste. This will be greatly decreased this year because of coal shortage.

### SOME BOOSTER

The Stockton Ad. Club has elected Arthur E. Kuehnmsted as its president for the coming year. Mr. Kuehnmsted is the publicity man for the Sperry Flour Company and writes the interesting and instructive advertisements of the Sperry people which have to do with poultry feeds. We may say that these advertisements which Mr. Kuehnmsted has written for the California Cultivator and other farm papers have resulted in boosting Sperry sales from 400 tons to about 1600 tons a month, or an increase of about 400 per cent. Do you read Sperry ads? Note how well they are written.



# Household Department

## PLAY THE GAME

Play the game! Play the game!  
For the game's tug-of-war  
And to win—that's the aim  
We are all fighting for.  
Hold 'em firm! Hold 'em fast!  
If we yield, ours the shame  
Till we triumph at last—  
Play the game! Play the game!

That was Washington's way;  
That was Marion's boast,  
And Decatur's that day  
Off the Barbary coast!  
Sound the tattoo of drums;  
Let the shrill life acclaim.  
Until victory comes,  
Play the game! Play the game!

Girdle up! Buckle to  
Never quail, never quit!  
Show 'em what we can do  
With our staunch Yankee grit!  
With a don't care a ——— slam  
For reward or for fame,  
Just for old Uncle Sam—  
Play the game! Play the game!  
—Clinton Scollard of the Vigilantes.

## SOME OF YANK'S TRICKS

Written for California Cultivator  
By Mrs. A. P. Robinson, Riverside

SOME years ago when we were living in Riverside, our youngest boy, who loved animals and especially dogs, came home leading a seven-months-old puppy, telling me one of the church ladies was leaving town and, wanting to get the doggie into a good home, gave it to him. Many a time before the youngster had brought some poor cur, pleading in vain to keep it, but this time he won the day, so was happy indeed.

Yank was naturally a smart dog, and he learned the following tricks himself, excepting to sit up, and that he always did without being told if he wanted anything. We had a triangle hanging under the big pepper tree near the back door. I always taught that to call the children home. Soon we noticed that whenever it was rung Yank would come running to us, wagging his tail and looking our faces as must as to say, "Here I am."

One day when the turkey gobblers got to fighting he ran up behind and gave one a good bump with his nose. Of course they stopped to look around, but soon began fighting again. Then he bumped them some more. So they quit.

He did love candy, or anything else that we ate. So when the boys saw him begging so for some they gave him a gumdrop, which, when he began to chew, stuck his teeth fast. It was more fun for the boys than the dog, but after that he always swallowed gumdrops whole.

Whenever we returned home we

always found him sitting in the driveway waiting for us. How glad he was when I would come out of the house wearing my sunbonnet! Then he knew he could go along to tend chickens or call on a neighbor, but it was amusing to see the doleful look on his face if I appeared dressed for church or to go shopping. Then he just knew he had to stay at home alone.

Yank had such a big bark for the size of him, and used to scare the small boys, and especially the little darkies who used sometimes to come and buy milk of us, I called him in the house one day, fearing he might snap at their bare legs, as he didn't like them. After that he would stand ready to dash around the corner as they were leaving, simply to get me to let him in the house.

He liked raw fish almost as much as a cat, and the fish man always gave him some when I stopped him to buy. One day I wondered what was the matter with Yank, and looking out saw the fish wagon coming. As soon as he could hear that fish horn he would try to attract my attention.

He knew the sound of the older boy's motorcycle and would dash down the street and around the corner to meet him. Then if son ran him a race, how he did cry and yelp because he couldn't keep up, with his short legs. He was such an affectionate little fellow, and if any of the family was away for months he was just as glad to see them. He lived to old age and we have missed him ever since he died.

## HOUSEHOLD QUERIES

### Canning Pimientos

Please give recipe for canning pimientos. Should they be allowed to turn red before picking—to can?—Subscriber, Victorville.

Pimientos are much richer and finer flavored if canned ripe; if caught by frost before ripening the green peppers are very good, however. We give several methods of canning.

Whole Peppers—After they ripen take out the seeds and the tough inner stringy portions and pour boiling water over the pods. Let them stand five minutes, then pack in the little half pint or quarter pint glass jars honey and various condiments come in. Fill with boiling water and



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ports; and, in fact, leads practically every contributing unit of supply to the firing line.

At such a time, when the government is straining at its task and every industry is loyally contributing its energy, this national courier is constantly being used to call up the reserves. It is at the base of every contributing activity.

The right of way must be given to the military for the direction of troops and to the government for the marshaling of endless supplies. To do this, and also make the telephone serve all other needs, both patriotic and private, all must economize.



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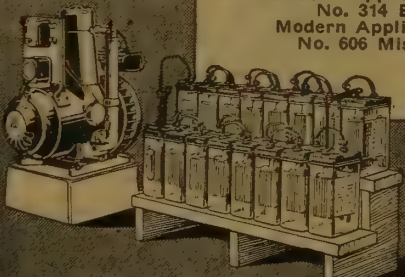
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sterilize an hour a day for three successive days, or give them five hours of continuous cooking on one day. So little is needed as an addition to cooked corn, cabbage, salad, sandwiches, etc., that the small jars are preferable. The peppers mold easily after being opened, and it is a waste to have large cans of them.

**Sterilization Method**—Cut open peppers, clean out seeds and cut in strips the size of a string bean. Pack into jars which have been rinsed in warm or cold water and cooled. Cover to the brim with salt water (one pound salt to seven gallons of water). Rinse cap in cold water and place on jar but do not clasp or screw down as the steam which forms inside must find an outlet. Place a board with holes in it or a few pieces of lath nailed crosswise in bottom of boiler. Set jars on this rack and pour water in, filling even with neck of jars. Heat gradually to a boil, then boil for three hours. "Boiling" does not mean "simmering." Count time from the time water begins to boil and keep boiling steadily for the full number of hours specified. Keep lid on boiler. Remove jars while boiling hot and set aside to cool. Do not set on a cold or wet surface or in a draft.

**Cold Water Process**—Cut off stem end of peppers and remove seeds. Parboil until tender but do not cook long enough to cause them to lose their shape. Pack in jars, pour cold water over them and seal. They are ready for use any time during the winter and may be used for stuffing with coldslaw, leftover meats, etc.

**Pickled Pimientos**—Wash one peck of red pimientos in cold water, cut a slice from the stem end of each and remove the seeds; then cut in thin strips by working around and around the peppers, using a pair of scissors. In this way the strips may be kept as long as one desires. Cover with boiling water; let stand three minutes, drain and plunge into ice water to cover, in which there is a large piece of ice. Again drain and pack solidly into pint glass jars. To one quart of vinegar add two cups of sugar; bring to the boiling point and let boil 15 minutes. Pour over the peppers to overflow the jars, adjust the covers, and store in a cold place.

### WINTER GOODIES

**I**t is a wise housekeeper who converts part of the summer fruits into winter "goodies" to fill the call for candy or "rush order" desserts. Fruit paste so common in the tropics is little known in America. Old time Virginia housekeepers put up peach and damson "leather," a similar product.

These pastes make a delightful dessert served with cream cheese or nuts. They can be used to garnish cakes, custards and platters of cold meat or eaten as a candy.

Fruit paste is made by boiling down fruit pulp, adding sugar and drying out slightly.

### Peach Paste

Cook peaches tender and rub through colander after draining off juice (this can be bottled and used as a fruit syrup). Allow half pound sugar to one pound fruit. Cook over slow fire till very thick. Pour paste out in thin sheet on flat dish or marble slab which has been rubbed over slightly with salad oil. Place in sun or draft for two days, covered to protect from insects. If should be dry enough not to be sticky, but by no means hard or leathery. Cut paste

in fancy figures or in any way desired, place on wax paper, sprinkle with granulated sugar, stand in draft two days more. To store, dip again in granulated sugar and pack in boxes or jars like candy with layers of paper between.

### Damson Plum Leather

"Damson leather," as it is known in Virginia, is made without straining, the skins left in, dried as above. The sheet of leather is then sprinkled with granulated sugar, rolled like jelly roll and cut into slices. Dry these slices in granulated sugar and pack in jar.

### Apple Conserve

One pound apples to three-quarter pound sugar and half pint water. Slice apples, quartered and peeled, in syrup till clear. Dry in sun till no longer sticky. Roll in granulated sugar and pack in tin boxes or glass jars, in layers with wax paper.

### Damson Plum Conserve

Four pounds plums, three pounds sugar, one pound shelled nuts, two oranges, one pound raisins. Remove the seeds and chop the plums. Peel the oranges and slice thinly one-half of the peel. Discard the other peel and the seeds. Mix chopped plums, orange pulp, sliced peel, sugar and raisins. Cook all together rapidly until bright and thick as jam. Add nuts five minutes before removing from the fire. Remove from fire, cool and pack into jars.

### Fancy Variations

These are only a few suggestions; there are endless varieties and combinations that can be worked out with these pastes. Use different fruits or pastes, dry partly and arrange in layers like layer cake. Or vary the layers by adding finely cut citron, candied peel or blanched nuts. With apple pastes different colorings and flavors can be used. Where fruit is abundant, fancy packages of these pastes might be put up for Christmas presents or church bazaars.

Onions can be placed in a fruit jar after being washed and the rubber cover placed on the jar; this will make the onions crisp and tender and they can be kept in the icebox without odor.

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# STERILIZATION OF MEATS IN JARS

By W. V. Cruess

**W**ING to the composition and texture of meat its sterilization is very difficult and, if not properly done, the consumption of the product may cause illness or death by ptomaine or botulinus poisoning. Great care therefore must be taken in preserving meat to render it safe to use. The most satisfactory method is to heat it for 40 to 60 minutes in a pressure cooker at 15 pounds pressure (249 degrees Fahrenheit). It may also be safely sterilized by heating to the boiling point of water (212 degrees) three times at intervals of 24 hours. Each heating should continue for at least one hour.

## Chicken and Rabbit

Boil in slightly salted water until the meat is tender. Strip the meat

from the bones and pack into jars with a highly seasoned tomato or other sauce. The addition of the sauce not only flavors the meat but also facilitates the penetration of the heat. Several ripe olives added to each jar will improve the flavor. Place the filled jars in the washboiler sterilizer with their covers on loosely. Heat the water to boiling for one hour. Then seal the jars by applying the clamps or screwing down the tops. On the following day, boil again for one hour without loosening the tops. Repeat this heating the third day and invert the jars while cooling. The time of heating should be counted after the water is boiling vigorously.

If solder top cans and a pressure cooker are used, proceed as follows: After the cans have been filled with the hot meat and sauce and the lids have been soldered on, place the cans in boiling water for ten minutes with the vent holes open. The vent hole is a small pinhole in the center of the lid. Seal this hole with a drop of solder and sterilize the cans for 60 minutes in the pressure cooker at 15 pounds steam pressure. The steam pressure cooker is not so suitable for glass jars, as without special skill and experience considerable breakage may result from its use.

## Other Meats

Other meats may be prepared for canning by boiling or frying or cooking in other ways and the cooked meat may be sterilized by either of the above methods. It is also possible to pack the meat into the cans with little or no cooking. In this case the sterilization is carried out in the same way.

## CHICAGO HOT

This is an excellent receipt. I am making a Cultivator cook book and as I wish to have this in print would be very glad if you could publish it.

One peck ripe tomatoes, peeled, chopped and drained, one cup chopped celery, one cup chopped onions, one cup grated horse radish, one red pepper chopped, one green pepper chopped, two cups brown sugar, one-half cup white mustard seed, six cups vinegar, one-half teaspoon each cloves, allspice, cinnamon, and nutmeg, mixing thoroughly. Bottle without cooking.—C. D. Spangenburg.

## HOMINY GRITS

Another from the food administration:

"You don't eat grits or rice?"

The Vermont woman shook her head.

"Well, what do you put your gravy on?" was the puzzled question of a Southern woman.

Food economists must answer this if meats stay at present prices. For average Americans will have to learn to use meats as the Italians do, largely for the flavor. Then the something cheap to put your gravy on is necessary. Grits make an ideal "something," and moreover is a corn product and so a patriotic food.

In the far South hominy grits is a breakfast dish, a dinner dish, or a supper dish. It goes well and quickly with bacon or hash for breakfast. Sometimes a Southern child will stir into his grits a soft-boiled egg, making a complete meal. Usually it is eaten with gravy or butter.

## To Cook Hominy Grits

Wash thoroughly. Allow three cups of water to one cup of hominy. Salt water to taste. Cook in single boiler until hominy begins to thicken. Then set on back of stove or on asbestos mat and cook slowly until done. Hom-

iny needs about an hour's cooking. It burns very easily. It is much improved by beating in half a cup of milk just before dishing up. The pan in which hominy has been cooked should be put to soak in cold water at once. If hot hominy is poured into a deep dish it can be turned out when cold, cut in slices and browned under the blazer or fried like mush. Fried hominy is usually served with duck. It is also an appreciated addition for breakfast.

## Baked Hominy Grits

Cook one cup of hominy as directed above. While hot stir in one well beaten egg and enough milk to make a very thick batter, and a little bacon fat. Bake in deep dish until firmly set. Time depends on depth of dish. Serve from dish with spoon. Baked hominy, toast and bacon is a most satisfactory breakfast. It may be used as a dinner dish like a vegetable. Baked hominy is liked by all who try it.

Those who wish to try out hominy are advised not to serve it as a breakfast food with milk and sugar. It is too starchy to be satisfactory; it needs the flavor of the meat or egg. Serving it as a breakfast food will only prejudice the family against a really valuable food product.

## FASHION NOTES

Written for California Cultivator



**S**ERGE dresses are very much in evidence in the new fall clothes shown in the windows. Blacks and blues are the more popular shades, for simplicity is the keynote of all the season's styles—in keeping with our desire, and our necessity, to economize. An almost universally becoming feature of many of these serge gowns is a bias fold, about 2½ inches wide which forms the collar and is brought down to the waist in surplice effect. Something of the same idea is shown in the collars on waist 8509 and dress 8511 in the patterns illustrated this week. These are shaped collars, however.

The dress 8518 is not so very different from a glorified bungalow apron—than which no other style ever conceived has made more universal appeal. It is altogether charming in a warm wool gown with contrasting collar and cuffs of silk or satin or plain colored wool. White or buff are striking and dainty with dark dress material. The skirt of dress 8511 is not altogether new, but is very much seen in new models. It is soft and graceful in effect.

Separate skirts are generally more simple than the flamboyant "sport" skirt of the spring and summer. The model pictured in 8504 is a good example.

A new and charming dress for the small girl is illustrated in 8481. I saw recently an exquisite combination of soft brown wool with buff guimpe on a dark-haired, rosy-cheeked mite. Red or blue with white guimpe would be equally pretty and satisfactory. The guimpe for a child's dress is eminently satisfactory and always attractive. A tiny bit of embroidery on the front is an added attraction. An outline of feather stitching seems especially adapted to children's clothes.

If the letters on flour, sugar or salt sacks are sprinkled with kerosene the night before washing, a boiling in strong soapsuds is all that is necessary to entirely remove them.

In spicing pickles be careful that no one flavor predominates. Proportion them so that the result will be a perfect blend.

# The Cultivator Patterns



8509—Ladies' Waist. Cut in sizes 36 to 44 inches bust measure. The sleeves may be long or short.

8481—Girls' Empire Dress. Cut in sizes 4, 6, 8, 10 and 12 years. The dress is to be slipped on over the head.

8518—Ladies' Dress. Cut in sizes 34 to 42 inches bust measure. Long sleeves may be made with or without the deep cuffs.

7802—Ladies' Waist. Cut in sizes 36 to 44 inches bust measure. This is very good style for plain and figured material.

8495—Children's Rompers. Cut in one size, suitable for 1 and 2 years. The rompers are to be slipped on over the head.

8511—Ladies' Dress. Cut in sizes 36 to 42 inches bust measure. The dress is draped at the sides and has a four piece skirt.

8504—Ladies' Skirt. Cut in sizes 24 to 32 inches waist measure. The skirt is cut in two pieces.

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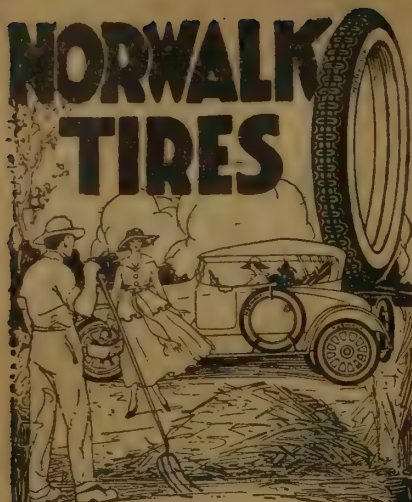
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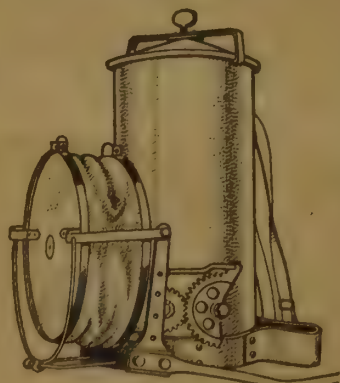
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# September Crop Report

Washington, D. C., September 7, 1917.—A summary of the September crop report for California and the United States, as compiled by the bureau of crop estimates:

### Corn

California: September 1 forecast, 2,550,000 bushels; production last year (December estimate), 2,048,000 bushels.

United States: September 1 forecast, 3,250,000,000 bushels; production last year (December estimate), 2,583,241,000 bushels.

### Wheat

California: September 1 forecast, 6,530,000 bushels; production last year (December estimate), 5,600,000 bushels.

United States: September 1 forecast, 669,000,000 bushels; production last year (December estimate), 639,886,000 bushels.

### Oats

California: September 1 forecast, 6,930,000 bushels; production last year (December estimate), 6,500,000 bushels.

United States: September 1 forecast, 1,530,000,000 bushels; production last year (December estimate), 1,251,992,000 bushels.

### Barley

California: September 1 forecast, 37,600,000 bushels; production last year (December estimate), 33,320,000 bushels.

United States: September 1 forecast, 204,000,000 bushels; production last year (December estimate), 180,927,000 bushels.

### Rice

California: September 1 forecast, 5,230,000 bushels; production last year (December estimate), 3,263,000 bushels.

United States: September 1 forecast, 32,200,000 bushels; production last year (December estimate), 40,702,000 bushels.

### Potatoes

California: September 1 forecast, 13,600,000 bushels; production last year (December estimate), 10,575,000 bushels.

United States: September 1 forecast, 462,000,000 bushels; production last year (December estimate), 285,437,000 bushels.

### Sweet Potatoes

California: September 1 forecast, 928,000 bushels; production last year (December estimate), 960,000 bushels.

United States: September 1 forecast, 88,200,000 bushels; production last year (December estimate), 70,955,000 bushels.

### Hay

California: Preliminary estimate, 4,630,000 tons; production last year (December estimate), 4,615,000 tons.

United States: Preliminary estimates, 92,000,000 tons; production last year (December estimate), 109,786,000 tons.

### Apples (Agricultural Crop)

California: September 1 forecast, 1,860,000 barrels of 3 bushels; production last year (December estimate), 1,918,000 barrels.

United States: September 1 forecast, 59,100,000 barrels of 3 bushels; production last year (December estimate), 67,415,000 barrels.

### Peaches

California: Estimated production

1917, 10,190,000 bushels; production last year (December estimate), 8,808,000 bushels.

United States: Estimated production 1917, 42,600,000 bushels; production last year (December estimate), 36,939,000 bushels.

### Cotton

California: August 25 forecast, 56,000 bales; production last year (Census), 43,620 bales.

United States: August 25 forecast, 12,500,000 bales; production last year (Census), 11,449,930 bales.

### Sugar Beets

California: September 1 forecast, 1,770,000 tons; production last year



Tall Enough for Shade

F. W. Waite, horticultural commissioner of Imperial County, embracing two Sudan plants. This forage crop makes heavy yields in Imperial Valley.

(December estimate), 1,463,000 tons.

United States: September 1 forecast, 7,940,000 tons; production last year (December estimate), 5,920,000 tons.

### Beans

California: September 1 forecast, 6,399,000 bushels; production last year (December estimate), 4,175,000 bushels.

United States: September 1 forecast, 20,000,000 bushels; production last year (December estimate), 8,846,000 bushels.

### Oranges

California: September 1 condition 50, compared with the ten-year average of 88.

United States: September 1 condition 49.7, compared with the ten-year average of 86.0.

### Lemons

California: September 1 condition 55, compared with the ten-year average of 88.

### Prunes

California: September 1 condition 95, compared with the six-year average of 77.

### Almonds

California: September 1 condition 65, compared with the six-year average of 75.

### Olives

California: September 1 condition 67, compared with the six-year average of 84.

### Walnuts

California: September 1 condition 80, compared with the six-year average of 83.

### Hops

California: September 1 forecast — pounds; production last year (December estimate), 22,200,000 pounds.

United States: September 1 forecast, — pounds; production last year (December estimate), 50,537,000 pounds.

### Prices

The first price given below is the average on September 1 this year and the second the average on September 1 last year.

California: Wheat, 212 and 111 cents per bushel. Corn, 175 and 100 Oats, 84 and 53. Potatoes, 150 and 122. Hay, \$15.70 and \$12.00 per ton. Cotton — and — cents per pound. Eggs, 40 and 31 cents per dozen.

United States: Wheat, 209.7 and 131.2 cents per bushel. Corn, 175.1 and 83.6 cents. Oats, 61.7 and 43.1 cents. Potatoes, 139.1 and 109.3. Hay \$13.68 and \$10.42 per ton. Cotton 23.4 and 14.6 cents per pound. Eggs 33.2 and 23.3 cents per dozen.

### CROP REPORT

Under date of September 8 the State Commission of Horticulture reports condition of the fruit crops in all counties of the state:

#### Almonds

San Joaquin and Stanislaus Counties show a condition of 100 per cent. Butte which is normally one of the heaviest producers of almonds in the state will have only 15 per cent of crop. Contra Costa, which is also heavy producer, shows a 70 per cent crop. Yolo 50 per cent, Sutter 65 per cent, Sacramento, a half crop, Riverside 25 per cent.

#### Apples

Kern, Lake, Madera, Mendocino, Napa, Riverside, Sacramento, San Benito, Santa Barbara, Santa Cruz and Sutter Counties all report a full crop. Monterey will have three-fourths of a crop, Sonoma 90 per cent.

#### Figs

There is a good crop of figs practically all over the state, Butte, Colusa, Madera, Merced and Tulare Counties showing a 100 per cent crop, while Stanislaus reporting a 110 per cent crop. Fresno County, which produces more than half the figs of the state reports a 90 per cent crop.

#### Peaches

Fresno County will have nearly normal crop of peaches. She reports a 90 per cent yield. Contra Costa, San Benito, San Bernardino, San Diego, San Joaquin, Sacramento, Colusa, Los Angeles, Merced, Napa report a 100 per cent crop; Madera 100 per cent, Fresno, which produces nearly 30 per cent of the peaches of the state, reports a 90 per cent crop. Placer County will have a 70 per cent crop. Tulare will have 95 per cent, as will Kings.

#### Pears

In pears Sacramento County, which is the largest producer in the state will have 15 per cent above normal yield. The following counties report 100 per cent: Colusa, Contra Costa, Kern, Lake, Mendocino, Nevada, San Benito, San Diego, Santa Barbara, Stanislaus, Sutter, and Yuba.

#### Plums

Plums are harvested in many of the counties. Placer, the largest producer in the state, reports a small yield only 35 per cent of normal.

#### Prunes

Three counties report yields above normal, Contra Costa and Napa 100 per cent, Tulare 105. Kern, Kings, Lake, Mendocino, Modoc, Riverside, San Benito, San Joaquin, Stanislaus, Sutter, report full crops. Santa Clara will have only three-fourths of a crop. Sonoma about the same.

#### Olives

Butte County's olive crop will be 100 per cent of normal. Los Angeles reports only a quarter crop, as do Riverside, Tehama 40 per cent; Tulare County 65; San Bernardino 50; San Diego 40; Sacramento 50 per cent. Fresno, Glenn, Merced report full crop.

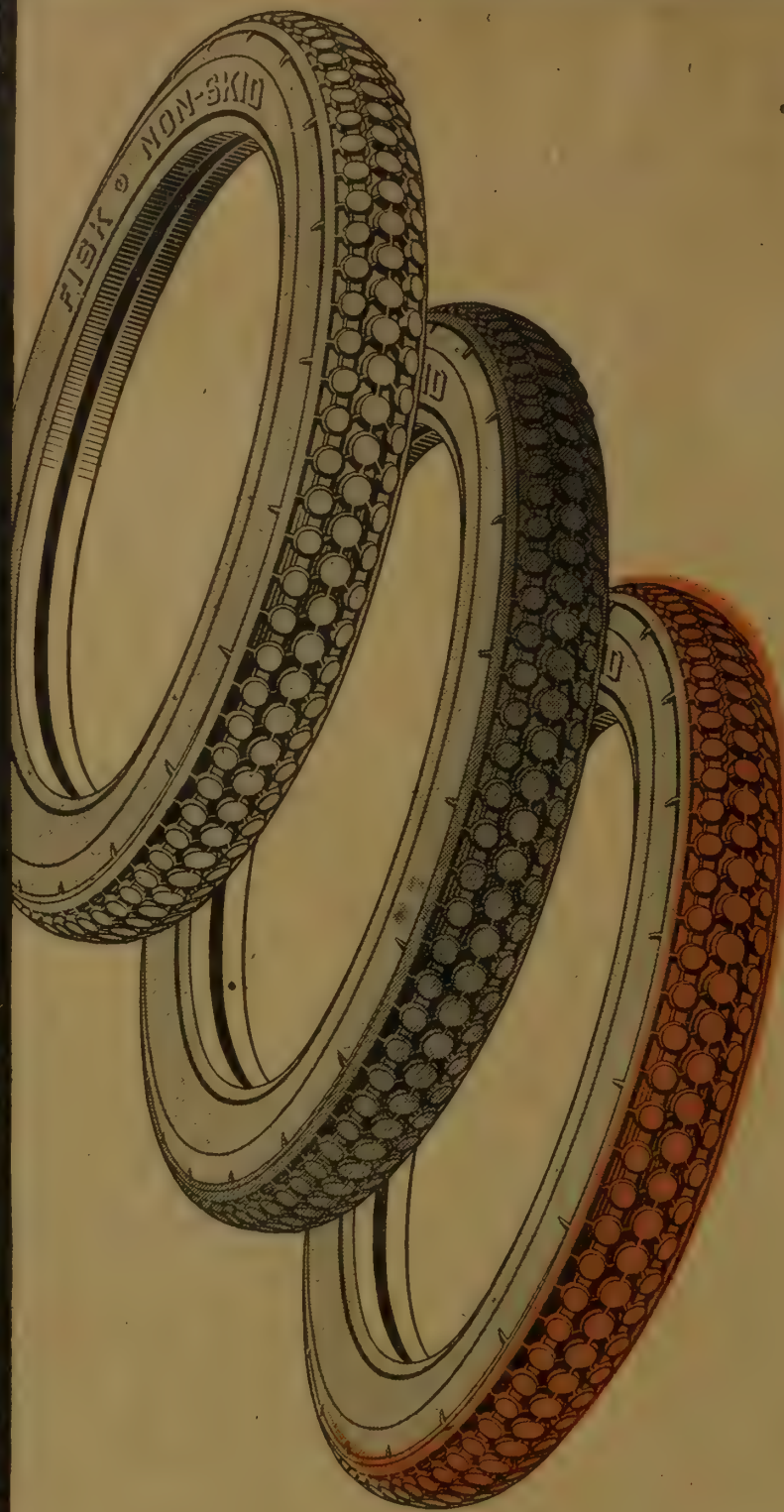
#### Walnuts

Orange County will have 70 per cent of a crop, as will Los Angeles, Alameda, Colusa, Contra Costa, San Benito, Santa Barbara and Stanislaus. Counties report yield up to normal. Ventura County reports a three-fourths crop, Yolo and Riverside 100 per cent.





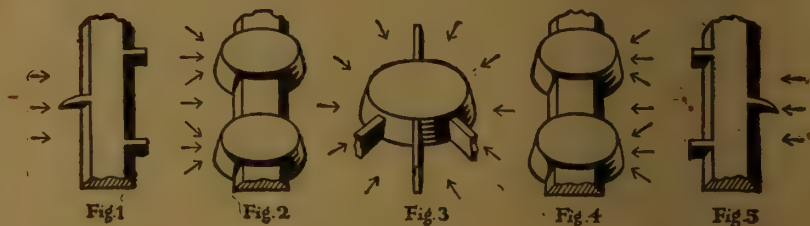




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**ADDITIONAL SAFETY** against side slipping is supplied by a rib of rubber extending around the whole tread, on both sides. Fisk Non-Skids are the only automobile tires that furnish such complete protection.

This graphic illustration explains Fisk Non-Skid features—protection from every direction.



**Fig. 1** is the outside rib that makes an uninterrupted counter against direct side slipping or skidding—**Fig. 5** is the same protection on the other side of the tread.

**Fig. 2** is the outside row of buttons connected by a second rib of solid rubber. The buttons, which are slightly higher than the connecting rib, offer perfect resistance against skidding and because they grip the road so firmly, make the pull forward in soft ground ever so much

more positive and certain—**Fig. 4** has these identical qualities, but from the opposite directions.

**Fig. 3** is the master button around which the Fisk Non-Skid tread is constructed. It supplies resistance against slipping in any direction—no matter which way there is a tendency to skid there is always a flat resisting surface to prevent that skidding, and to assist the sure forward movement of the wheel.

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the handsome RED TOP,  
Tire De Luxe



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# FISK Non-Skid TIRES



CA

# CALIFORNIA CULTIVATOR

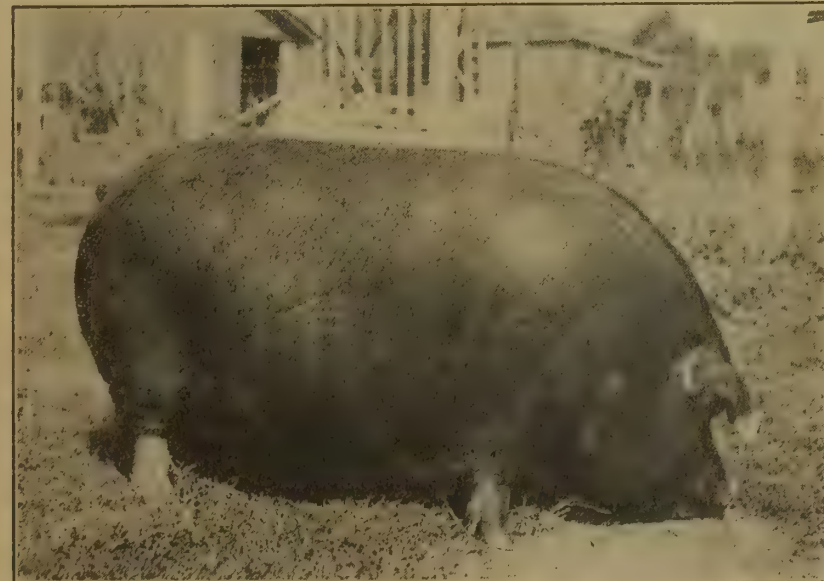
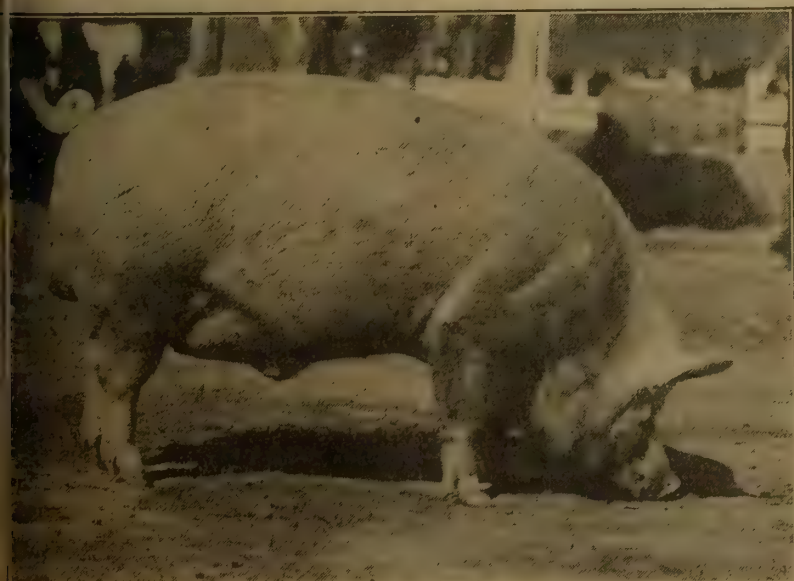
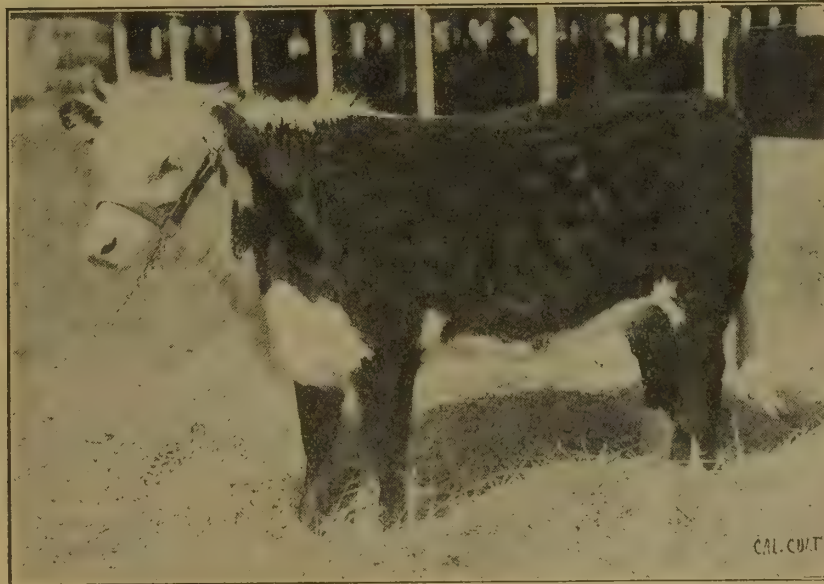
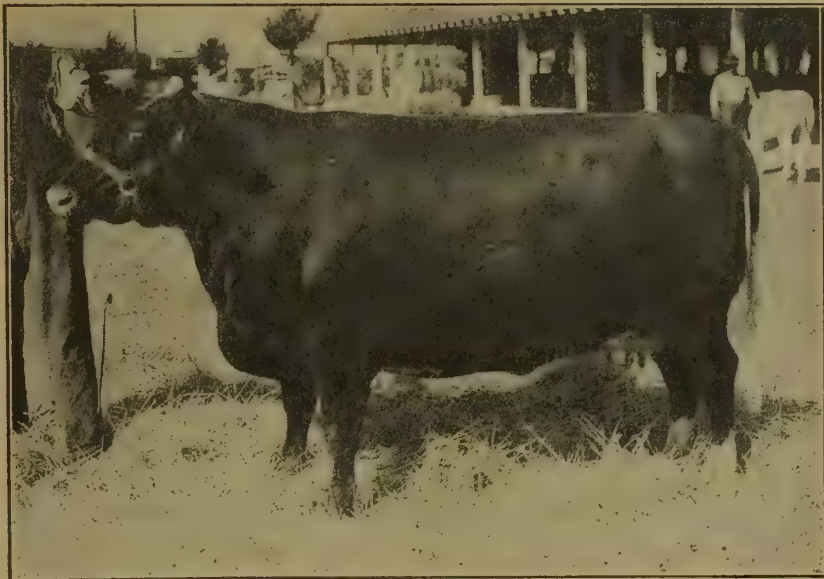
*THE LIVESTOCK and DAIRY JOURNAL* Combined with **CALIFORNIA CULTIVATOR**

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

September 22, 1917

SAN FRANCISCO



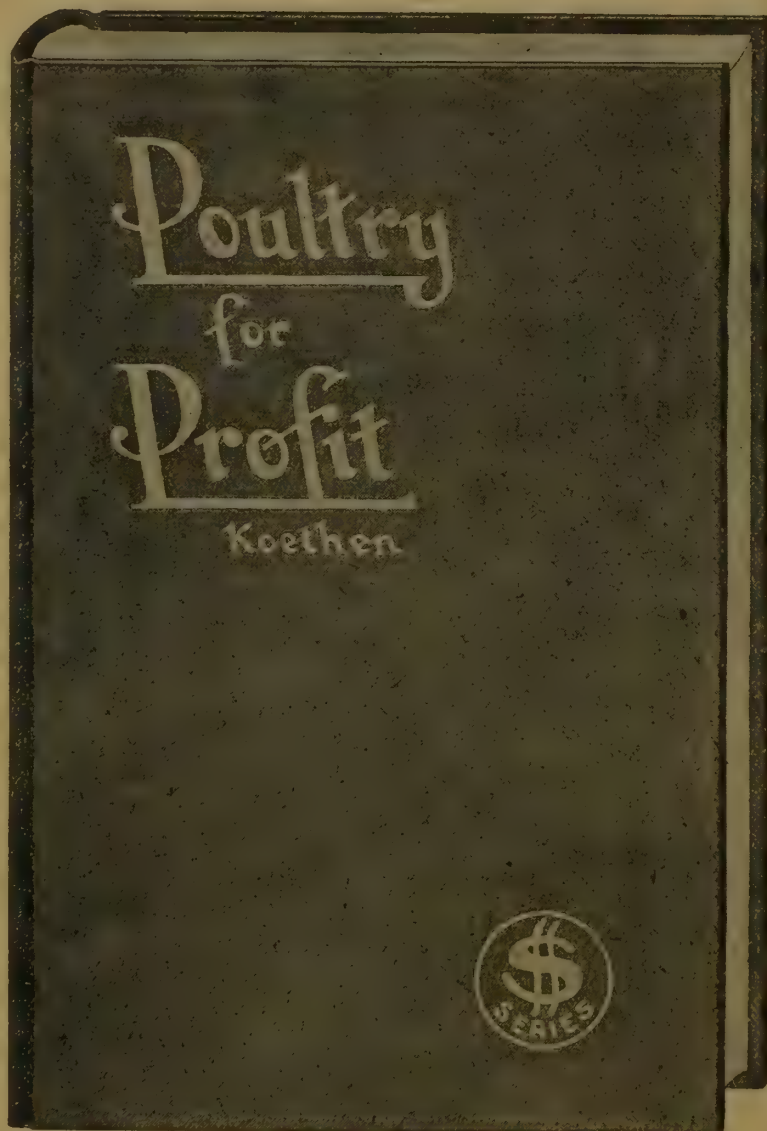
Some Champions at the California State Fair. See Article on Page 299



the Cultivator Poultry Book

# Poultry for Profit

by  
Jean A. Koethen



## PACIFIC POULTRYCRAFT SAYS:

A brand new book on poultry published by that old reliable Cultivator Publishing Co., Los Angeles. The author, Jean A. Koethen, has really written a poultry book worth while. The different subjects are treated with a directness that is refreshing, after reading so many books that say so much and mean so little. The book is intended for the beginner and farmer, but we commend it most heartily to anyone interested in poultry; whether for pleasure or profit; it is full of good things from cover to cover.

## THE LOS ANGELES TIMES SAYS:

The author of this manual has covered the subject fully, giving the salient features and practices of an enlightened poultry culture as it applies to California conditions, based largely on personal experiences, and intelligent compilations from recognized authorities.

## THE RIVERSIDE PRESS SAYS:

The Press is in receipt of a copy of this work, called "Poultry for Profit," and has no hesitation in commending it to either the "backlotter" who keeps a few chicks for his own pleasure, to the fancier who works to the "standard," and to the commercial poultryman who makes a business of poultry culture. Before its publication, the manuscript of "Poultry for Profit" was submitted to practical poultrymen, to experts and simple poultry enthusiasts, and all agreed that it was more comprehensive, more readable and vastly more helpful than any similar poultry book yet published. It covers the widest range, discussing breeds, feeds, diseases, housing, marketing and answers the thousand and one questions that even the expert poultryman sometimes has to ask and the amateur is ever asking.

## THE PORTLAND OREGONIAN SAYS:

The Weekly Oregonian takes pleasure in recommending this book to its readers, for it is "the right stuff," told in the right way by the right woman.

## "Poultry for Profit"

Gives more practical knowledge of every branch of the poultry business in a more concise and simple manner than any similar book published. With the knowledge gained by a study of this work experience in the poultry business is not as necessary. Through its guidance obstacles are overcome before it is too late.

## An outline of its valuable information—

Making a Beginning	Housing and Yarding	Incubation
Brooding	Feeding	Breeding
Marketing	Sanitation and Hygiene	Fixtures, Conveniences
Diseases and Vices	Ducks and Geese	Turkeys

The book is 5½x8 inches and contains 12 chapters, with over 225 pages of text and 18 pages of illustrations, printed on eggshell book, binding full cloth vellum de luxe, at the price of one dollar postpaid.

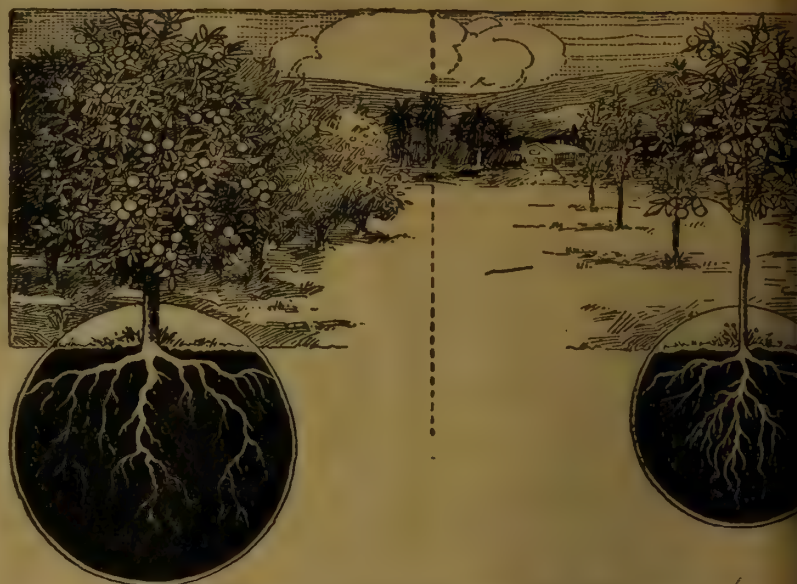
\$1.00 Postpaid to any address.

\$1.75 with the California Cultivator, weekly, one year.

**The Cultivator Publishing Co., Inc.**

115-117 N. Broadway

Los Angeles, Cal.



## Five Years After

Five years ago these two orchards were planted. At that time there was no difference between them—except that the trees on the left were planted in holes blasted with Hercules Dynamite while the trees on the right were planted in holes dug with a spade.

And today—what a difference. The orchard planted with the aid of Hercules Dynamite is producing a full crop of splendid fruit—its second crop by the way. The other are bearing for the first time and producing inferior fruit at that. It pays to plant

## HERCULES DYNAMITE

The difference between the growth and yield of a tree planted in a dynamited hole and one planted in a spade dug hole is almost unbelievable.

During the first year alone the development of the former will be almost twice that of the latter. When the trees begin to bear, the yield of the one which has received the benefits of dynamite is much greater than that of the other. Its fruit is larger and of a better flavor.

Whenever you plant trees always use Hercules Dynamite.

Write today for the 64 page book, "Progressive Cultivation". It tells how to plant trees with Hercules Dynamite, also many other uses for dynamite on the farm. It is sent free on request. The coupon below is ready for your name and address.

## HERCULES POWDER CO.

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## SECOND ANNUAL Napa County Fair

will be held at Napa

September 22, 23, 24, 25, 26

GRAND LIVE STOCK EXHIBIT  
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**BIG NAPA COUNTY FAIR**

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# California Cultivator

XLIX No. 12

LOS ANGELES: September 22, 1917

One Dollar Yearly

## State Fair Crowds Exceed Former Years

Almost Every Day Gets Record Attendance. Partial List of Awards. Items of Interest from Stock, Machinery and Implement and Horticultural Exhibits

Prize winners, champions, on the cover page and on other pages are only a few of the fine exhibits. Our pages are not extensive enough to admit every prize winner. Dozens of others have been photographed and will find place in later issues. Those shown on cover are: Upper left, a champion Holstein exhibited by the Bridgford Company. Middle picture on left shows B. E. Nixon holding senior and grand champion Guernsey bull, Ricardo of Edgemoor. Upper right picture is Hopland Lass, senior and grand champion Shorthorn of Hopland Stock Farm. Middle: right, Lady Tintinger, junior and reserve grand champion heifer calf exhibited by J. A. Bunting. The large Yorkshire in lower left corner is Riverina Paddie, first aged boar of A. D. McCarty. The Poland-China at lower right is King's Rosebud, grand champion sow of Wm. Bernstein.

ed thousands filled the enclosure and even the race track. That day called for the use of trucks to haul off the gate money, for people came to be thrilled by the instant destruction of that which took great ability and months to construct.

Notwithstanding, all folks do not go because of the thrills and the side shows. Many a careful observer took from Sacramento last Saturday night information which will mean much to himself and to the state.

Amongst the livestock judges were

judge hesitate long before the blue was placed.

The livestock notes by livestock contributors and the awards which are published, so far as they could be secured and space could be given, are best proofs of merit.

I will take a few moments in the horticultural "building." The main building on the grounds, the old horticultural building, was burned during the last year's fair. But in its place a number of tents and frame structures covered approximately the same space. The outward appearance of



Dairy Prize Winners

top to bottom: Argie's Prince 1st prize junior yearling Guernsey, A. J. Welch. King Segis Al-Prilly 192705, 1st senior yearling grand champion Holstein bull, and Co. Jolly Senator Raleigh junior and reserve grand champion Guernsey bull, J. B. and J. E. Thorp. Beauties at the state fair.



Every one a Blue Ribbon Winner

A string of drafters from stables of Easton and Ward.



Pigs as is Pigs

From top to bottom: Duroc-Jersey, 1st senior and grand champion boar, J. M. DeVilbiss. Duroc-Jersey, King's Lady 3rd, junior and reserve grand champion sow, F. M. Johnson. Berkshire, 1st in junior pig class and reserve junior champion, H. J. Hammond. Poland-China, reserve grand champion boar, Rosebud's Chief, W. Bernstein.

SO FOLKS go to fairs to see exhibits, inventions and the finest in livestock and field productions that inspiration may be had for their own and better performance, or they go to "Hello, Bill," see the shows, the collision and to chew Ask the gate keepers at the California State Fair. They will tell of easy jobs on Tuesday, Wednesday and Thursday of fair week. Day was governor's day when more than a million dollars of California's finest (and the world's finest) stock passed in review before the fair and other Californians gathered. They will also tell of a different story of Friday when locomotives crashed head on in the middle of grandstands massed with thousands of beings, while other unnumber-

many from Eastern states, and every one with whom I came in contact and questioned as to the quality which California was showing at the fair expressed unqualified surprise at the showing made. Some were there for their first visit and they had been given something of an inkling of California's abilities in her performances at the last International. Still in all classes, from poultry and sheep and hogs, through the dairy and beef classes to horses, there were examples of exceptionally fine breeding. In every class were animals or exhibits not strictly top-notchers, yet it was no uncommon sight to see the

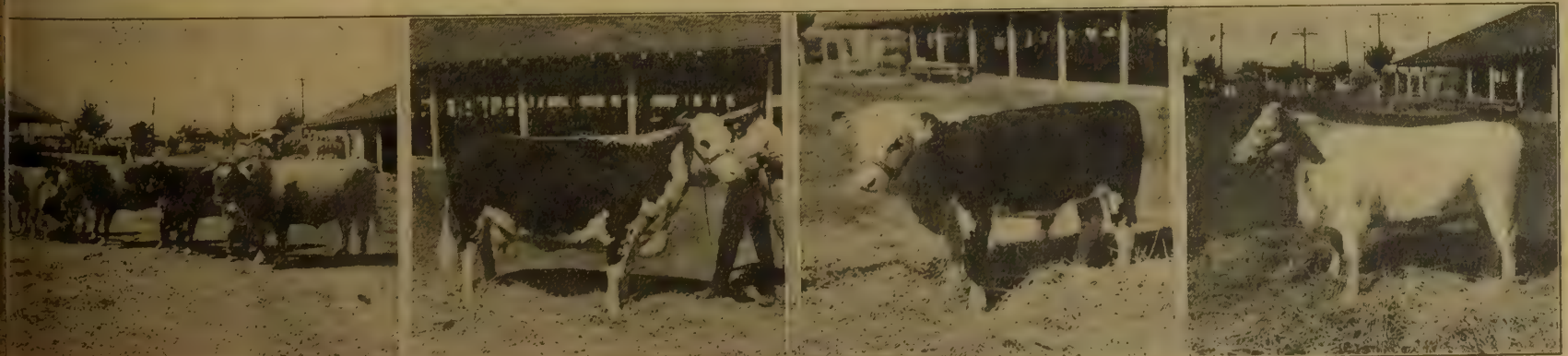
this conglomeration was not imposing, as was shown by the illustration in last week's issue, but the character of the exhibits was fully up to that of former years. We believe still greater advance might be shown in these horticultural exhibits.

California is the greatest in horticulture of any state of the Union. We wish we might see a strictly high quality, commercial fruit exhibit. California's exhibits have always taken on more the appearance of the promotion or land sales departments of chambers of commerce or similar bodies. This is not said with the idea of discrediting in any way such ex-

hibitions. At Eastern expositions or in the larger commercial centers such exhibits are entirely in order and have made known the productive possibilities of this great state, but in the state fair a strictly quality exhibit of fruits of standardized packs, with contests between various associations or packing concerns, would prove of real value to producers and shippers.

The horticultural building was not entirely devoid of commercial packs or of the plate exhibits of fruits. There were some most excellent exhibits but these were not given prominence. It is true such exhibits may not prove so attractive to the casual visitor at the fair as the featured exhibits of commercial bodies.

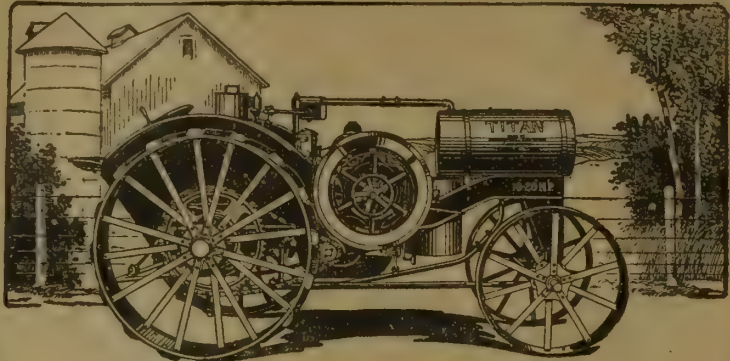
Continued on Page 302



The beef classes were largest and filled with higher quality than ever at California State Fair.

left: First prize aged Shorthorn herd, T. T. Miller; second from left: Lady Berendo C. C. 339463, senior and grand champion Hereford cow, D. O. Lively; Bertram 1st, junior and grand champion Hereford bull, H. H. Gable; White Mayflower 552668, first prize senior and reserve grand champion Shorthorn cow, T. T. Miller.





## The Titan Tractor Record

**A** TITAN tractor is a safe machine to buy. The present models have been at work steadily on average American farms for more than two years. Their standing is established.

Ninety-six per cent of Titan owners say they are perfectly satisfied with the amount and quality of work the machines do, and with their fuel economy.

Every Titan tractor operates successfully on kerosene. You can always get a plentiful supply of kerosene or distillate, at a reasonable price.

There are two sizes—10-20 and 15-30 H. P. The 10-20 size is the one recommended for average farms. It is a three-plow outfit with two plowing speeds, 1.85 and 2.50 miles per hour, turning from 7 to 10 acres a day. You can use it for all kinds of belt work up to 20 H. P. and for hauling.

Both sizes give the same steady, reliable service. Both operate successfully on kerosene. They reduce labor costs. By getting the work done in the right way and at the right time, they increase yields.

A Titan tractor is a safe, profitable machine to buy. To have a Titan tractor delivered in time for the harvest and the fall plowing, your order should be placed soon. Write us for catalogues.

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**No Set Collars Used**

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Fitted with Ring Oil-  
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Renewable Babbitted  
Bushings.

Ring Oiling Gland.

We also build deep well  
turbines, deep well plungers,  
horizontal and vertical  
pumps for mining, irrigation,  
drainage.



## More Careful Picking



CONTINUAL source of loss to all fruit shippers is careless picking, careless hauling, careless handling, careless packing—carelessness generally. Stop it! has been the cry for a score of years, yet we continue to be careless.

P. J. Dreher says in his last report to San Antonio Exchange:

### Decay

As each year passes it becomes more difficult to place to advantage cars showing decay. The best trade will not handle decayed cars at all. Buyers who purchase decayed cars demand heavy reduction in price and even then it is only the cheaper class of trade which will take a chance on decayed fruit. In the majority of cases cars arriving in the Eastern market showing decay cannot be sold at original destination, dealers having neither the time nor the facilities for repacking. This means diversion, longer time enroute, delay and more decay with its resulting loss. The best trade demand good sound fruit and are willing to pay the price for the assurance of good keeping quality in any brand.

In order to secure and hold special customers for your brands and have them take cars which they order, the fruit not only must arrive in sound condition but must hold up long enough to allow of its sale and distribution to the trade and consumer. To do that every care must be used at this end in the handling of the fruit from the tree to the car; any reasonable expense which insures better keeping quality is an investment

which means greater returns to the grower.

The matter of decay has been uppermost in our minds and carefully brought before you. In our report made 16 years ago we said:

"Fruit should be handled in a careful manner as eggs. Careful handling and long stems are a source of most of your losses on account of decay. I have for years advised that picking gangs be employed under competent foremen to your crops."

In each of our reports since that date we have referred to the matter of Picking and Handling

This matter has been uppermost in our minds since the organization of this exchange. In our report 16 years ago we called attention to the point and in our report of 1900 said:

"Next comes the matter of picking fruit as to size; taking the past season as a guide, there was an average of 50 cents per box between 96 126s and 176s to 200s in favor of larger sizes for the first three months of the season while during the two months it was not the case. During the first period small off sizes were not wanted and discounted at 12 cents to \$1.00 per box, while 126s were neglected and in cases discounted."

Not only was this true then but has always been true and is true now. Small off sizes brought a large premium at the end of the season.

Contract work for pickers is the best and should not be resorted to.

## Pickling Olives

By Paul H. Steude



THE following directions for home pickling of olives were recently given by Paul H. Steude in the Yolo Democrat. He says:

"This recipe is one of my own invention. I have pickled tons of olives, which sell and taste much better than the commercial article. I usually use a sugar, vinegar, cider or glucose barrel as olives absorb all foreign flavors from barrels where whisky, brandy or red wine has been.

"I take an auger and bore a hole in one end of bottom of the barrel. Then make a long 10-inch point on a broom handle, with which to close the hole. By tapping on the broom handle you can have the lye or water drawn off without getting your hands wet, or letting the olives drop out of the hole.

"Olives should be cherry color for pickling. In this way they have a good flavor and are appetizing. I consider the Mission olive the best for home use. It is best not to mix the olives from different trees as some trees have more bitter fruits than others. This accounts for having some bitter olives among the sweet usually found in Yolo and Sacramento Counties.

"When you pick olives get them into clear water as soon as possible. Never use ditch or dirty water as olives absorb the mud and are easily spoiled. Neither use well nor filtered water. Olives picked into lug boxes will mold in 24 hours.

"Add 1 pound concentrated lye and 1 pound pure salt. Dissolve in 2½ to 3 gallons of water, and see that it is

thoroughly dissolved, then skim, cook it, then skim. Then drain the water from olives and tighten broom handle and pour the preparation of salt and lye over them. Weigh the olives down so as to keep covered. In this way in 12 hours the bitter will be entirely moved from them. In leaving in I draw off the preparation and in on top again about once or twice a day to find out if the bitter taste is out of them. If you see milk on by cutting them open you find bitter still.

"You can take a few olives, place in clear water and wash off and bite them, being sure not to touch your lips near them, and spit once and rinse your mouth with water. As soon as the bitter taste is out of the olives turn in clear water. The first few days change four or five times a day, and two to three times a day for about ten days or till the vestige of the lye is gone.

"Should they get a little soft, make a strong salt brine and place them for 24 hours and then wash in clear water. I usually have olives eat in one week from the time they are picked, but there is still a little lye in them.

"To keep the olives a long time, make a preparation of 12 ounces of brine to a gallon, or one that will float a potato. Olives should be kept in a dark place covered with brine or oil. In keeping them a long time the scum should rise to the top and should be skimmed off, and the olives rinsed in clear water and put in brine. If olives are too salty, place them in water for a few hours and they will be ready to eat.

"This preparation is strong enough to take the color out of the olives. They will not look as well as the commercial but are far superior in taste."



## Potash or Powder?

Written for California Cultivator By J. R. Mattern

THE expression that "tillage is manure" is an old one now, familiar to nearly everyone. There seems to be no doubt of its essential truth. But when we seldom see an analysis of what the words mean, or what "tillage is manure" really implies. Tillage means anything at all in connection it means plant food, as we get in common stable manure or in commercial fertilizers, or we find in the rich virgin soils have not been run down. In other words, it means nitrogen and phosphorus and potash, especially potash at the present time, when the manure and sulphate that we have been relying so much on all these years cost 75 cents a pound, is a little dear for fertilizers. For tillage, its meaning should be hard to establish clearly. Tillage means to work the soil, stir it, mix it and turn it over. There is the work of smoothing harrows, light weeders. This is tillage on the surface. A spring tooth harrow deeper, and a disc or cutaway deeper. When we plow we till the soil, and when we hitch behind a subsoiler we still are trying to secure the same thing, tillage. Live tillage is merely tillage applied thoroughly, and often it is tillage that mixes the soil somewhat to the extent that mortar or concrete is mixed, and that goes deep. Experience has shown that there

must be much latent or dead plant food, including potash, in nearly all soil, for after the soil is stirred up and worked well, and the first plants made to grow in it, "it gets richer" of itself. The solution lies in the fact that the tillage makes available a lot of this dead plant food and therefore that there is a supply of potash right in the soil which every farmer can get by applying the right methods.

Deep plowing and subsoiling are the forms of tillage which are the most productive of results in the securing of fertility. The top soil in a way has become burned out or its plant food used up, but this is not true of the subsoil. The use of heavy engines with deep tillage machines behind has proved to be very effective in raising crop yields. The blasting of soil is another way to secure the required tillage to free the potash and other plant food elements, and since it does not require expensive equipment the practice can be made use of by nearly everyone. Blasting seems to do the work more thoroughly than machines too. When properly done it grinds the soil up like chop feed.

But whatever the method of securing it there is little doubt that through intensive tillage many farmers can get a sufficient potash supply for their crops out of their own soil. The phrase should be changed during the war. It now should read "Tillage is potash."

## Sensible Fertilizing This Year

Written for California Cultivator

SINCE all the fertilizers on the market contain little potash, on account of the war, it seems necessary to go back to the application of phosphorus alone, as the practice is to be. But when this conclusion is reached a little reflection on the general subject of soil fertility cause a further and more radical change in the plans.

That the general practice has been in the past few years has been to apply as nearly as possible a complete fertilizer for the soil and crop intended. It now becomes necessary to go along without the application of the element of plant food—potash. The lack will break up the chain and will result in the plants suffering for the lack of it almost as much as they would suffer from the lack of three of the chief plant foods if one at all were given—provided there is no other source of potash.

There is another source of potash. This is in the soil itself. In the ordinary course of farming some of the potash, which at present is in the soil in an unavailable condition will be rendered free. And there is no reason to think that phosphorus in the soil also will not be released by the same treatment and at the same time. Nitrogen, we know, is not present in the soil unless it is there from the air by some means other. Some soils lack in phosphorus, it is said, but this lack is easily supplied with material that is cheap in the United States now. What is needed now, more than potash, is soil treatment that will release the potash and the phosphorus that are in the soil already,

but locked up. The logical thing then is to give the soil the most intensive tillage possible and go down deeper by far than ever before. If possible the soil should be blasted. The blasting breaks the soil about as well as 50 plowings and does it three or four feet down.

Then follow the intensive tillage by cover crops of some legume, crimson or red clover, cow peas, vetch or soy beans, anything in the way of a nitrogen catching plant that will at the same time fill the soil with organic matter. If there is a lack of phosphorus in the soil it should be supplied by the application of raw ground phosphorus rock. The strength of acid rock and other quick phosphorus sources leaches away too quickly. Very likely the clover or other legume will not grow well without liming of the soil, and it is certain that the lime will help to release both potash and phosphorus. Therefore what is needed is farm powder, raw ground rock, and lime, plus clover seed.

### COST OF AN APPLE

As the result of a detailed study of 54 bearing orchards in the Hood River Valley of Oregon, it was found that the total cost of apple production for the 54 bearing orchards averaged \$1.02 per box and \$222.32 per acre under mulch crops. The average cost per box exclusive of interest on orchard land investment was 66.4 cents. Net labor costs averaged 38.3 cents per box. Material and fixed costs constituted 62.5 per cent of the total cost. The trees in the orchards studied averaged 12 years of age and 72 trees to the acre. The average total investment per acre of apple orchard was \$990.74; the average yield, 222 boxes per acre.



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—powered direct from jack shaft by patented lubricated roller pinions—interchangeable bull gear bolted to inside center tread—direct drive—no side strain—minimum of friction with least wear.

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YOU NEED MORE FARMING POWER NOW FOR YOUR FALL PLOWING. Has your present equipment the endurance to stand the day and night drive of WAR TIME WORK. You can do more and better work this fall with a Samson Sieve-Grip Tractor. Ask us to tell you how one can help you. Copy of Tractor-Farming Magazine, and latest Catalogue goes with the answer. Write Today—NOW. Address,

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Low boiling points  
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*The Gasoline of Quality*

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**SELF-OILING WINDMILL**  
With INCLOSED MOTOR  
Keeping OUT DUST and RAIN—Keeping IN OIL  
SPLASH OILING SYSTEM

Constantly Flooding  
Every Bearing With  
Oil, Makes It Pump  
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DOUBLE GEARS—Each Carrying Half the Load  
Every feature desirable in a windmill in the  
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Write, phone or wire for quotations.

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LEMON, ORANGE  
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Properly grown and cared for to produce good crops of quality fruit; immediate delivery; write for prices.

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SUPPLIES  
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Catalog FREE on Request  
**Smith-Booth-Usher Co.**  
LOS ANGELES

## Plant Bulbs Now

Written for California Cultivator By E. Branton



OCTOBER is the month that heralds the autumnal planting season. All those who garden should prepare to garden now. Tear up the soil deeply, fertilize freely, and pulverize finely. You are then ready to begin operations, either of sowing, planting, or transplanting.

First, in alphabetical order comes the amaryllis, A. minor and A. major; they are both A. belladonna or known to many as the belladonna lily. In England they are planted six inches deep. We are generally advised here to plant them more shallow, but this season I had some that were buried under a pile of heavy soil to a depth of 18 inches and proved to be the best in the garden. If soil is light plant them as deep as you like. This will also hold good for the giant flowers usually called amaryllis which are really hippeastrums. In heavy soil, however, the latter should be put down so that the top of neck of bulb is even with the soil surface.

Anemones of the bulbous type are best left for planting until November. By the way, do not accent this name on the first e as the French do. The correct English and also the Latin is pronounced similar to the still more common word alimony, which has the same number of syllables. Accent the i in alimony and note how queer it sounds, for I do not like alimony. Anemones of the herbaceous or Japanese type are still finer for the garden than the bulbous type, but the Japanese need a shaded spot and the bulbous type should be planted in full sun. Soak the bulbs in warm water for two or three hours before planting. They will swell up and enable you to distinguish the crown or top side from the smooth or bottom side—they have no roots attached. Cover two inches deep.

Callas of the common white may now be put in soil and if the latter be light and warm and the drainage good, the yellow calla and others may be put in, but I lose many in fall planting if the season proves cold and wet, so I "play safe" and plant in March.

Cyclamen are a seasonal bulb, and should be planted in partial or full shade. The soil for these should be fine, light, and retentive of moisture for cyclamen need a steady supply of soil moisture but will perish quickly if kept too wet. The new types are superb, with waxy, orchid-like flowers in a fine range of colors. Do not cover the bulbs with soil.

Now come the glorious daffodils, jonquils, or narcissus, all of them worthy of the best place in the garden. None of them are worthless, none of them poor, though some varieties are better than others. Buy no double sorts unless it be Orange Phoenix; the singles are best. Plant the bulbs five or six inches deep and after tops are up mulch with rotten manure. This mulch prevents weeds from growing, feeds the bulbs, keeps the soil cool and renders cultivation unnecessary.

Freesias should be planted first of all fall bulbs except Watsonias and should go in at once. Plant them two inches deep, in any old place in any old soil, for they always flower well. There are colored varieties now to be had, of which the lavender is perhaps best.

The dwarf gladiolus are also for present planting and by many are pre-

ferred to the big, summer-flowering type. The Bride, Blushing Bride, and Peach Blossom are the leading varieties. Plant these well down, four or five inches below the surface. The best luck I have had with them was in a rich sandy soil, more than six inches below ground, and I grow many very fine ones each year. All gladiolus bulbs may be safely planted now and will thrive as well as if left until January. The latter month is late enough for the main crop, for early planting brings best average results.

Hyacinths may now go in the garden, pot, or glass, but as I do not care for these thick, heavy, ungraceful spikes of color I make no comment beyond advising the Romans in limited number for garden planting.

Iris of all kinds are recommended and I hope you will plant many of them, of all types but the Japanese. Plant as for dwarf gladiolus for the Spanish and English types and more shallow for the Germanica type. Ixias are also in season as are the nearly-related sparaxis, both grass-like plants with fine flowers.

There are a few lilies now to be had and they are best planted at once as the bulbs deteriorate in vitality if left long out of the soil. I would plant all six inches deep and would surely put a large handful of clean sand for the bulb to rest on and a like quantity on top of the bulb. If the garden soil is sandy or very light this treatment may not be necessary.

Tulips must have sandy soil or, better still, sand and leaf mold. It should be deep and of fine drainage; rich but not with fresh manure. Plant bulbs not less than six inches deep and keep well watered at all times.

French buttercups or ranunculus are among the best of bulbs and require the same treatment as anemones. Watsonias should go in soil first. Plant deep in any kind of soil and feed well.

### Seeds for Cut Flowers

Calendulas will furnish cut flowers when nearly all else is "frozen up." For that reason grow plenty of them. You can't prevent them from blooming well if you give them water. They come only in lemon and orange shades and both should be obtained in named varieties for results will be much better than from the nondescript shades in mixed seeds. Scabious is another good cut flower and snapdragons still better. Many are planting Canterbury bells. I do not grow them as I do not like the tumble down plants, but the flowers are fine. Stocks are a splendid reliance in the flower garden and should be freely sown or planted now or planted at any time in the

### STATE FAIR

Continued from Page 299

#### Some of the Features

Alameda as usual took the large space and made one of the most impressive exhibits of her fruits and agricultural productions. She made an exceptionally fine showing of corn and of Indian corn.

The Northern California Counties Association, with Tehama and Butte County, took up the central portion of the larger tent space. Fresno, of course with grapes and raisins predominating, took smaller space than in former years but had a most attractive exhibit. Colusa with wheat given a prominent place, Sutter with her peaches and other fruits, and San Joaquin with special prominence given to products of the Sperry people with her onions, milo and nuts, and Sacramento, a photograph of whose exhibit appeared in last issue, all had most attractive booths.

In the annex adjoining the main horticultural tent there were educational exhibits from schools of the Sacramento and San Joaquin Valley. In all of these agriculture was given a most prominent place, one school not only appearing with the productions of its gardens but with a complete poultry yard stocked ready for practical work.

Another feature not in the horticultural building, yet essentially horticultural, was one representing the entire state of California. It was entered by the permanent state exposition located in the city of Los Angeles. Mr. Davison, the manager, conceived the idea of a portable temporary building, constructed entirely in Los Angeles in sections and put together with bolts or pins, which could later be taken down and transported to the fair grounds in Sacramento. The building was filled with products of all sections of California and was one of the most attractive on the grounds.

The University of California made many exhibits, that is, its animal husbandry department made especially strong exhibit of horses, cattle, sheep and hogs. This was featured and nicely decorated, but none of the animals were entered in the competition for premiums. This is supposed to be in response to the appeal of the livestock people for opportunity to win premiums without having to compete with a great institution which has unlimited capital to bring in the finest of the earth. The university has shown itself patriotic and far-sighted as to the state's welfare by introducing the finest stock which could be procured. It has been an inspiration to livestock producers. We believe this sufficient reward, at

### FRUIT GROWERS GREATEST LABOR-TIME-MATERIAL SAVING DEVICE

ONE NUSYST™ GUN DOES THE WORK OF  
ONE LINE OF HOSE  
ONE MAN  
ONE DAY

FOUR NOZZLES  
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MATERIAL

100% MORE EFFICIENT THAN RODS AND NOZZLES

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WRITE FOR  
CIRCULARS AND PRICES TO





herdsmen and others connected intimately with the stock may be disappointed in not being able to carry off blue ribbons were the spirit of fairness shown is appreciated in a way which will be more for the university than for the matter of winning blue or red ribbons.

Across the street from the exhibits of livestock was the exhibit of the University of Agriculture. It was surrounded with a picket fence of Indian

a machinery building was devoid of the noise and splash of the former years but one interesting exhibit there which did attract attentionists continually was that of the Keller-Thomson Company showing many forms of gates and valves, small centrifugal lifting water pumps, the big pool and distributing in the field, demonstrating its several methods in actual work.

## Legal Queries

Mr. B. Stanton, attorney, 243 Wilcox Street, Los Angeles, will answer legal queries in this department. Immediate mail replies cannot be given where fee to Mr. Stanton is paid. Replies are wished in Cultivator as query to 115 1/2 N. Broadway, Los Angeles.

### Line Right of Way

In the water commission give me permanent use of water now going to waste upon patented land? I pipe this water across adjoining patented land without the owner's consent? If he refuses to consent can I get a right of way?—Subscriber, Mail.

On a proper application made to the state water commission and appropriation made of the waste water can very probably obtain the use of the water so long as you place same to beneficial use. Upon the facts stated, however, we fail to see how you can take another man's land for a right of way without giving him compensation. If you were to undertake the business of supplying such water to the public or to any neighbor or community the right of eminent domain would then be conferred under which such right of way could be conferred.

### Contract with Commission Merchant

Could fruit shipped to a commission merchant daily on a guaranteed price, f. o. b. point of shipment be considered a sale? Upon the arrival at destination if some of the shipments are found to be too ripe, according to the consignee whose statement is that the temperature is 112 degrees, is the consignee justified in charging commission and deducting express charges on selling fruit at less than guaranteed price?—Subscriber, Soquel.

When stating that the fruit was shipped on a guaranteed price you placed an interpretation upon the contract beyond which the writer cannot go in the absence of the contract and in that interpretation you have answered your whole question. The commission merchant has merely guaranteed to you that for merchantable fruit you will obtain a purchaser in the open market who will pay the guaranteed price in addition to freight, cartage, handling, and commission. There has been no sale made, therefore, until the merchant is a buyer for you and, consequently, you assume all risk of loss and expense and expenses. If you can show that the fruit was merchantable at arrival at destination you can take action against the commission merchant upon the guarantee, if it is merchantable when shipped and loss occurred through delay of the carrier, place your claim with the carrier. It would be entirely within the authority of the commission merchant acting as your factor upon the arrival of overripe fruit to sell same for the best price obtainable and charge back to you all expenses and commission if it left a red ink figure for you. The excuse made to you of overripe fruit is a favorite one of a certain class of men in this line of business and is, under the form of contract which you have probably made, almost impossible to disprove by the farmer located many miles away attempting to ascertain the true facts weeks or months after the fruit has been disposed of.

## Fair Dates

Fresno District Fair, Fresno, September 25-29.

Napa County Fair, September 22-26.

Glenn County, Orland, September 26-30.

Antelope Valley Fair, Lancaster, September 26-29.

Kern County Agricultural Fair, Bakersfield, October 2-7.

Yolo County Fair, Woodland, October 4-6.

Riverside County Fair, Riverside, October 9-13.

Coachella Valley Fair and Date Festival, Thermal, November 1-3.

Tulare County Citrus Fair, Visalia, November 16-24.

### OTHER STATES

Idaho State Fair, Boise, Idaho, September 22-29.

Oregon State Fair, Salem, Oregon, September 24-29.

Montana Fair, Helena, Montana, September 24-29.

American Royal Livestock, Kansas City, Mo., October 1-6.

Dairy Cattle Congress, Waterloo, Iowa, October 1-7.

National Swine Show, Omaha, Nebraska, October 3-10.

Texas State Fair, Dallas, October 13-28.

National Dairy Show, Columbus, Iowa, October 18-27.

Arizona State Fair, Phoenix, November 12-17.

Pacific National Dairy Show, Portland, Oregon, November 12-17.

Pacific International Live Stock, Portland, Oregon, November 19-24.

International Livestock, Chicago, December 1-8.

National Western Stock Show, Denver, Colorado, January 19-26, 1918.

National Shorthorn Congress, Chicago, February 11-16, 1918.

### Ditch

The land of A is between the land of B and the irrigating canal. B has permission to take water from the canal, but in order to get it must make a ditch along the boundary of the land of A. A has not responded to the request of B for such right of way. What can B do?—Subscriber, Angilola.

It would be well for B to first make a careful examination of the charter and by-laws of the irrigation district or company owning the canal, also of the title under which A holds his property. It is frequently the case that the right is given or reserved to the concern supplying water to cross the lands of those within its territory in order to supply landowners desiring water who are remote from the ditch. It is also frequently the case that the right is reserved in the deeds of the landowners to cross their lands with ditches in order to serve others with water.

### Lease for Second Year

A leases land to B for one year. At the end of the year A leases the land to another party without notifying B. Has B any claim upon the land for the year following, no notification having been given him to quit at the end of the year?—Subscriber, Oceanside.

B has absolutely no claim. He was well aware of the term of his lease and must get out when his contract is ended without notice other than the three day notice necessary in order that the landlord may obtain treble rents under the unlawful detainer act if B remains beyond the term of his lease.

## -what ranchers say about-

Hairy Peruvian Alfalfa was thoroughly tested out all over the state, and the entire Southwest, last year—and it HAS MADE GOOD!

It is the HEAVIEST PRODUCER known—and it is bound to displace all other varieties. It grows vigorously in all climates—does well at 5000 feet or at sea level.

Hairy Peruvian Alfalfa produces a great mass of leaves from the top to the crown of the plant, and as the leaves contain the greatest amount of food value, this type of alfalfa gives the farmer the greatest yield.

Send in  
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to-day

**Germain**  
Established 1871  
**Seed & Plant Co.**  
326-328-330  
SOUTH MAIN STREET  
LOS ANGELES, CAL.

**-Produces 2 1/2 MORE tons per acre-**

## Germain's Hairy Peruvian Alfalfa

## READ THESE

Growers' Ass'n raised price to \$21 a ton. Pomona, Cal.

Dakota buyers offered \$22.50 per ton. Parker, Ore.

Humboldt dairymen order 1,000 tons at \$14.75 Escalon, Cal.

Delta Farmers get \$17.50 a ton for alfalfa. Stockton, Cal.

## Hay Prices

are high in all parts of the country. Fall sown alfalfa on summer cropped land should produce profitable crops next year.

## Plant Early

and insure a good stand before spring.

Reduce chances of poor or weedy stand by using

## GREEN GOLD BRAND ALFALFA SEED

Always fresh, clean and pure because it is grown and selected by experts. Always Reasonable in Price because of direct buying and selling plan.

1917 Prices and Samples on Request

## Bomberger Seed Company

MODESTO, CAL.

"Firm name and trade name on every sack."

## SHORTHORNS

AT THE

## 1917 State Fair

With eleven head of our own breeding in thirteen classes and groups we won five firsts, five seconds and five thirds.

### The Get of Sire, True Dale

Won first and third at 1917 fair, also won first at 1916 fair.

## Pacheco Cattle Co.

Hollister

California

## Hauser's Digester Tankage

GIVES GREATEST VALUE FOR LEAST MONEY.  
IT MAKES THEM FAT.

Hauser Packing Co.

Los Angeles



## The Tractor Section

Written for California Cultivator  
By M. C. Holman

**U**NDER the auspices of the California Tractor and Implement Association the largest exhibition of tractors ever held was in the big tractor tent on fair grounds.

Heretofore tractors have given demonstrations on ground that was unsuitable for plowing at this season and the tractor was at a decided disadvantage. At the 1917 fair there was a "dead" exhibit, which proved to be from dead if we may judge from hundreds of spectators who were interestedly watching the various demonstrations. These demonstrations consisted of an analysis of the relative working and a study of the strength supporting the main weight.

A "dead" exhibit is far more beneficial to the manufacturer as it offers a chance to bring to bear certain merit points possessed by his tractor, and better for the buyer to be able to make comparisons as the machines side by side, than to follow them furrowed fields through clouds of dust. Gathered in the tractor tent were separate exhibits from the small Bear, the mammoth Holt. One finds much interest in observing the steel horses they stand ready to pull on the draw or tug at the belt. Each one represents the potential energy of a relative number of horses. Under normal conditions the rated power can be expected for the manufacturers have been servative to a remarkable degree. They have underrated their machines to every opportunity for the doubt to be eliminated.

That there is a tremendous interest taken in tractors was shown by the crowds of inquisitive spectators, a point particularly noted was the interest of women. But when we realize that women are running many of the ranches of the state we can readily understand their need for an acquaintance with tractors.

To enumerate all of the 22 exhibits would be to tax our space too heavily. Some are worthy of special note.

The Yuba exhibit showed two sizes of the Ball Tread—the 12-20 and the 24-30. These tractors are easy to operate, powerful enough for the plow, light enough for the harrow and cheap enough for pocketbook. They are simple and compact, giving the greatest possible power for the size, weight and consumption of fuel.

The Holt display covered not only tractors, but also the combined harvester, the mammoth land leveler. The Holt is the one tractor for extra hard work with continuous endurance. We have seen it used in moving houses, the work was done with surprising ease and swiftness.

The combined harvester presents a massive appearance when "at ease" serves a wonderful purpose by turning the growing grain into sacks of grain ready for market.

The Samson Sledge Grip tractor, with its clod smasher wheels, its over size over strength parts, its automatic control and its low price has a commanding place in the eye of the purchaser. The Samson is the tractor for the medium size farm. Its substantial construction, of the best possible steel, makes it particularly desirable when one is considering ease of running, freedom from breaks and accessibility of the various working parts.

The new and improved Bean tractor places on the market a small, serviceable machine that has been given an acid test. It is the result of a study and extensive experimenting. The first model gave general satisfaction, the new one bids fair to outdistance in popularity.

Another new model, shown for the first time, is the Joshua Hendy "Invincible." It is true to name for it embodies the principles of tractor construction that make it truly invincible. Size, weight, power and price are all in its favor. We are surprised to learn that the Joshua Hendy Company is working three shifts to get the tractor on the market in sufficient quantity to meet the present demand.

The big kerosene-burning Sandusky 15-35 is a tractor of no small calibre. It represents a maximum of efficiency and economy on the farm. It may be used for pulling heavy loads, whether in the soil or traction work, and is readily adaptable to working a three-point machine. It will handle a constant pound drawbar pull.

The Moline Universal will pull a usual five horse load and will do as much work as seven horses. It requires less space and less care than one horse and is a two-wheel tractor to which implements are fitted. For plowing, one may be run in the furrow making the tractor practically self steering.

The Case 9-18 finds a place between the large and small tractors. It is of a size and strength, gives a liberal pull and may be run by the novice.

The Cleveland tractor, while new to the Coast, has been used extensively in the East. It is a comparatively light machine, but the main weight is used for power making. It will be a prime favorite for the man who wants a machine of medium frame backed by ample power.

A tractor, no matter what size, cost, make, no matter how well built, requires careful handling. Parts will break. Care will prevent much of this trouble. Weather is a great destroyer. A rain proof tractor garage will prove worth many times over and greatly prolong the life of your tractor. You should have this protection the moment your tractor arrives. Give your machine attention and consideration. It deserves it and it will give you a good return on your investment.

The Waterloo Boy exhibited by the Coast agents, W. L. Cleveland Company, created much live interest. The Waterloo is put up either as a three-wheel



Some Tractor Exhibits

The California Tractor and Implement Association provided their own tent. The tractors shown above in order from top to bottom are, Sandusky, manufactured by Dauch Manufacturing Company; Bean, Bean Spray Pump Company; Holt, Holt Manufacturing Company; Moline Universal, a two-wheeler, Moline Plow Company; Waterloo Boy, W. L. Cleveland Company; Yuba, Yuba Construction Company.



In the Tractor and Implement Tent

The gang at the top is not a fanciful model but an actual working gang of 16 plows. It takes power to move it but it turns the dirt. The Case tractor is shown in the middle illustration, while at the bottom is the Invincible, manufactured by the Joshua Hendy Iron Works.

## Your Most Valuable By-Product

This year of all years you can't afford to waste manure—your crop needs it. Save every bit. By spreading it evenly in a wide sheet and making one ton produce better results than two tons spread by hand; doing the work in one-fourth the time and without back straining labor—you can soon pay for

## The Flying Dutchman Wide-Spread Spreader

Striking advantages are built into this spreader which commend it to farmers above all other spreaders.

Double Beater pulverizes manure thoroughly. Second beater running at high speed makes a wide, even spread—covers the field in less time—makes the load go farther and produces better crop results.

Separate Direct Axle Drive for beater and apron eliminates overstrain on beater mechanism—prevents breakage.

Low down—only 42 inches from

ground to top of box at rear—makes it easy to load.

Wide range of adjustment permits spreading thin coat or heavy layer. Reserve speed moves apron at rate of 40 loads to the acre, for clearing out the bed. One lever controls operation.

Exceptionally light draft under heavy load—easily carries 4500 pounds.

Built almost entirely of steel—nothing to warp, sag or rot.

The Flying Dutchman pays for itself in one season's work. Ask your Moline Dealer about it, or write us for Illustrated Literature.

Address Department 56

**Moline Plow Company, Moline, Illinois.**

Manufacturers of

Plows (Steel Chilled)	Stalk Cutters	Grain Drills	Rice Binders	Spreaders
Harrows	Hay Loaders	Lime Sowers	Grain Binders	Scales
Planters (Corn &c)	Side Del. Rakes	Seeders	Corn Binders	Wagons
Cultivators	Dump Rakes		Mowers	Vehicles
Listers	Potato Diggers		Reapers	Farm Trucks
Moline-Universal Tractor				



For Over 50 Years The Mark of Good Implements

## Big Yields—Less Labor

To reap the greatest return at harvest time, cultivate thoroughly before planting. This is the vital time for all crops. With small grains it is the only cultivation. To do it with less labor requires the

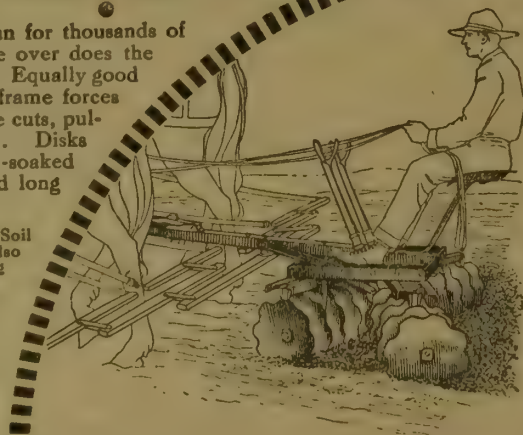
## Cutaway Double Action Disk Harrow

It is saving a team and a man for thousands of farmers right now—and once over does the work! Its light draft is noted. Equally good on stubble. The rigid main frame forces every disk to its work; double cuts, pulverizes and levels the ground. Disks are forged sharp; dust-proof oil-soaked bearings—perfect service and long wear.

Write for our helpful freebook "The Soil and Its Tillage," and new catalog; also for name of nearest dealer selling CUTAWAY (CLARK) Implements.

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**Cutaway Harrow Co.**  
701 Main Street  
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Maker of the original CLARK  
Disk Harrows and Plows.



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**Clark's Harrows**

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**STANDARD OIL COMPANY**

**MICA AXLE GREASE**

Mica Axle Grease is backed by the quality guarantee of the Standard Oil Company. For years, Mica has been the standby of farmers everywhere. It's the Standard Oil Company's "know-how," and—the powdered mica.

STANDARD OIL COMPANY (California)



orchard use or a four-wheeler for operations. Best Tractors—big 75s—are im- and even while standing idle con- of their power to turn over the

## Some Commercial Features

Written for California Cultivator  
By M. C. Holman

WE WOULD lose an opportunity to tell a big story if we failed to tell of the commercial side of the fair—but we're not going to lose it.

Commercialism finds a field of activity at a big state fair, for it discovers ready ears and eager eyes. The most massive agriculturists find their way, possible, to the fair, for they expect a display of those implements and things which come close to their everyday lives. They see new and better ways of doing old things and discover ways of doing what was before thought impossible. And it is for this advancement and progress that the wide awake ones

state fair would be complete if it were to show what progress had been made during the past 12 months, and the California State Fair of 1917 holds a high place in its presentation of commercial achievement.

Enumerate all of the pleasing displays would be to fill a ponderous volume, but pointing out carefully arranged displays may lead to a fuller realization of what California has done in the line of commercial helps.

In the dairy section one could not fail to see the large and complete display of the De Laval Dairy Supply Company. Occupying a space of 1280 square feet the line of dairy utilities was shown in a most effective operation. Here was action—action that makes for better dairymen and more money for the dairyman. Their products numbered 25 of various sizes and capacities, fitted for hand and power operation. A large Alpha engine was driving a pump that was throwing a high stream of water with tremendous force.

The Ideal Green Feed Silo, in miniature, took a prominent place in the display, and also various sizes of Alpha engine feed cutters and a complete line of equipment. In the new Brooks Cement Stave Silo, which rears its head majestically in the center of the fair grounds, this silo is made of tongue and groove cement slabs one foot wide and two feet long. They are cemented together and held fast by bands of galvanized iron one quarter of an inch thick three inches wide. The inside is lined with a thick coating of cement. Special attention was given the giant made by the Oliver Chilled Plow Co. It combined a string of at least separate plows and is one of the largest combinations ever made.

In its place in the tractor tent was the did display of the Standard Oil Company. It embraced every kind of oil and was used in tractor work, showing all grades of oils and the different uses of refining. Educationally this is an important exhibit, for a large number of tractor success lies in the use of the proper kind of fuel and lubricants.

A particular feature of special interest is the sub-soil plow, made by the Killefer Manufacturing Company. For many years the University of California recommended this sub-surface plowing and one can see the practical benefits to be derived from its use.

A new and improved nozzle attached to the Bean Sprayer delivered a continuous mist under a pressure of 265 pounds. It means less destruction to trees and shrubs by its use, and many will find their way into the orchards of California. A new tile silo, manufactured by the On-Phillips Company bids fair to be extremely popular. It is made of concrete blocks about one foot square and is so constructed that it will not allow the contents to be affected by any kind of weather conditions. A great land leveler and almond huller—the Schmelser Manufacturing Company's machines worthy of special mention. The land leveler is to be used on a large tractor and is capable of leveling several acres per day. The almond huller means more and better almonds. It is all but human, working with steady precision and delivering the almonds shelled, packed and ready for market.

An intensely educational display was shown by the Western Soil Bacteria Company. Two microscopes were used to show the tiny living bacterial organisms that add to the productivity of land. There were illustrations of what bacteria will do for plants and tubes showing various kinds of culture.

A complete electric lighting system for try homes was shown by the Karl Hildberg Company. By this system there are no batteries and the standard volt current is generated. One can see the ordinary commercial globes and they may be stretched for a distance of miles from the generating plant. The system is guaranteed for five years and will run from one to three hundred lights continuously. It is automatic control and cannot easily get out of order.

Among the many features we have been able to mention only a few but they serve to indicate the value that may be derived from a careful visit to the state



Dairy Supplies and Tractor Exhibits

One little corner in the Standard Oil exhibit is shown at the top. The next photo shows dairy supplies of practically all kinds handled by De Laval; the third from the top, exhibit of the International Harvester Company; fourth is the Killefer Manufacturing Company's exhibit of implements for deep soil tillage. The fifth is the Sharples Separator Company's exhibit of dairy barn and creamery supplies. At the bottom is an exhibit of the Delco Light people, showing to farmers the simplicity of installation of an electric light plant giving light and power for the home.



Two Other Exhibits

At the top is a "for sure" silo. It is a stave silo of new type, concrete, tongued and grooved. It is called the Brooks Patent Cement Stave Silo. The bottom illustration, a monster scraper or leveler, a portion of the Schmelser Manufacturing Company exhibit.

## Sour "Kraut"

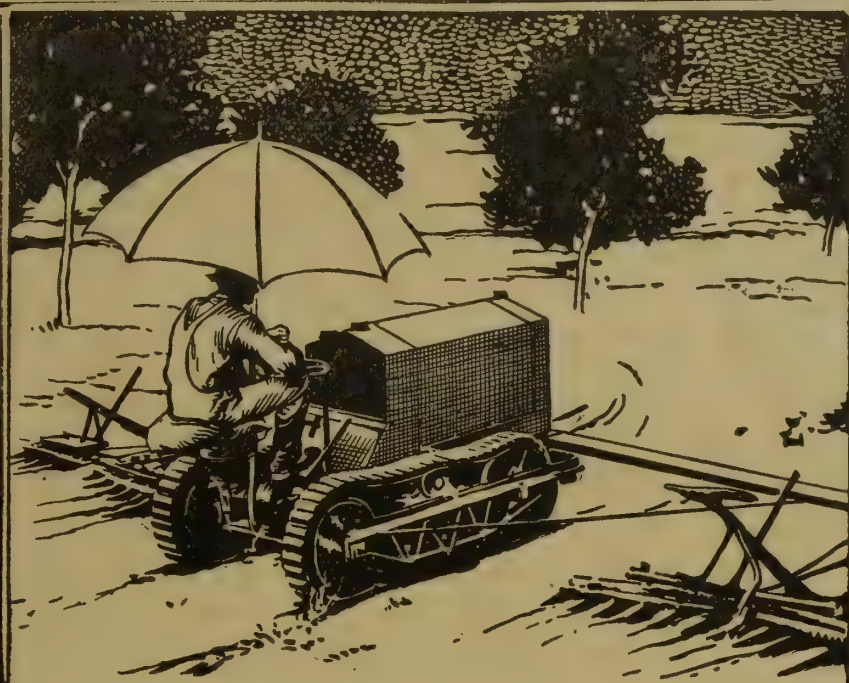
From the Arizona agricultural extension service we have the following directions for making sour kraut (or sour cabbage to use the American word):

Shred the cabbage finely, using a shredder which cuts it into long, thin strips. Have a barrel or keg perfectly clean and well scalded. Mix a pint of sugar and a pint of salt and sprinkle about a tablespoon over the bottom of the barrel.

Shred the cabbage into the bottom of the barrel to a depth of about six inches, and over this sprinkle a heaped tablespoon of sugar and salt.

Then pound the cabbage well, shred in some more, sprinkle on more salt and sugar, and pound again. This process is continued until the barrel is full, and the more the cabbage is pounded the better.

Place a cloth over the top of the cabbage and fit a board cover inside the top of the barrel so that it will settle down under the weight of a rock or something heavy placed thereon. Set this in a warm place to ferment. In about three days the juice will come up and cover the cabbage; fermentation will begin at once and the "kraut" will be ready to eat in about four weeks.



## "I Harrow 60 to 75 Acres a Day"

—H. O. Sebring

H. O. Sebring owns a large orange grove in Sebring, Florida.

For years, he searched for a tractor that he could use for cultivating. He declared himself unable to find a machine adaptable to harrowing through the sand in the dry spring months. Nor could he find one that would turn from one row into the next without injuring the trees.

But—

Mr. Sebring recently bought a Cleveland Tractor. It is a crawler type machine—small and light, yet with tremendous hauling capacity.

After trying it out on his grove, he found that it not only does his work well—but quicker, better and at much less expense.

Mr. Sebring attaches a 17-foot pole to the front of the machine and then hitches a six-foot harrow on each end of the pole.

"We can easily harrow from 60 to 70 acres in 10 hours," he writes.

Think of such speed. "We can turn right around the next to the last tree in the row and then come back the next row," he continues.

"At present we are using the Cleveland in a grove that needed plowing, going up one side of the trees and down the other. We have already plowed 25 acres a day of three rows.

"We figure that this work would cost \$17.50 a day with one-horse plows. I estimate that my Cleveland Tractor can be run for about \$8.50 to \$9 a day figuring repairs and depreciation much higher than they will run."

In other words—it cuts the cost in two!

What the Cleveland is doing for Mr. Sebring it will do for anyone. It crawls on its own tracks. So it can go anywhere—through sand, wet, marshy ground, up hill and even over ditches.

It is only 50 inches wide and 52 inches high—small enough to go under and between small fruit trees. Yet it develops 20 horsepower at the pulley and 12 at the drawbar.

The Cleveland is built by Rollin H. White, one of the country's best known motor truck engineers. He uses only the finest motor truck parts and gears. All gears are enclosed in dirtproof, dustproof cases. It is just the tractor you need—speedy, light and economical. Above all, it is dependable.

Agriculturists in all sections of the country are flooding us with orders for Cleveland Tractors. Our big factory is unable to keep pace with the demand.

We advise ordering now for delivery in the spring. Do not delay. Every day lost now means time lost when you need it most.

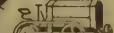
Write to us now for full information and the name of the nearest Cleveland dealer.

CLEVELAND TRACTOR CO., Cleveland, Ohio

\$1185 f. o. b. factory

# Cleveland Tractor

Geared to



the Ground

Cleveland Tractor Company  
Dept. BF Cleveland, Ohio  
Please send me full information about the Cleveland Tractor.

Name .....  
City ..... County .....  
State .....



Established 1888. Twenty-eighth Year

**The California Cultivator**

A Journal of Horticulture, Agriculture and Live Stock

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 Livestock and Dairy Journal, Established  
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Saturday, Sept. 22, 1917

## OUR ADVERTISERS RELIABLE

We guarantee our subscribers against  
 loss through dishonesty of any adver-  
 tiser in the Cultivator. We do not at-  
 tempt, however, to adjust trifling differ-  
 ences between subscribers and honest,  
 responsible advertisers, nor will we pay  
 the debts of honest bankrupts. Notice  
 of complaint must be sent us within 30  
 days from date of the transaction, and  
 the subscriber must have mentioned the  
 Cultivator when writing the advertiser

## THIS WEEK'S COVER

Amongst the blue ribbon win-  
 ners at the recent state fair were the  
 champions which have been chosen  
 for this week's cover. This is one  
 of the many proofs of California's  
 ability to produce fine stock. There  
 were exhibited this year some mag-  
 nificent animals recently introduced  
 from the East. These are an honor  
 to the sections from which they come,  
 and will honor this state. Credit is  
 due to those who have brought them,  
 but there is a greater measure of sat-  
 isfaction in "California bred." It is  
 proof that the talent and capital of  
 California have been free in looking  
 to every section to bring its best  
 blood to our state. The state fair has  
 shown this to a greater extent this  
 year than any other. More satisfac-  
 tory information regarding these ani-  
 mals is to be seen at the head of page  
 299 of this issue.

## ALMOND PRICES

The Almond Growers named  
 prices last Monday. The rush of orders  
 induced the first day a raise, and on  
 Tuesday morning wires were sent out  
 raising the price one cent. Non-  
 pariels were first quoted at 20½; to-  
 day the price is 21½. Other prices,  
 including the raise are: I. X. L. 19½,  
 N. P. U. 18½, Drakes 16.

## FARM LOAN

The appeal of many of the  
 fruit growers of the southern end of  
 the state for consideration of their re-  
 quest for more just valuation of or-  
 chard lands has resulted in the prom-  
 ise of a visit by President Joyce  
 Secretary Hendrick and Treasurer  
 Ellis of the federal farm loan bank

at Berkeley. They will also be ac-  
 companied by Appraiser Shaw and  
 will meet Southern California or-  
 chardists in Los Angeles on the 25th  
 of September. It has been the policy  
 of the federal farm loan board to  
 make the same valuation on orchard  
 lands as on adjoining lands which  
 are not improved and not bringing in  
 income. The orchardists insist that  
 real value is added to lands by in-  
 come bringing improvements, which  
 the board should not ignore.

## MORE TRACKAGE

Husky grumbling was heard on  
 the grounds of the state fair this year  
 because of the lack of trackage. One  
 exhibitor who understood conditions  
 beforehand said that he stopped his  
 car of prize winners some miles out  
 of the city of Sacramento and hauled  
 his stock in in motor trucks. This  
 was expensive but satisfactory com-  
 pared to the unsatisfactory methods  
 which seemed to be necessary on the  
 grounds. When it is considered that  
 hundreds of carloads of stock and  
 other exhibits have to be handled  
 within a day or two of the opening  
 of the fair it may be appreciated that  
 one or two short platforms with sid-  
 ings are entirely inadequate. Live-  
 stock which should be in best of con-  
 dition and fitted to the highest within  
 the power of modern science lose  
 much of their spirit—and the stock  
 owner loses all of his—when it is  
 found necessary to hold in express  
 cars for 24 or 36 or even 48 hours be-  
 fore they can be released and cared for.

Dairymen have appealed for better  
 facilities for years, and this year  
 many of their requests were granted  
 and they feel their industry is more  
 generally recognized, but they, with  
 all the other livestock interests, feel  
 that at least one more radical change  
 should be made in the fair ground  
 facilities. It means too much to the  
 success of the state fair association,  
 and we doubt not the need will be  
 recognized.

## MORE WHEAT

The editor was most interested  
 and gratified by the discussions at  
 the meeting called by California's gov-  
 ernor and held in the state capitol  
 last week. It was participated in by  
 members of the state council of de-  
 fense, many representatives of the  
 state university and growers from a  
 score of California's largest produc-  
 ing counties. We had hoped to pass  
 on some of the expressions of this  
 meeting to Cultivator readers this  
 week. We have in type much of the  
 addresses made by Dr. Thomas For-  
 syth Hunt, Prof. Frank Adams, and  
 many others who realize the needs  
 and opportunities of California. Un-  
 fortunately, with state fair awards,  
 illustrations and other matter which  
 so many are demanding of the Cult-  
 ivator, this important material is held  
 over until another issue.

In a word, the situation has been  
 thoroughly canvassed. There is too  
 little food being produced; there is  
 too much being wasted. Every Amer-  
 ican is appealed to to stop the waste  
 and produce more. At the Sacra-  
 mento meeting not only were means  
 fully considered, but representatives  
 of the grain corporation were present  
 and explained the methods of price  
 making and price control on wheat.  
 This matter of price control is abso-  
 lutely new in America. Some are  
 watching with much concern to see  
 the results. It is hoped that this con-  
 trol will be necessary only as to one

grain, wheat, and that this will in a  
 measure control other prices. Mean-  
 time let every food producer consider  
 how he can add to the state's produc-  
 tion and how the 90,000 acres of in-  
 crease in wheat planting may be se-  
 cured.

## LAND SETTLEMENT

The new land settlement com-  
 mission is in action. It is sending  
 circulars to owners of land in various  
 communities asking for submission of  
 propositions which will aid the com-  
 mission in securing 5000 or more  
 acres for its first land settlement pro-  
 ject. Dr. Elwood Mead is chairman  
 of the board and Dr. David N. Mor-  
 gan is its secretary. Dr. Mead in-  
 forms us that the work of the com-  
 mission is being encouraged on prac-  
 tically every side. Some of the larger  
 landed interests which at one time  
 were considered not entirely friendly  
 to this movement have manifested a  
 desire to cooperate and aid in the  
 most effective way.

The first step of the commission  
 has been to make appeal to owners of  
 lands and interested communities for  
 definite propositions as to land. When  
 the land is secured it will be sup-  
 plied with irrigation and careful, sci-  
 entific investigation of every portion  
 of the tract made. It will be subdi-  
 vided into 20, 40, 80 and 100 acre  
 fields. Prices of the various units  
 will be fixed according to reports of  
 the experts. The type of farmer de-  
 sired is that one who will engage in  
 diversified farming. The commission  
 believes in intensive culture, but at  
 the same time it recognizes the great-  
 er opportunity for success where  
 there is diversification. There must  
 be some livestock kept on every  
 place. In this connection it is hoped  
 by the commission that certain breeds  
 will be kept by these farmers, that is,  
 in dairying, let every farmer in the  
 tract who keeps a cow keep a Hol-  
 stein, a Jersey, a Guernsey or an  
 Ayrshire, whichever breed is adopted  
 by the community. Then let there be  
 rivalry between farmers as to who  
 shall keep the very best animals of  
 this particular breed. The neighbor-  
 hood should unite and buy the best  
 bull of the breed which it has, or can  
 borrow, the capital to pay for. In  
 this way a name for this community  
 may be built up as the producer of  
 some of the finest of the breed and as  
 a section where quantity may also be  
 had.

The commission has in hand \$260,-  
 000, \$10,000 of which is for the immed-  
 iate expense of the commission. The  
 remainder must be invested in the  
 first project. Two hundred and fifty  
 thousand dollars is for improving and  
 fitting this for the settlers. Within  
 the period of 36 or 40 years these  
 monies will be returned to the state  
 treasury with interest.

But we find we are entering too  
 much at length into this plan, at least  
 for this particular page. Another  
 week we will give more of the par-  
 ticulars which were given to us in a  
 few minutes interview with Dr. Mead  
 after the last meeting of the com-  
 mission in Sacramento.

Australia has benefitted her set-  
 tlers, herself and made much money  
 in direct profit because of a similar  
 land settlement scheme. Dr. Mead's  
 connection with the Australian pro-  
 ject fits him for giving to California  
 wonderful service. We are leading  
 the United States in this advanced  
 step. We hope and believe it is  
 fraught with great opportunity for  
 greater good than most of us appreci-  
 ate.

## Agricultural News No

The Western Fruit Jobbers' As-  
 sociation will hold its next annual  
 meeting at Houston, Texas, January

California gets almost a half mil-  
 lions dollars from the \$14,000,000 ap-  
 propriation for the construction  
 and maintenance of rural post roads

Onion growers around Laredo,  
 Tex., received the past season, \$3  
 000 for the Bermuda onion crop  
 exceptionally high prices were received

Burma exports 22,792,000 quarts  
 of rice. Its production is increas-  
 ing slowly. Its freight rate is now  
 being 18 fr. per quintal as compared  
 with 3.2 frs. previous to the war

California is not the only pro-  
 ducer of lima beans. The island of  
 Madagascar, off the southeast coast  
 of Africa, last year produced 14,000  
 tons of limas. Most of these were  
 shipped to London.

Maryland and many of the  
 municipalities within the boundary  
 that state unite in the establish-  
 ment of municipal forests, this partly  
 for the sake of watershed protection  
 partly for recreation purposes.

This week Hoover of the fed-  
 eral administration will address  
 businessmen of all America at the  
 States chamber of commerce  
 tails of greater efficiency in  
 business and farming interests  
 war measure.

Porto Rico's output of sugarcane  
 year was in excess of half a million  
 tons. That was the first year  
 ever reached such high figure  
 was nearly 20,000 tons increase  
 the preceding year. The pro-  
 duction of the present season's  
 will materially exceed that.

Weather conditions are con-  
 tinuing fine over practically all corn  
 and another week without frost  
 mean that almost every bushel  
 corn in the United States is safe  
 that more than the 3,000,000  
 bushel crop is practically assured  
 Present indications are that  
 year's production, as compared  
 that of last year, is 125.7 per cent

Two assistant secretaries of  
 agriculture have been appointed  
 president. They are: Clarence  
 ley, director of agricultural extension  
 in Texas, and Dr. Raymond A.  
 son, president of the Iowa state  
 college of agriculture. Provision  
 appointment of these secretaries  
 made in the recently enacted food  
 production measure.

President Menocal of Cuba has  
 a great worker for agricultural  
 improvement in his country and  
 himself an enthusiastic farmer. His  
 appointment is now announced  
 secretary of agriculture for Cuba  
 new appointee is Dr. Sanchez  
 monte who is a planter, breeder  
 registered horses and cattle and  
 believer in up-to-date methods of  
 culture and farm handling.

Recent figures of the crop in-  
 creasing board of the United States  
 department of agriculture indicate  
 wheat production this year, compared  
 with last, will be about 104.4 per cent  
 This is not as great as wished  
 because of winter killing and  
 because of drouth and heat in  
 Texas and other large wheat  
 areas. Oats, on the other hand, show  
 material increase, 122.4 per cent,  
 112.7 per cent, rye 118.1 per cent,  
 greatest of all, buckwheat with  
 100 per cent. Potatoes, likewise, show  
 most as great increase as buckwheat  
 with 102.1 per cent.



# Agricultural News Notes of the Pacific Coast

## Northern California

fruit shipments are falling off decidedly.

Blackeye beans are being harvested in Sutter County.

The rice mill at Gridley will be put in shape to operate this fall.

Yolo County reports a crop of 500 tons of almonds in the valley running from Esparto to Rumsey.

The state board of control has appropriated \$5000 to be expended in fighting mealy bug pest control.

The San Francisco Grain Exchange is wired to Herbert Hoover asking for the price of California wheat is.

The Peach Growers will pay growers 10 cents per pound on delivery on all grades and varieties of dried peaches.

The California Development Board reports rice buyers in the field offering \$3.00 and better for this season's crop.

Rice growers are busy shooting the chaffbirds in their grain. The recently enacted law gives them the privilege.

Dixon, Solano County, is again discussing the building of a canal system to irrigate some 20,000 acres of land.

The sugar beet factory at Hamilton, Glenn County, is in operation. It has had difficulty in securing sufficient labor.

The suggestion is made that the Feather River highway be chosen as the route for the Lincoln Highway to California.

During the month of August Gridley, Butte County, shipped out 106 loads of fruit and grain and 1800 cases of butter.

The warehouse of the Sutter Almond Growers' Association opened September 10 and will be open for receiving nuts on each Monday.

The California Land Settlement board has asked owners of from 4000 to 6000 acres of land suitable for intensive cultivation to submit bids.

At the recent annual meeting of the Olive Products Company at Oroville B. B. Meek was elected president and Carleton Gray, secretary-treasurer.

Many of the olive canneries of the state have found it profitable to handle other products. Some of them handle fish, others tomatoes, figs and various by-products.

The Ukiah cannery is running day and night with a force of 200 hands. Four thousand pounds of beans are brought in each alternate day. The bean run is expected to last 40 days.

The last of the 1916 rice crop stored in the warehouse at Maxwell, Colusa County, was shipped last week. Shipments from this point for the season have amounted to over 100,000 bags.

There are three associations of the Almond Growers' Exchange in Yolo County; one at Guinda, one at Esparto and another at Rumsey. All nuts sent out from their packing houses carry on the sack "Yolo County."

Secretary Murdock of the California Raisin Association has been looking over the field in Sutter County the past week. The dryers are finding it difficult to get sufficient help to pick the grapes as fast as the dryers can handle them. Many women are picking.

## Central California

Kings County is now working for a farm adviser.

Tractor short course, University Farm, Davis, November 5-15.

The first car of Malagas of the 1917 crop was sent from Kerman to Boston.

Chowchilla, Madera County, has abandoned its plan to hold an agricultural fair this fall.

Eight thousand raisin trays were destroyed by fire on a ranch near Armona last week.

A sheep raiser near Porterville reports the loss of 3000 sheep from eating poisoned grain.

In compliance with the new state law many cattle and sheep men of Tulare County are recording their brands.

The Lindsay Ripe Olive Company has shipped its last car of olives for the season's run and is now preparing to handle tomatoes.

The food administration announces that the entire American sugar industry will be placed under government control on October 1.

Exhibits for the land show to be held in San Francisco are being sought by secretaries of chambers of commerce of various counties.

The Fresno County farm bureau held a silo building demonstration August 31 and September 1 at the Hillcrest Farm south of Carruthers.

A special prize of \$300 for the best pure bred dairy herd is offered by directors of the Fresno district fair. Entries close Monday, September 24.

All strike troubles were settled at the Libby, McNeil and Libby cannery at Selma, the strikers returning to work on the same terms as before the strike.

In an effort to break up the Prune and Apricot Growers' Association outside packers are said to be offering as high as seven cents per pound for prunes. The association guarantees its members six cents.

Representatives of the cottonseed crushing and refining industry are in conference with food administration officials with a view to putting the industry under voluntary regulation by the food administration.

Grape growers of the Alta district of Tulare County will meet at Dinuba today with the state viticultural commission for the purpose of inspecting the restoration work of J. W. Jeffrey in vineyards of that section.

A committee representing the sugar beet interests of California is endeavoring to secure refugee laborers from those recently deported from Bisbee, Arizona, to aid in the harvest of the sugar beet crop.

Work has been started on the fair grounds of the Stanislaus Live Stock Show and Exposition which will be held the coming week. A special train will be run from Sacramento to bring prize winners from the state fair to the Stanislaus Exposition.

The so-called "mysterious disease" affecting vineyards in some sections of Tulare County is now said to be not a disease but a condition caused by alkali brought up by the seepage of surface water. After treating such affected portions of the vineyard with gypsum the vines were found to have made speedy and complete recovery.

## Southern California

Orange County is taking active steps toward securing a farm adviser.

The Hemet Canning Company has been turning out from 75 to 85 tons of peaches daily.

Alfalfa growers will have a special exhibit at the Riverside Fair to be held October 9-16.

Wheat rather than barley will be planted more generally by farmers of Imperial Valley this fall.

Imperial Valley is elated over the way in which her irrigation waters are holding up this season.

Ranchers of the Coachella Valley are planning for a larger acreage of onions than any previous year.

The Santiago Fruit Growers' Association of Orange County expects to build a \$125,000 precooling plant.

The College Heights Citrus Association at Claremont received this year practically a half million dollars.

Ranchers of the Hemet-San Jacinto Valley are urged to make exhibits at the valley fair which will be held October 16-19.

The packing house of the Foothill Valencia Growers' Association of Orange County burned last week with a loss of \$12,500.

The San Jacinto-Hemet Valley Fair Association has decided to declare off for this season the fair which it had planned to hold.

The Apple Show held at Yucaipa every fall will this year be held November 1-4 and will be called the Southern California Apple Show.

Citrus growers of San Bernardino County met last Wednesday to formulate plans for the organization of a county citrus fruit growers' association.

North Whittier, Los Angeles County, will have a big production of beans, much of the output being grown as an intercrop in walnut and citrus groves.

An owner of a flock of 2500 Angora goats near Elsinore, in Riverside County, recently finished shearing his flock. It is expected the wool will bring 70 cents per pound.

California led all cotton producing states in 1916 in average yield per acre and average price per pound received by growers for short staple, growers average 20 cents per pound.

One of the most severe forest fires for years has just been brought under control by Forest Supervisor Charlton and a corps of fighters in the mountains north and west of San Bernardino.

The annual fair of the Soboba Indians is being held today. This is probably the largest Indian fair held in Southern California and is attended by Indians from all over the southern part of the state.

The Saticoy Walnut Growers' Association at its recent annual meeting elected the following directors: J. M. Sharp, J. M. Dickinson, E. O. Tucker, G. A. Smith, H. F. Clark, T. A. Kelsey and L. B. Hogue.

In accordance with government recommendations the Pomona high school will this year offer a course in practical agriculture. Students taking the course will be expected to spend several hours each day in home work.

## The Coast

Wenatchee will build a \$13,000 fruit drying plant.

The Seattle market reports a slight demand for early apples.

Douglas County, Washington, will have a \$7,000,000 wheat crop.

County agents of Arizona are making a state wide crop survey.

A grain elevator to cost \$100,000 will be erected at Ogden, Utah.

The Indians of the Yuma reservation held a three-day fiesta last week.

Eight hundred cars of pears will be shipped from North Yakima, Washington.

Cotton raisers of Yuma Valley Arizona, have organized a cooperative association.

Bean growers of Pueblo County, Colorado, controlling 19,212 acres, have formed an organization.

An onion grower of Texas has begun suit because of non-delivery of crates purchased on contract.

Five hundred coolies will be imported to aid in harvesting the cotton crop of Lower California.

Seventy-nine cents a pound for long staple cotton is reported being paid in the Salt River Valley of Arizona.

One thousand Belgians will be colonized on a tract of 18,000 acres above the Grand Ronde reservation in Oregon.

Owing to shortage of cars for transporting to pasture many cattle are dying in drouth stricken portions of Texas.

A \$1,000,000 sugar beet factory will soon be built at Rigby, Utah. Six thousand acres are already contracted.

The entire Northwest faces a box lumber shortage, and much fruit will be shipped in paper and cardboard containers.

Onion growers of Texas have agreed on the standard bushel crate, as approved by the department of agriculture.

The cranberry crop of Washington, estimated this year at about two-thirds of normal, will be ready about September 30.

Salt River Valley cotton fields report 95 per cent of normal yield. The crop has been reduced by summer rains and by inroads of insects.

A large Arizona stockman says "From a stockman's point of view Arizona conditions have not been better in 30 years than they were on August 1."

The live stock sanitary board of Arizona proposes to reduce the number of live stock brands on which filing has been made but which for years have remained unused.

Whatcom County, Washington, is expecting a \$250,000 crop of peas. Agents of both the United States and Canadian governments are already in the field bidding for the output.

Navajo Indians have been taking advantage of the high wool prices to market their clip at Holbrook, Arizona. Many of them are prosperous and market their wool in their own auto trucks.

State inspection of fruit shipped from North Central Washington was discontinued the first of September because of the discontinuance of the services of many horticultural inspectors for lack of funds.



# Holsteins at the State Fair

Written for California Cultivator By C. L. Hughes

**T**HE Holstein show at the 1917 California State Fair was as a whole the most interesting yet made by the breed at this fair. It was a long way from the best showing in some of the classes, while other classes were perhaps better than similar classes at previous fairs.

Main interest centered about the entries of several exhibitors showing for the first time. Of these the herds of the J. S. Gibson Company and J. H. Harlan Company made a most favorable impression and justified popular approval by their show ring winnings.

Among exhibitors who have shown at this fair before, Bridgford Company uncovered a splendid show herd up in most classes to the high standard which this company has set for type in their herd. Napa State Hospital showed a splendidly fitted herd and is to be complimented highly for the extraordinary showing made with such a comparatively small herd to select from. John Benoit showed a small herd but they would not have been out of place in any company and were well up in the money in this fast show. George Kounias made an excellent showing, and better ones may be expected of this herd at later fairs for Kounias is a young breeder who is coming ahead fast with very good judgment of type. Toyon Farms showed only a few head and were up on the front line at all times.

The aged bull class as a whole was hardly up to the standard set at this fair for several years back. The Benoit bull, El Prado Wayne Colantha, was a comparatively easy winner in this class, and this bull may well be watched for future shows as he develops. The Gibson bull, Segis Creamcup Pontiac, was placed second in this class and is a showy fellow but lacked considerable of the front end and quality of the bull placed above him. The Kounias bull, King Korndyke Hengerveld Ormsby, took third position and was in many respects the most commanding bull in the class, but lacked something of the refinement of line of the two bulls placed above him. The fourth bull was in fit condition but fell somewhat short in barrel and topline. The fifth bull was an attractive fellow, almost pure white in color, but lacked in barrel to go higher in this class, and somehow did not show to good advantage the straight topline that the writer has noted in this bull as he stood in his home paddock.

The Harlan bull, Prince Butter Boy Walker, had a walkover in the two year

old class. He was later made senior champion and contested grand championship honors with a bull to which it was no disgrace to lose. This bull is a son of Prince Gelsche Walker, and he should be heard from outside the show ring.

The senior yearling class uncovered an outstanding winner and the junior and grand champion in the Bridgford bull King Segis Alcartra Prilly. This bull is unquestionably one of the most promising show bulls yet uncovered at California state fair. The youngest bull in the class, he yet excelled in size and is a wonderfully deep bodied fellow with a great topline and commanding bearing. The Gibson bull, Segis Annie De Kol Burke, took second position by a narrow margin over the son of Segis Pontiac De Kol Burke recently purchased by Gonzalo Campo y Cia, Santiago, Chile, thus reversing the positions won by these two bulls in their senior calf form. Fred Ross broke into the money in this class with Rossmead Fidessa Pieterje.

The junior yearling class brought a good bunch of young fellows of which the Gibson bull, Segis Mead Walker, son of Prince Gelsche Walker, looked the best by a comfortable margin. Two sons of King Valdessa won the next two places, the second money going to the Harlan bull, Toyon Valdessa Hengerveld, and third money to the Toyon bull, FINDERNE Soldene Valdessa. It was a hair line decision between these two bulls with superior fitting a factor in the decision.

The senior bull calf class brought out a snappy bunch of youngsters, the Bridgford calf Nudine Butter Boy winning easily. Gibson landed the next two places with two sons of Segis Creamcup Pontiac, while Heroux came in for fourth money and Fred Ross' entry in fifth place.

The junior bull calf class was a spirited contest in which the five moneys finally went to five different exhibitors, the Heroux entry taking first position.

The aged cow class was lacking in numbers but was of acceptable quality. Last year's first prize winner was not to be denied again this year and the Bridgford cow Miss Korndyke Mercedes 2nd took first position and was later made senior and grand champion. Second place was won by the Napa State Hospital cow Hazelwood Heilo Queen. In this class she lacked the constitution and capacity to win over the cow placed above her.

The three year old cow class brought

out only two entries, Napa winning first with last year's grand champion at Washington State Fair, and Bridgford second.

From here on Judge H. H. Kildee found plenty of action in every class. In the two year old class the Heroux heifer, Riverview Bracelet Brett, won first place on her great refinement of type, although possibly lacking a bit in ruggedness and capacity. Bridgford's entry scored second in this class and Gibson's entry was a strong third, with Napa and Heroux taking next two places.

The senior yearling class brought out one of the best classes of this age yet shown at this fair and the winner was good enough to take junior championship later on. The Napa state hospital heifer, Fay Nook Creamelle, finally took first money, and is a beautifully finished heifer of promising form. Second place went to the Gibson heifer, Colantha Juliana Dotty Sunnyside, a great favorite at the ringside. The Harlan entries of two splendid daughters of King Mead of Riverside took third and fifth places with the Bridgford heifer, Miss Pontiac Model De Kol, sandwiched between.

Gibson came out fully armored for hot competition in the junior yearling heifer class and won first and second, first money going to a most promising daughter of King Mead of Riverside. Fred Ross moved up to third place in this hot class, while Bridgford took the next two places.

Possibly the most uniform class of the whole show was the senior heifer calf class. The decisions in this class were decidedly of the hairline variety, with the beautiful Bridgford heifer, Jennie Korndyke Walker, going to top place. Blood told here as she is a daughter of King Walker 5th, son of the famous National Dairy Show winner Paula of Chagrins Falls 3d. The Gibson heifer, Princess Hazel Pontiac Alcartra, took second position with the Napa state hospital entry next, Gibson in fourth place and Bridgford in fifth. The heifers that were left out of the money in this class were good enough to make up a strong show class themselves.

The strong junior heifer calf class settled down to a contest between Bridgford and Harlan, honors finally going first and third to Bridgford and second and fourth to Harlan.

In the group classes Napa state hospital won first on aged herd with Gibson second. The presence of the grand champion bull at the head of an otherwise excellent breeders' young herd made first money certain for the Bridgford entry in this class. Bridgford also showed a coking good calf herd winning first, with Gibson's well balanced entry in second place and Harlan in third place with a herd that suffered somewhat from the handicap of youth.

Fred Ross took down his first blue in the produce of dam class, completing a Holstein show that will long be remembered by California state fair regulars.

The work of Judge Kildee was of high character and met with the fullest approval both from exhibitors and the ringside talent.

Exhibitors—J. S. Gibson Co., Williams; J. H. Harlan Co., Woodland; Bridgford Co., Knightsen; J. W. Benoit, Modesto; S. G. Kounias, Modesto; Napa State Hospital, Napa; Toyon Farm Assoc., San Jose; F. A. Heroux, Oakland; Fred D. Ross, Hanford; E. G. Wharton, Tulare; Gonzalo Campo y Cia., Santiago, Chile, S. A.

## Awards

Bulls, three years and over — 1, El Prado Wayne Colantha, Benoit; 2, Segis Creamcup Pontiac, Gibson; 3, King

Korndyke Hengerveld 7th, Kounias; Prince Rag Apple Imperial, Napa Hosp.; 5, It State Bells, Wharton.

Bulls, two years and under three—

Prince Butter Boy Walker, Harlan.

Bulls, senior yearlings—1, King Segis Alcartra Prilly, Bridgford; 2, Segis Annie De Kol Burke, Gibson; 3, Segis Pontiac De Kol Burke 11th, Campo y Cia; 4, Rossmead Fidessa Pieterje, Ross; Sir Aagie Alcartra Korndyke, Gibson.

Bulls, junior yearlings—1, Segis Mead Walker, Gibson; 2, Toyon Valdessa Hengerveld, Harlan; 3, FINDERNE Soldene Valdessa, Toyon; 4, Rossmead Alcartra Kol, Ross.

Senior bull calves—1, Nudine Butter Boy, Bridgford; 2, Prince Pontiac Alcartra, Gibson; 3, Hartog Korndyke Pontiac, Gibson; 4, Model Domino Gha Heroux; 5, Rossmead Korndyke De K Ross.

Junior bull calves—1, Dutchland Aggie's Lucky Guess, Heroux; 2, Hazel Pontiac Gem, Napa St. Hosp.; 3, Benoit of Gibson; 4, Toyon King Korndyke 5, dene, Kounias; 5, Toyon King Korndyke Pet, Toyon.

Senior champion bull — Prince Butter Boy Walker, Harlan.

Junior and grand champion bull—King Segis Alcartra Prilly, Bridgford.

Cows four years and over — 1, Miss Korndyke Mercedes 2nd, Bridgford; Hazelwood Heilo Queen, Napa State Hospital; 3, Koroba Electa, Benoit; Midnight Marie, Napa St. Hosp.; Spring Farm Pauline Pontiac 2nd, Bridgford.

Cows, three years and under four—Bessie Johann Lill Black, Napa St. Hosp.; 2, Spring Farm Pontiac Maid 2nd, Bridgford.

Cows, two years and under three—Riverview Bracelet Brett, Heroux; Bos Antonia Cornucopia, Bridgford; Queen Pontiac Charlotte Korndyke, Gibson; 4, California Colantha Bess, Napa St. Hosp.; 5, May Flower Pieterje, Heroux.

Senior yearling heifers—1, Fay Nook Creamelle, Napa St. Hosp.; 2, Colantha Juliana Dotty Sunnyside, Gibson; 3, Hazelwood Korndyke 2nd, Harlan; 4, Miss Pontiac Model De Kol, Bridgford; Nadgi Korndyke Mosl, Harlan.

Junior yearling heifers — 1, Contenta Riverside Mead, Gibson; 2, Cora Forth of Linwood, Gibson; 3, Rossmead Pauline Hengerveld, Ross; 4, Valdessa Inka Korndyke, Bridgford; 5, Adeline Pontiac Segis Korndyke, Bridgford.

Senior heifer calves—1, Jennie Korndyke Walker, Bridgford; 2, Princess Hazel Pontiac Alcartra, Gibson; 3, Lady Ormsby Genesee, Napa St. Hosp.; Princess Korndyke Segis Alcartra, Gibson; 5, Princess Inka Butter Girl.

Junior heifer calves—1, Woodbine Pontiac Cornucopia, Bridgford; 2, Margaret Walker Moore; 3, Inka Hengerveld Korndyke Pontiac, Bridgford; 4, Modjeska Walker Crane, Harlan; 5, N. S. E. Midnight Marie.

Senior and grand champion cow—Miss Korndyke Mercedes 2nd, Bridgford. Junior champion cow—Fay Nook Creamelle, Napa St. Hosp. Cow with semi-official yearly record—1, Princess Jetze, Gibson.

Aged herd—1, entry of Napa St. Hosp.

2, entry of Gibson.

Breeder's young herd — 1, entry of Bridgford; 2, entry of Harlan; 3, entry of Ross.

Calf herd—1, entry of Bridgford; 2, entry of Gibson; 3, entry of Harlan.

Get of sire—1, get of Segis Creamcup Pontiac, Gibson; 2, get of Prince Butter Boy Walker, Harlan; 3, get of Creamcup Fidessa Cornucopia, Ross.

Produce of dam—1, produce of Fidessa Pieterje, Ross; 2, produce of Napa Aagie of Oakwood, Gibson.

## State Fair Observations

Messrs. Guilford, Stonerod and Briggs Give Items Regarding Live Stock

By W. S. Guilford

### HOGS

The most striking features of the 1917 hog show were the large number of new

exhibitors who were prominent prize winners and the uniformity and excellence of the show throughout. There were very few poor or common hogs of any breed shown, and there were six months old pigs in nearly every breed that weighed close to 300 pounds. The profitable production of high class pork is the object sought by those who are breeding hogs of all breeds, and all are accomplishing this.

### The Judges

The state fair board is to be commended for the capable and high class lot of judges selected to rate the hog classes this year. Elbert J. Barker of Thornton Indiana, who passed on Berkshires, is one of the most prominent breeders in America, an old time exhibitor and a man whose judgment and honesty is unquestioned. He was given a vote of thanks by the exhibitors. J. J. McLain of Anna Texas, who judged Duroc-Jerseys, is a breeder and exhibitor and president of the National Duroc-Jersey Swine Breeders' Association. Walter Gatton is one of the best posted hog men in the West. He judged Yorkshires, Chester Whites and Hampshires. Howard Frances of New Lenox, Illinois, the Poland-China judge, has bred and exhibited hogs for many years and has won grand championship on fat barrows at the International at Chicago several times.

### Chester Whites

Chester White hogs are becoming more widely distributed over the West than the number of exhibitors at the fair this year would indicate. The reason for this is that they are being bought more by farmers than by breeders who will exhibit them.

Three good herds were represented, and the Chester White division was nicely decorated and kept neat and clean, like the Yorkshire section. The two barns which housed the Yorkshires and Chesters were at the beginning of the hog show, and the impression made by



**EMPRESS LASS 218446**  
Grand Champion Washington, Oregon  
California and A. Y. P. Exposition

## 2.95 Pounds Butter Daily for 158 Days

has been produced by Empress Lass under dairy conditions. Still working. Her sons and grandsons are from big producers of show type. Prices right.

### LOCKEFORD STOCK FARM

N. H. Locke Co., Props.

Breeders of Jersey Cattle and Chester White (O. I. C.) Swine.

LOCKEFORD, San Joaquin County, CAL.

## Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count Glory 426982, grand champion at the California State Fair, 1916. Berkshire herd won Premier Exhibitor's banner at P. P. I. E.

513 Hearst Building  
San Francisco

CARRUTHERS FARMS  
Mayfield, Cal.

## The Third Sacramento Sale — 150 Registered Holsteins

The Third Sacramento Sale of registered Holsteins will offer established breeders and beginners unusual opportunities to secure breeding animals of the best quality. Aside from the very high excellence of the cattle in this sale, there is unusual attractiveness added in the way of health requirements. Every animal over six months in this sale has an individual tuberculin test certificate issued by a veterinarian approved by the sales company, and the buyer will be permitted to tuberculin retest every such animal he buys, turning back to the seller at full purchase price any animal that might react on retest.

In this sale will be offered splendidly bred heifers and cows in calf to bulls whose daughters have never been offered for sale, and it will be the opportunity of the season to secure daughters of these sires in the only way they can be secured.

Just consider a few of these opportunities in this sale:

Cows with A. R. O. records up to over 28 pounds butter in seven days, and heifers of most desirable breeding and of show quality bred to King Segis Alcartra, Abbecker and King Segis Alcartra Prilly, both sons of the \$50,000.00 bull King Segis Pontiac Alcartra and both out of 30 pound

dams of great transmitting quality.

Splendidly bred cows and heifers in calf to Sir Aagie De Kol Acme, whose dam is Aagie Acme of Riverside 2nd, 35.36 pounds butter in seven days, 1095.1 pounds butter in one year as a four year old, and she is now well along on another year's test that promises to go well over 1300 pounds butter.

Choice cows and heifers bred to King Morco Alcartra, whose dam is Tilly Alcartra, the world's greatest dairy cow, the only cow in the world to average 24,000 pounds of milk per year for five years, and this covers her first five lactation periods; the only cow of the breed to average over 1000 pounds butter per year for four years; the only cow in the world to average 963.32 pounds butter per year during her first five lactation periods.

Young cows and heifers of outstanding merit and breeding bred to Prince Gelsche Walker Korndyke, the \$4000 son of Prince Gelsche Walker.

Some of the best bred and best developed heifers ever led into a California sales ring in calf to it, son of Pontiac Clothilde De Kol 2nd, 37.21 pounds butter in seven days, 1271.6 pounds butter in one year, world's records when made, and she is one of the greatest if not the greatest

transmitting cow of the breed. In no sale, with the possible exception of the Stevens Bros. Co. Dispersal Sale, have buyers had an opportunity to secure such great heifers bred to it as they will have here.

About 20 high class heifers and cows, many out of A. R. O. dams with records up to over 29 pounds butter in seven days, will be sold in calf to Sir Skylark Ormsby Hengerveld. He is the only bull in California with three 30 pound daughters; he is the only bull in California with two 30 pound daughters and a 30 pound granddaughter all under mature age; he is the sire of the cow that holds the yearly butter record for the northwestern states with a record of 1127.8 pounds butter in one year, record made at past nine years of age and she came back at her next freshening and made over 30 pounds butter in seven days at past 10 years of age. There will be many opportunities to buy such females in calf to this sire, and his offspring is not only in great demand today but will be in greater demand as more of his daughters are developed.

This is just an opening outline of the great cattle that you will find in this sale. If you want to get some of the best begin to plan now to attend this sale and jot down the date and place.

## State Fair Grounds, Sacramento, California

Please Apply for Catalog Now. Sales under management of

TUESDAY And WEDNESDAY  
OCTOBER 30-31, 1917

CALIFORNIA BREEDERS SALES AND PEDIGREE COMPANY, J. M. Henderson Jr., President, C. L. Hughes, Sales Mgr.  
SACRAMENTO, CALIFORNIA



These attractive shows were good. Many of the fair visitors will have a better opinion of the hog business because of it. It is a further demonstration of the well known fact that business and advertising ability will produce results in the exhibition of hogs as well as anywhere else. A lot of mellow, easy feeding Chesters were shown, and they were attractively presented.

#### Yorkshires

At the Panama-Pacific Exposition the Yorkshire interests were represented by one breeder. This year hogs from three Yorkshire herds were shown. Interest in Yorkshires is increasing and Yorkshire breeders are producing a hog now that stains all of the vigor and prolificacy of which the breed is noted, but combines with it a little heavier covering of fat.

McCarthy of Riverina Farms, Modesto, as the pioneer Yorkshire herd and has supplied animals to the other breeders in the state. Tubbs won championship on a boar recently imported from the East. McCarthy won the sow championships. The show was very attractive. A lot of fine hogs were brought forward in splendid condition.

#### Hampshires

Improvement over previous shows was the order of day in the swine division, and nowhere was it more marked than in the Hampshires. There were six months pigs weighing right at the 300 pound mark, and it required evidence of good feeding as well as good breeding to put them in the ring. The Hampshire show made many friends for the breed and was a credit to the exhibitors.

#### Duroc-Jerseys

"Two hundred per cent better than last year"—this is the estimate made of the 17 Duroc show by Walter Gatton who judged them last year and who is in close touch with the affairs of the breed. Durocs are becoming more popular every year in California. As will be noted in the list of awards which follows, many new names appear, and these new exhibitors were prominent winners. The Duroc-Jersey hog is noted for being very prolific, having plenty of length and size, and being a good rustler. Breeders report sales particularly good this fall.

#### Berkshires

There were not so many Berkshires shown as last year, but there were more good Berkshires than have ever before been brought together in the West. The show was uniformly good throughout. A good Berkshire or a good Berkshire in poor condition—cannot win in a Western showing.

More new breeders exhibited Berkshires than ever before, and the fact that they won in some of the most closely contested classes shows that men who know good hogs and can feed them right are coming into the Berkshire ranks. This is a hopeful sign for the future of the breed in this territory. Frank Anderson of Sacramento won second and third on sow pigs that he raised and sows he bought in congress sale at Davis last February. Dr. Hammond won first on a boar pig.

Prizes were well distributed; no one made a clean sweep. Grand champion went to Perkins on a hog bought from him by Humphrey. The grand champion sow was bred by Carruthers and bought by Harry Murphy. Every breeder whose name appears in the following list made a showing that was a credit to his herd and to the breed.

Exhibitors securing awards—Perkins Co., Perkins; James Mills Orchard Co., Hamilton City; A. B. Humphrey, Escalon; H. L. and E. H. Murphy, Perkins; L. Stephenson, Los Molinos; Frank A. Rush, Santa Rosa; H. J. Hammond, Sacramento; Carruthers Farm, Mayfield; George M. York, Modesto; Frank B. Anderson, Sacramento; Napa State Hospital, Napa.

The awards:  
Boars, two years old and over—1, Perkins on Majestic King 6th; 2, Mills on Ames Rival 70th; 3, Humphrey on Solano Emblem; 4, Murphys on Artful King 11th; 5, Stephenson on Tehama Chief.

Boar, senior yearling—1, Brush on Mayfield Champion; 2, Humphrey on Fashion Longfellow 27th; 3, Brush on Incon Duke.

Boar, junior yearling—1, Brush on Inona Lee Champion 6th; 2, Hammond on Hedgemere Irving.

Boar, senior pig—1, Brush on Rincon's Rival; 2, Humphrey on Escalon Blackbird; 3, Carruthers on Mayfield Rival 11th; 4, Brush on Rival, Rincon; 5, York on Western Premier 3rd; 6, Mills on Mills Prover 3rd.

Boar, junior pig—1, Hammond on Hedgemere Star; 2, Humphrey on boar; Stephenson on Wilsonia Chief Laurel; Brush on Rincon Lee Champion; 5, Anderson on Natoma Riverby.

Sows, two years old or over—1, Brush on Rockwood Lady 100th; 2, Humphrey on Fashion Longfellow Princess; 3, Humphrey on Grand Bernice; 4, Murphy on Rival Pointer Star 15th; 5, Brush on Whier's Geronimo.

Sows, senior yearling—1, Brush on Mayfield Rosemead 5th; 2, Brush on Rockwood Belle 7th; 3, Humphrey on Escalon Lady; 4, York on Lady Rose; 5, Napa State Hospital on Lady Combination 30th.

Sows, junior yearling—1, Humphrey on Leader's Artful Belle 3rd; 2, Brush on Mayfield Lady 10th; 3, Brush on Princess Leader; 4, Murphy on Mayfield Laurel 11th; 5, Hammond on Hedgemere Belle.

Geronimo; 2, Humphrey on Solano Emblem, Fashion Longfellow Princess, Leader's Artful Belle III, Grand Bernice.

Herds, boar and three sows under one year—1, Humphrey on Escalon Blackbird, Amoretta, Escalon Ladybird, Allinda; 2, Carruthers on Mayfield Rival 24th, Mayfield Laurel 15th, Mayfield Laurel 16th, Mayfield Lady 9th; 3, Brush on Mayfield Champion, Rival B. Princess, Rival B. Princess II, Rivals Lady Lee 42nd; 4, Anderson on Natoma's Riverby, Natoma Princess, Natoma Duchess, Natoma's Beauty.

Herds, boar and three sows—1, Humphrey on Fashion Longfellow XXVII, Fashion Longfellow Princess, Leader's Artful Belle III, Grand Bernice; 2, Escalon Blackbird, Amoretta, Escalon Ladybird, Allinda; 3, Carruthers on Mayfield Rival 24th, Mayfield Laurel 15th, Mayfield Laurel 16th, Mayfield Lady 9th.

Get of sire—1, Humphrey on Solano Emblem; 2, Brush on Ames Rival 102nd; 3, Mills on Ames Rival 70th. Produce of dam—1, Carruthers on Produce of Forest Grove Laurel 2nd, Mayfield Laurel XVI, Mayfield Laurel XV, Mayfield Rival XXIV, Mayfield Master VII; 2, Humphrey on Produce of Columbia's Model 108th; 3, Brush on Produce of Riverby Princess; Winona Champion 1st, Winona Champion 2nd, Winona Champion 3rd, Winona Champion 4th.

Senior champion boar, Perkins on Majestic King 6th. Junior champion boar, Brush on Rincon's Rival. Senior champion sow, Brush on Rockwood Lady 100th; reserve Brush on Mayfield Rosemead 5th. Junior champion sow, Carruthers on Mayfield Laurel 16th. Reserve Stevenson on Miss-Villa's Laurel. Champion boar bred by exhibitor, Perkins on Majestic King 6th; Reserve; Brush on Rincon's Rival. Champion sow bred by exhibitor, Carruthers on Mayfield Laurel 16th. Fat barrows, any age—1 and 2, Humphrey; 3, Brush. Fat barrows, pen of three, any age—1, Humphrey; 2 and 3, Brush.

#### SHEEP

Sheep are so high in price and there is such keen demand for breeding animals that many breeders are sold out so closely that they have nothing to show. Others have not gone to the expense of fitting a flock and making a show when they can sell everything they raise without this expenditure.

Corriedales, a new breed developed in Australia by crossing long and fine wool sheep to secure size, a heavy fleece and hardiness on the range, were shown by Ellenwood and Ramsey of Red Bluff.

Dorsets were shown for the first time by H. H. Schmitt of Davis. This breed is noted for the milking ability of the ewes, the number of twins raised and the fact that the two crops of lambs a year can be raised.

Bullard Bros. of Woodland made a fine show of "Bullard type" Rambouillets. Their sheep combine a heavy fleece with a good mutton carcass.

Kaupke Bros. of Woodland; Calla Grove Stock Farm, Manteca, and R. F. Miller of Davis, exhibited Hampshires. Miller had champion ram, Kaupke champion ewe.

Rambouillets and Shropshire rams were shown by McInnes and Salz of Red Bluff.

#### UNIVERSITY OF CALIFORNIA

The pure bred livestock breeders of the state were proud of the showing made by the University of California. The horses, cattle, sheep and swine from the Davis farm occupied one entire barn in the livestock section. The show was in charge of Professors True, Royce, Vestal, Miller, Jack Findlay, Geo. Phillips and Geo. Hamblin.

There are prospective championship winners among the sheep, hogs and cattle and a fine lot of Percherons are shown. None of the animals were in competition.

The barn was simply but effectively decorated—adding greatly to the effectiveness of the display.

#### BEEF CATTLE

By F. F. Stonerod

Expressing the size and importance of the 1917 state fair beef cattle show is no easy matter and it would require considerable space to crowd in a complete account of the wonderful show. However, it can be summed up in one word, "inspiration." The Shorthorn show especially was an inspiration. Never before in the history of our California fair has such a lineup faced the judge in numbers or in quality. Some of the classes had 12 entries, and each entry one to be proud of in any show ring.

The Hereford class, while not so large as the Shorthorn, surprised the ring-siders by the high class individuals competing for prizes. Last year the Hereford show was a joke, as the university farm was the sole exhibitor. This year

there were four exhibitors. Next year there will be more. The beef department is fast outgrowing the stabling facilities of the grounds and will tax capacity of new barns next year.

Several surprises were in store for fair goers in the ribbon tying. The classes were difficult to place in many instances. A March 1917 calf captured junior and grand championship honors in the Hereford division, while a senior heifer calf won junior and reserve grand champion in the Shorthorn cow class.

#### Shorthorns

Exhibitors—T. T. Miller, Los Angeles; Ormondale Co., Redwood City; Jack London Ranch, Glen Ellen; Pacheco Cattle Co., Hollister; H. L. and E. H. Murphy, Perkins; Carruthers Farms, Mayfield; Hopland Stock Farm, Hopland; T. S. Glide, Davis; Roselawn Stock Farm, Woodland.

#### The awards:

Aged bulls—1, Jack London Ranch on Roselawn Choice; 2, T. T. Miller on Diamond Choice; 3, Ormondale Co. on Gold-

# Star Leader

## Reserve Grand Champion Berkshire of the World

and some of his get  
will be exhibited at the

## Glenn County Fair ORLAND, SEPT. 26-30

Send for the illustrated  
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When in Orland, pay  
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3 DAUGHTERS OF A 28  
POUND COW.

16 GRANDDAUGHTERS OF  
KING OF THE PONTIACS.

A FULL SISTER TO A 31  
POUND JUNIOR FOUR YEAR  
OLD.

A GRANDDAUGHTER OF  
SARCASTIC LAD HEAVY IN  
CALF TO A GRANDSON OF  
KING OF THE PONTIACS.

THREE DAUGHTERS OF  
SIR SKYLARK ORMSBY  
HENGVERVELD, THE ONLY  
SIRE IN THE WEST WITH  
THREE 30 POUND DAUGHTERS.

A GRANDDAUGHTER OF  
KING SEGIS PONTIAC—HER  
SEVEN NEAREST DAMS,  
ALL A. R. O. COWS, AVERAGE 23.10 POUNDS BUTTER  
IN SEVEN DAYS.

#### BULLS

THIS SALE WILL BE A  
RARE OPPORTUNITY FOR  
DAIRYMEN TO BUY BULLS  
OF SPLENDID BREEDING  
AND DESIRABLE IN EVERY  
WAY TO HEAD GRADE  
HERDS. THERE ARE MANY  
YOUNG BULLS OF THIS  
CLASS IN THIS SALE, INCLUDING A NUMBER OF  
GRANDSONS OF KING OF  
THE PONTIACS.

## The Big Two Day Sale of Registered Holsteins

at

### McCLURE FARM

Santa Ana, Orange County, Cal.

Tuesday and Wednesday,  
OCTOBER 16-17, 1917

will afford one of the best opportunities of many seasons for buyers to secure well bred, dependable Holsteins at their own price. This sale includes the absolute dispersal of Ernest Otto McClure's herd at Santa Ana; the herd of A. Satterberg, San Jacinto; the herd of P. H. Jarrett, Lancaster; and consignments of very desirable cattle by McAlister & Sons, Chino; Santa Anita Rancho, Santa Anita; R. Nadeau, Saugus; and Aro Farm, Buena Park. A study of the bulletin board will show a group of animals that would add to the quality of any herd.

Every animal over six months of age has individual tuberculin test certificate, issued by a graduate veterinarian on a tuberculin test made within sixty days of date of sale.

Sale under management of

California Breeders' Sales and Pedigree Co.

C. L. Hughes, Sales Mgr., Sacramento, Cal.

Auctioneers: Col. Ben A. Rhoades, Harold B. Rhoades

Clerk of Sale: Mr. H. A. Olsen, Orange County Trust & Savings Bank.

12 A. R. O. COWS AND  
HEIFERS WITH RECORDS  
UP TO 28.43 POUNDS BUTTER  
IN SEVEN DAYS.

FOUR DAUGHTERS OF A  
SIRE WHOSE DAM IS A 29.24  
POUND GRANDDAUGHTER  
OF KING SEGIS.

A GRANDDAUGHTER OF  
RAG APPLE KORNDYKE  
8TH, ONE OF WHOSE SONS  
RECENTLY SOLD FOR \$53.-  
200.00 AT PUBLIC AUCTION.

A GRANDDAUGHTER OF  
HENGVERVELD DE KOL,  
HEAVY IN CALF TO A  
GOOD SON OF KING OF THE  
PONTIACS.

10 HEIFERS BY A GRAND-  
SON OF PIETERTJE HENG-  
VERVELD'S COUNT DE  
KOL, 99 A. R. O. DAUGHTERS  
AND SEVEN 30  
POUND GRANDDAUGHTERS.

A GRANDDAUGHTER OF  
TILLY ALCARTRA, THE  
WORLD'S GREATEST DAIRY  
COW WITH A RECORD AVER-  
AGING OVER 24,000 LBS.  
MILK PER YEAR FOR HER  
FIRST FIVE LACTATION PERIODS.

#### BULLS

FIT TO HEAD THE HIGH-  
EST CLASS REGISTERED  
HERDS, OUT OF HIGH RE-  
CORD COWS AND Sired BY  
FAMOUS Sires OF WORLD'S  
RECORD BREEDING.



en Goods Jr. Two year old—One entry, Pacheco Cattle Co. Senior yearling—1, T. T. Miller on Greendale Sultan; 2, Carruthers Farms on Hallwood Flash. Junior yearling—1, Hopland Stock Farm on Hopland; 2, Pacheco Cattle Co. on Pacheco Lad; 3, T. S. Glide on Village Type; 4, Roselawn Stock Farm on Ring-leader King; 5, T. S. Glide on White Knight.

Senior bull calves—1, Pacheco Cattle Co. on Pacheco Lad 100th; 2, Hopland Stock Farm on Hopland Valkyrie; 3, Ormondale Co. on Star of Ormondale; 4, Hopland Stock Farm on Councilor. Junior—1, Pacheco Cattle Co. on Pacheco Lad CIX; 2, Roselawn Stock Farm on Ring-leaders Ring 2nd; 3, Roselawn Stock Farm on Ringleaders Model; 4, T. S. Glide on Kings Knight; 5, Hopland Stock Farm on Hopland Cumberland.

Senior champion bull—Jack London Ranch on Roselawn Choice. Junior and grand champion bull—T. T. Miller on Greendale Sultan.

Aged cows—1, Hopland Stock Farm on Hopland Lass; 2, T. T. Miller on Brands-bys Jinny XVIII; 3, T. S. Glide on September Morn. Two year old cows—1, Ormondale Co. on Mayflower 4th; 2, Pacheco Cattle Co. on Pacheco Lass LXXX; 3, T. T. Miller on Golden Queen; 4, Jack London Ranch on Village Pride 2nd; 5, Hopland Stock Farm on Hopland Duchess.

Senior yearling heifers—1, T. S. Glide on Sonellas Lady; 2, T. S. Glide on Spicy Lady; 3, Pacheco Cattle Co. on Orange Blossom C; 4, T. T. Miller on Sultana of Linwood 2nd. Junior yearling heifers—1, Carruthers Farms on Broadhooks Sultana 2nd; 2, Jack London Ranch on Londons Aloha; 3, Pacheco Cattle Co. on Pacheco Lass LXXXIX; 4, T. S. Glide on September Night; 5, Ormondale Co. on Ormondale Beauty.

Senior heifer calves—1, T. T. Miller on White Mayflower; 2, Jack London Ranch on Londons Choice Lady; 3, Pacheco Cattle Co. on Pacheco Lass CVIII; 4, Carruthers Farms on Lady Mayflower; 5, Pacheco Cattle Co. on Pacheco Lass CXL. Junior heifer calves—1, Jack London Ranch on Londons Lavender Lady; 2, Pacheco Cattle Co. on Pacheco Lass CXVIII; 3, Roselawn Stock Farm on Roselawn Blossom; 4, Roselawn Stock Farm on New Years Morn; 5, T. S. Glide on Mysies Rose.

Senior and grand champion cow—Hopland Stock Farm on Hopland Lass. Junior champion cow—T. T. Miller on White Mayfield.

Graded herds—1, T. T. Miller; 2, Jack London Ranch; 3, Pacheco Cattle Co. Young herds—1, T. S. Glide; 2, Pacheco Cattle Co.; 3, Hopland Stock Farm. Calf herds—1, Pacheco Cattle Co.; 2, Roselawn Stock Farm; 3, Hopland Stock Farm.

Get of sire—1, Pacheco Cattle Co., 2, T. S. Glide; 3, Pacheco Cattle Co. Produce of cow—1, Hopland Stock Farm; 2, Pacheco Cattle Co.; 3, Pacheco Cattle Co.

#### Milking Shorthorns

The dual purpose breed has evidently come to California to stay and the exhibition at the 1917 state fair was worthy of competition with the best in the country. There were only three exhibitors but every class was well filled and the individuals were pronounced by Judge Carlisle to be the best he has seen this year.

The senior bull calf, Westward Ho, captured grand champion bull, and Lady Beatrice, the wonderful imported cow, was an easy winner in all her classes including grand champion. The Murphy boys showed a nice string and were particularly strong in the produce of cow class.

Exhibitors—Alexander and Kellogg, Suisun; H. L. and E. H. Murphy, Perkins; and Thos. Harrison, Glen Ellen.

#### The awards:

##### Herefords

Exhibitors securing awards—W. J. Bemmerly, Woodland; D. O. Lively Stock Farm, San Francisco; H. H. Gable, J. A. Bunting, Mission San Jose; Mrs. J. H. Ware, Live Oak; Kern County Land Co., Bakersfield; H. L. and E. H. Murphy, Perkins; and Western Meat Co., San Francisco.

##### The awards:

Bulls, senior yearling—1, Bemmerly on Bonnie Brae. Bulls, junior yearling—1, Lively on Bertram Fairfax; 2, Bemmerly on O'Connor. Bulls, junior calf—1, Gable on Diamond Fairfax; 2, Bemmerly on Kenneth Splawn.

Cows, three years old or over—1, Lively on Lady Berenda 208th; 2, Bemmerly on Lady Dulcinea; 3, Lively on Lady Berenda, 200th. Cows, two years old and under three—1, Bemmerly on Goldie Donald. Cows, junior yearling—1, Bunting on Baby Bunting; 2, Lively on Lady Evenho; 3, Bemmerly on Patricia Splawn. Cows, senior calf—1, Bunting on Grace Bunting; 2, Bemmerly on Nolo Ray. Cow, junior calf—1, Bunting on Lady Tintinger; 2, Bemmerly on Alyand; 3, Bemmerly on Ruth Dulcinea.

Junior champion bulls, under two years—Champion, Lively on Diamond Fairfax. Senior champion cow, two years old or over—Champion, Lively on Lady Berenda 208th. Junior champion cow, under two years—Champion, Bunting on Lady Tintinger. Grand champion bull, any age—Grand champion, Gable on Diamond Fairfax; reserve grand champion, Lively on Bertram Fairfax. Grand champion cow and heifer, any age—Grand champion, Lively on Lady Berenda 208th; reserve grand champion, Bunting on Lady Tintinger.

Hereford breeders' young herd—1, Bemmerly on Bonnie Brae 96th; Edith Hope; Patricia Splawn; Nolo Ray. Hereford calf herd—1, Bemmerly on Kenneth Splawn; Nolo Ray; Alyand.

Hereford get of sire—1, Bemmerly on get of Mr. Perfection; O'Connor; Patricia Splawn; Edith Hope; Nolo Ray. Produce of dam—1, Bemmerly on produce of Ruby Splawn; Kenneth Splawn; Patricia Splawn; 2, Bemmerly on produce of Molly Hope; Edith Hope; Alyand.

#### Aberdeen Angus

All awards to Ware.

Fat Cattle, Any Breed, Pure Bred or Grade

Steers, one year and under two—1, Kern County Land Co. on Steer; 2, Murphy on Kelley. Car lot steers, any breed, one year old or over—1, Kern County Land Co. on one entry; 2, Western Meat Co. on one entry.

#### Guernseys

The absence of one regular exhibitor this year was more than made up by the presence of two new breeders, and the

number of Guernseys exhibited was unexpectedly large.

B. E. Nixon captured a long string of ribbons including grand champion cow and bull but both A. J. Welch and Calla Grove Farm furnished strong competition. Mr. Welch led a wonderfully typey cow in the ring to compete with Nixons champion and but for a temperature of 104 due to fever she would have had a good chance to win as she carries a wonderful udder and is full of quality. Calla Grove Farm won junior and reserve champion cow on a six months old daughter of Itchen May King. Interest in the guernsey classes was intense throughout and the remarkable demand for breeding stock by fair goers shows how popular this great breed of cattle has become in California.

#### Jerseys

While the Jersey show was less in numbers than last year the quality of individuals shown was high and great interest was shown in the judging. Exhibitors were: O. J. Ames, J. B. and J. E. Thorp, C. P. Hembree, Guy H. Miller, S. F. Williams. All classes were hotly contested as usual, with the best of good feeling between the exhibitors. A number of Jersey breeders from different parts of the state were interested spectators.—C. A. Briggs.

Exhibitors securing awards—C. P. Hembree, Monmouth, Ore.; Guy H. Miller, Modesto, Cal.; J. B. and J. E. Thorp, Lockeford, Cal.; S. F. Williams, Orland, Cal.; Dr. H. W. Hand, Glenn, Cal.; O. J. Ames, Oakdale, Cal.

#### The awards:

Bulls, three years old and over—1, Hembree on Rochette's Noble Duke; 2, Miller on Altama Interest; 3, Thorp on Imp. of L; 4, Hembree on Undulatta Prince; 5, Williams on Alva Lady's La Foss Boy. Bulls, two years and under three—1, Williams on Golden Maidkin's Boy; 2, Hembree on Clover Blossom's Noble Boy. Bulls, senior yearling—1, Thorp on Jolly Senator Raleigh; 2, Williams on Noble Lucy's Warder Boy. Bulls, junior yearling—1, Hembree on Inglenook Lass' King; 2, Williams on Coutelenc. Bulls, senior bull calves—1, Miller on Aldene's Interest; 2, Williams on King Hanford; 3, Hand on Oxford Daisy's Keep On; 4, Thorp on The Wolfe; 5, Hembree on Bull. Bulls, junior bull calves—1, Hembree on Bull; 2, Williams on Hanbright; 3, Miller on Lorita's Golden Fox; 4, Hand on Blossom's Liberty Bond.

Cows, four years old or over—1, Hembree on Imp. Brilliant Spray; 2, Thorp on Salome of Mossdale; 3, Hembree on Noble Peer's Jewel; 4, Hand on Foxhall's Sweet Blossom; 5, Miller on Goldie of Venadera. Cows, three years and under four—1, Miller on Catalina Venadera; 2, Ames on Rebekah's Figdale Nugget; 3, Ames on Dimple Bunny of Figdale. Cows, two years and under three—1, Thorp on Miss Daisy of Mossdale; 2, Miller on Martha of Venadera; 3, Hembree on Spray's Clotilde. Cows, senior yearling heifers—1, Hembree on Brilliant Spray's Gypsy; 2, Thorp on Nomie of Mossdale; 3, Miller on Angels of Venadera; 4, Hembree on Royal Queen's Pretty Girl. Cows, junior yearling heifers—1, Hembree on Brilliant Jersey Queen; 2, Hembree on Noble Duke's Little Prim; 3, Thorp on Rose of Mossdale; 4, Williams on Alta La Foss. Cows, senior heifer calves—1, Hembree on Birdie's Agnes; 2, Hembree on Silverine Pearl's Duchess; 3, Hand on Shasta Daisy Keep On; 4, Miller on Lucile of Venadera; 5, Thorp on Blossom's Miss of M. Cows, junior heifer calves—1, Hembree on Cow; 2, Hembree on Herome's Lora; 3, Miller on Cantata of Venadera; 4, Williams on Alata Dean; 5, Williams on Orland Queen. Cows having official yearly record—1, Hembree on Imp. Brill-

iant Spray; 2, Hand on Foxhall's Sweet Blossom; 3, Miller on Goldie of Venadera.

Senior champion bull, two years old or over—Champion, Hembree on Rochette's Noble Duke. Junior champion bull, under two years—Champion, Thorp on Jolly Senator Raleigh. Senior champion cow, two years old or over—Champion, Hembree on Imp. Brilliant Spray. Junior champion cow or heifer, under two years—Champion, Hembree on Brilliant Jersey Queen. Grand champion bull, any age—Grand champion, Hembree on Rochette's Noble Duke; reserve grand champion, Thorp on Jolly Senator Raleigh. Grand champion cow or heifer, any age—Grand champion, Hembree on Imp. Brilliant Spray; reserve grand champion, Hembree on Brilliant Jersey Queen.

Jersey aged herd—1, Hembree on Rochette's Noble Duke, Imp. Brilliant Spray, Spray's Clotilde, Brilliant Spray's Gypsy, Birdie's Agnes; 2, Miller on Altama Interest, Goldie of Venadera, Martha of Venadera, Angela of Venadera, Aldene's Interest; 3, Thorp on Imp. of L, Salome of Mossdale, Daisy of Mossdale, Rose of Mossdale, Daisy's Lass of Mossdale. Breeders' young herd—1, Hembree on Inglenook's Lass' King, Brilliant Spray's Gypsy, Brilliant Jersey Queen, Birdie's Agnes, Herome's Lora; 2, Thorp on Jolly Senator Raleigh, Nomie of Mossdale, Rose of Mossdale, Daisy's Lass of M., Blossom's Miss of M.; 3, Hembree on Herome's Little Hero, Royal Queen's Pretty Girl, Noble Duke's Little Prim, Silverine Pearl's Duchess; 4, Miller on Angela of Venadera, Ila of Venadera, Lucille of Venadera, Cantata of Venadera, Aldene's Interest. Calf herd—1, Hembree on Inglenook Lass' King, Silverine Pearl's Duchess, Birdie's Agnes, Herome's Lora; 2, Miller on Aldene's Interest, Kerma of Venadera, Lucille of Venadera, Cantata of Venadera, Blanche of Venadera.

Get of sire—1, Hembree on get of Undulatta Prince, Brilliant Spray's Gypsy, Brilliant Jersey Queen, Birdie's Agnes, Herome's Lora; 2, Miller on get of Altama Interest, Angela of Venadera, Lucille of Venadera, Aldene's Interest, Cantata of Venadera; 3, Williams on get of Alva Lady La Foss Boy, Golden Maidkin's Boy, Coutelenc, Alta La Foss, Hanbright; 4, Thorp on get of Marquis Golden Lad 3rd, The Wolfe, Rose of Mossdale, Daisy's Lass of M., Blossom's Miss of M. Produce of dam—1, Williams on produce of Golden Maidkin, Coutelenc, Golden Maidkin's Boy; 2, Thorp on produce of Miss Benedita, Miss Daisy of Mossdale, Rose of Mossdale; 3, Hembree on produce of Imp. Brilliant Spray, Spray's Clotilde, Brilliant's Jersey Queen; 4, Williams on produce of Bessie of Golden Trux, Alta La Foss, Hanbright; 5, Miller on produce of Fern of Venadera, Ila of Venadera, Blanche of Venadera.

#### HORSES

The exhibition of horses was greater than anticipated by many. There were some magnificent drafters and plainly the auto has not driven out the fancy gaited saddle horse. The coach horse seems to have largely disappeared but in the three and five-gaited saddlers there were more than a score of exhibitors.

Amongst the draft horse exhibitors were M. Bassett, Biggs Percheron Horse Company, O. H. Brant, California Polytechnic School, Easton and Ward, Geo. J. Luhrsens, Ruby and Bowers, N. W. Thompson, J. W. Wakefield and E. A. Ward.

In standard breeds there was the Hernet Stock Farm, J. E. Montgomery and James Thompson.

Jacks and mules were exhibited by Burrell and Correy, Frank Hart, F. A. Kingsbury, J. P. Yost.

One string of the winners is shown on page 299. Every animal in this group was a blue ribbon winner.

## Good Silage and Cut Feed Mean More Dairy Profits

Dairying as a business, consists of marketing the crops of the field in their most valuable form—milk and cream.

Profits are directly proportional to the economy used in feeding these crops. The economy in feeding finely cut dry feed is well known. Coarse hay, most of which is nosed out by stock, represents a loss of 20 per cent to 25 per cent of the feeding value of your hay. If it is all cut this coarse hay as well as the fine is entirely consumed as food, making your hay go 20 per cent to 25 per cent farther. With alfalfa hay at \$18.00 per ton, a wastage of 20 per cent of it means a loss of over \$3.50 per ton.

## ACME FEED CUTTER and SILO FILLER

Fills the Silo—Cuts Dry Feed—Makes Alfalfa Meal  
SUBSTANTIALLY BUILT—LIGHT RUNNING—ENORMOUS CAPACITY

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SAN FRANCISCO

## Field Notes from the Live Stock Men

#### Hollow-Hill Farm reports:

"Interest in Itchen Daisy's May King of Langwater 17349, the Guernsey bull recently brought to California by the Revada Farm at a record price of \$8000, is evidenced in the sale of two of his grand sons by Hollow-Hill Farm, Colton, last week. One of the calves was purchased by Mr. Hanford King of Santa Barbara. This one was out of Imp. Lady Dunmore III 19688, a cow with an official record of 390 pounds butter fat as a three year old, and by King of Hollow-Hill 24876, that wonderful son of Itchen Daisy's May King of Langwater, which was imported to California in his dam, Caroline of Chilmark 24812. The other calf was sold to T. J. Baltimore of Gridley. This one is out of Glen's Cora of Hollow-Hill 48357 which recently made 366.97 pounds of butterfat in 306 days on official test and averaged 5.93 per cent while doing so. It is also by King of Hollow-Hill. Another calf, Queen's King Christie 43752 out of a granddaughter of Imp. Galaxy's Sequel and by King Christie 35039, a grandson of Imp. King of the May 9001, was sold by Hollow-Hill Farm to A. H. Reynolds of Niland, the last week of July.

"According to advices these sales were all due to advertising in the California Cultivator and Hollow-Hill is convinced that it reaches the public."

One of the prizes to be offered at the Glenn County Fair in Orland the latter part of September will be a pedigreed Berkshire pig, donated by Anchorage Farm, the home of the great sire, Star Leader.

#### NAPA COUNTY FAIR

Napa County has done its bit this year in producing more and better than ever before. She now proposes to make a showing that will inspire toward still greater production another year. This is to be done at her county fair which will be held September 22-26 when she expects to exhibit not only things grown and dried and canned, but implements and machinery for still more and better production. The exhibit of machinery and implements promises to be exceptionally fine. We recall having seen at the last state fruit growers' convention a remarkably fine exhibit of a still finer exhibit at the coming fair. Live stock will make another feature. Of course there will be carnival and amusement features.



# High Record Holstein Blood in Southern California

Southern California Holsteins have contributed in a very large way to the splendid performance of the breed in production records, show ring winnings and sales ring prices, and now another great event is scheduled to take place in the southland.

Invading the very heart of the orange stronghold, a big two day sale will be held at McClure Farm, Santa Ana, on Tuesday and Wednesday, October 16-17, during which upwards of 140 head of high class registered Holsteins will be knocked down to the highest bidder.

Seventy head of this number come from the absolute dispersal of Ernest Otto McClure's herd. The McClure herd sire, King Pontiac Netherland Segis, is too well and favorably known among California breeders to require any extended comment. Sixteen of his daughters will be sold in this sale, besides a large number of cows and heifers bred to him.

A. Satterberg of San Jacinto will also disperse his entire herd of 11 head in this sale. Among them is a two year old granddaughter of Rag Apple Korndyke 8th and a young granddaughter of Tilly Alcartra.

P. H. Jarrett of Lancaster disperses a herd of ten females, among them some exceptionally heavy producing cows.

McAlister & Sons are consigning a

choice bunch of heifers to this sale. No single breeding establishment in California has excelled the McAlister organization in turning out typey heifers of splendid growth and fitness.

R. Nadeau, Saugus, consigns a number of well bred cows, good producers and most of them bred to a grandson of King of the Pontiacs.

Aro Farm consigns an unusually well bred lot of females including daughters of such sires as King Pontiac Topsy, Judge Hengerveld De Kol 6th and Juliana King of Rock. And all of the females of breeding age in this consignment are bred to a 26 pound son of Colantha Sir Aaggie.

One of the sensations of the sale will be the offering from Santa Anita Rancho. Their star contribution is King Korndyke Pontiac 20th, son of the state record junior three year old, Miss Valley Mead De Kol Walker, 36.81 pounds butter in seven days, the highest record for any age in the state. Of hardly less importance will be a son of King Morco Alcartra, son of Tilly Alcartra; two sons of King Korndyke Pontiac.

The animals mentioned are only a part of the very attractive ones to be sold in this sale and the quality of the whole sale is such that buyers from all over the Pacific Coast are inquiring for catalogs.

## Veterinary Queries

Answers in this column by Dr. Wm. Petrie, 2714 South Harvard Blvd., Los Angeles, are without charge. For immediate mail answer remit \$1.00. In writing questions give full symptoms or particulars of injury of animal. Unsigned communications receive no attention.

### Chronic Indigestion

I have a mare that has been sick off and on for nearly a year. She was fat before taken sick but never has done well since. Whatever she gains she loses with the next sick spell. When she takes a sick spell she paces about uneasily for a short time, then lies down, tosses about; rolls very little, lies on her side and looks back at her side, then jumps up and paces around again and sometimes goes ravenously for a few mouthfuls of feed. At times she will not eat anything. Sometimes her bowels are loose and sometimes the opposite. The sick spells usually last from four to six days and after three or four days her water comes highly colored. We are now feeding No. 1 wheat hay. She has these spells on alfalfa and barley hay and the longest one she has had was when she was out on alfalfa pasture. Can you kindly tell me the trouble and give me a cure?—Subscriber, Warner Springs.

The food is not digesting properly and in such cases as you describe it is sometimes found later that phosphatic calculi are forming in the bowels. The calculi are stones that form from the lime in the feed; there may be one or many of them. They do not pass on account of their weight and continually grow larger by coat-

ings of phosphate of lime being added to their surface. The condition of the horse may change and the stones stop growing when they may be passed or may finally cause death. The continual spells of colic on all kinds of feed and more especially when on pasture would lead one to think that calculi were forming. You may be able to relieve her by giving the following: Take two ounces of aloin, four ounces of turpentine and two quarts of raw linseed oil. Mix and divide into four doses. Give one dose every seven days. Also get powdered gentian four ounces, powdered nux vomica two ounces and bicarbonate of soda one pound. Mix and give a tablespoon once a day while it lasts. The powders have a tendency to stop the formation of the calculi and may dissolve them. They may pass with the physic; watch for them. Would be glad to hear again from this case.

### Founder

I have a ten year old mare that is foundered in both of her front feet. She appears sore when traveling on hard roads. Please tell me what the remedy is.—Subscriber, Dunsmuir.

Soften and cool the feet by paring the soles thin, then lay on a sponge or some cotton, cover with a piece of thick leather and tack on a shoe. Do not draw the nails too tight. Once or twice a day pour some water under the leather at the heels to keep the sponges wet. A blister at the edge of the hair repeated every two weeks

until four or five blisters have been applied will also help. Give a tablespoon of nitrate of potash in the feed or water once a day for two weeks.

### Diabetes

We have a young horse that will not fatten up as he should and we think the trouble is with the kidneys. He makes water about every half hour while working. Kindly advise us what to do for him. He also slobbers.—Subscriber, Nevada.

Change the feed and do not put him at hard work for a while. Get five pounds of ground flaxseed with the oil left in and twice a day put a handful of it in clean bucket and pour on it a gallon of boiling water. When cool fill the bucket with cold water and let the horse drink it. Also have your druggist prepare two ounces of iodide of potash and enough aqua to make one quart. Give a tablespoon of this with the flaxseed tea twice a day. The slobbering may be due to something wrong with the teeth. Better have the mouth examined by a veterinarian if one is in reach.

### Bloody Milk

Have a three year old cow that freshened with her first calf June 1. She seems to be doing well but about a month ago we noticed blood in the milk from two of the teats. It got worse and formed in clots and would milk out like garget. The milk was all right except the blood. We gave salts. She has a good appetite and is in good order. The udder is not swollen.—Subscriber, Norwalk.

It may be due to something she is getting in the feed, as a weed in the pasture or something in the water. Change the feed and the water too if possible and give her a teaspoon of sulphate of iron in a little feed twice a day for two weeks.

### Sick Hogs

Please inform me what is wrong with my three sick hogs. The symptoms are as follows: They refuse to eat, sleep most of the time and seem stiff and stagger when they walk. Have been so about ten days and remain about the same. — Subscriber, Dos Palos.

Very uncommon for hogs to refuse to eat. Do not know what is wrong. Try giving them a physic of salts. Give each one two tablespoons of epsom salts and one of common salt. Dissolve in half a pint of hot water and when cool give as a drench. Tie a small rope around the upper jaw and pull up on it then you can pour the medicine down without much trouble.

### CIRUELA JOSEPHUS

The Cultivator erred last week in giving the production record of the granddam of Ciruela Josephus, Aralia De Kol. This cow has a record at 11 years old of 28,090 pounds of milk and 1142.32 pounds of butter. Ciruela Josephus is owned by A. M. Bibens.

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### Rossmead Farm

## POLAND-CHINAS

Won second on boar and sow P.P.I.E. 1915. Champion sow at Fresno and Hanford 1916. Young stock of this breeding for sale.

F. D. ROSS

Hanford, Cal.

## B REEDERS EST OOKS

Two men, prominent in two great world industries, dairying and swine breeding, have each written a book giving the best information they have from years of actual experience, from many hours of study and careful reading and from meeting hundreds of dairymen and breeders like themselves.

### You Should Have Both Books

This book, entitled "Forty Years' Experience of a Practical Hog Man," by A. J. Lovejoy, is a neatly bound book of 170 pages that is what its name implies and more. It contains information on all the general subjects relating to swine breeding and feeding and goes into careful analysis and minute detail of many related subjects.

### Van Pelt's Cow Book

is another volume that thousands of dairymen have read and reread and studied because of the very thorough manner in which the essential knowledge of successful dairying is set forth. This book is profusely illustrated, printed on fine quality of paper and will be a valuable possession in the hands of any one who owns or handles cows.

Either book may be secured by sending \$1.25 which will pay for the book and one year's subscription to California Cultivator.

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Shorthorns

Berkshires

# Hopland Stock Farm

HOPLAND, CALIFORNIA

10 Prizes at State Fair, 1917, Including 5 Firsts

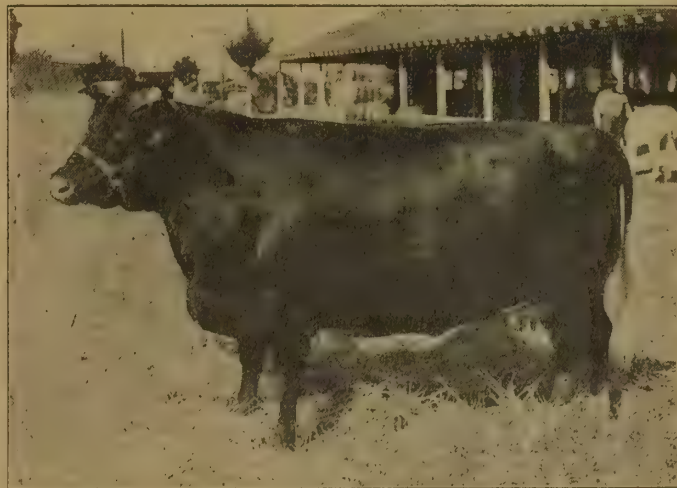
Senior and Grand Champion Cow raised on our farm from our own breeding.

REGISTERED RANGE AND HERD BULLS

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1210 FLOOD BLDG.



Hopland Lass 179452, Senior and Grand Champion Cow.





## It's Natural for a Hog to Wallow

Here's a good thing to do: Provide a wallow close to the feeding grounds to which add Dr. Hess Dip and Disinfectant. As the hogs pass back and forth from the wallow to the feed trough, the **DIP** will kill the lice and cleanse the skin, while the **DRIP** will destroy the disease germs and the worms that pollute the ground. That will mean a clean, healthy skin, freedom from lice, a safeguard against disease and larger, better porkers

Dr. HESS & CLARK  
Ashland Ohio

## DR. HESS DIP and DISINFECTANT



Gertie's Son's Victor No. 123159  
Dam, Victor's Lady Kate, (R.O.M.) of 537 lbs. Butter in 303 Days as a 4-year-old.  
185 Registered Jerseys in my herd, including 18 Register of Merit Cows. Blue Ribbon winners at 1916 Kings, Kern and Tulare County Fairs.  
**Invest in Jerseys and Start Right**  
Visitors Welcome Correspondence Solicited  
**A. A. Jenkins**  
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Registered young bulls from best families. Some of serviceable age.

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Masterpiece, Longfellow and Robin Hood Strains. Fine individuals of both sexes—we pay registration fee. Careful attention given to mail orders.

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# Breed Leaders

Every breed of live stock has its outstanding character the same as the human kind. A great dairy cow has proved her ability to produce anywhere up to 15 tons of milk annually; the trotting horse has secured his record around two minutes; the beefmaker has shown his ability to make the least amount of feed into the greatest amount of food; swine, sheep and others of the live stock family have shown themselves great characters. In addition—and here is where their worth is proven—these animals can transmit their productive power to their offspring.

Beginning with the issue of August 4 the Cultivator gave an account of Pietertje Bloom of the university farm dairy herd. Some things she has done and more that her daughters have done were chronicled. She was a most worthy leader in this series of articles. Others of her kind follow. More of the "handsome is as handsome does" type of animals will be given in the columns of the Cultivator during the next few months.

Written for California Cultivator by C. A. Briggs

## MODEL MAJOR

**T**HE show ring life of a hog is necessarily a short one, but the year 1916 was a year of triumphs for Model Major 224841, owned by Hale I. Marsh of Modesto. Model Major is

was first and grand champion at the Modesto Live Stock Exposition, first grand champion, winner of sweepstakes over all breeds, and first as head of prize herd at Fresno.

His litters run from nine to fifteen strong, active, easy feeding pigs. He



Model Major

a splendid type of Poland-China, long, deep, wide, smooth. The judge picked him for first prize aged boar at the Sacramento state fair in 1916. He

was bred by Wm. Smiley & Sons of Wisconsin. His sire was Major Hadley, his grandsire Major Bob. His dam was Model Gem 10th, his granddam Hadley Girl.

## Meeting of California Poland-China Breeders

Written for California Cultivator By R. H. Whitten

**T**HE annual election of officers and banquet of the California Poland-China Breeders' Association was held at Sacramento, Wednesday evening, September 12. There was a large attendance and enthusiasm was at high mark.

The following officers were elected for the ensuing year: President, W. Bernstein; vice-president, O. L. Linn; secretary-treasurer, R. H. Whitten; directors, the above and M. Bassett, H. I. Marsh, C. R. Hanna, Nate Hauck.

Twenty herds were nominated for the 1918 show, thus insuring the future of the American Poland-China Record Association, with cash prizes amounting to \$600. The guest of the occasion was Ray Davis, field secretary of the American Record Association, who gave an entertaining and in-

structive blackboard talk on matters of interest to the breeders.

It was decided to ask the members for contributions to carry on the work of the association. The response was generous, and it is expected that after the absent members are heard from the fund will amount to over \$1000.

The next meeting of the association will be held at Hanford, October 18, at the sale of the Kings County Breeders. All members are urged to be present as matters of great importance will be discussed.

The association is in a most flourishing condition, yet the support of every Poland-China breeder in the state is needed, and those who are not already members are urged to send \$1.00 for a year's membership to Secretary R. H. Whitten, 519 Marsh-Strong Building, Los Angeles.

## Annual Meeting of the California Holstein-Friesian Association

The annual meeting of the California Holstein-Friesian Association was held in the dairy barn, California State Fair grounds, Sacramento, on the evening of September 11.

At the business meeting the entire board of directors was unanimously re-elected. At the organization meeting Fred W. Kiesel was reelected president, De Lancey Lewis of San Jose was elected first vice-president, H. V. Bridgford, Knightsen, second vice-president, and C. L. Hughes was reelected secretary-treasurer.

A resolution fully endorsing the efforts of the various milk producers' associations throughout the state was unanimously adopted.

A resolution was adopted conveying high appreciation of the many courtesies extended by the directors of the state agricultural society to exhibitors of Holstein cattle and the splendid co-

operation given in the conduct of sales of Holsteins. The whole-hearted efforts of Secretary Charles W. Paine of the state agricultural society were especially commended.

Following the business meeting President John Perry of the state agricultural society, Edwin Voorhies of the university farm, Charles W. Paine, secretary of the state agricultural society, made interesting addresses.

The remainder of the evening was given over to general discussion of various subjects, during which the Holstein Breeders' Guaranty Sale to be held at Sacramento in December was endorsed.

The association has shown a rapid growth in membership during the past year and it is hoped to double the membership during the coming year. To that end the members present pledged themselves to an active campaign to secure new members. — C. L. Hughes, Secretary.

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OR PAIN KILLER FOR THE HUMAN BODY

## Gombault's Caustic Balsam

IT HAS NO EQUAL

For the Human Body

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

Perfectly Safe and Reliable Remedy for Sore Throat, Chest Cold, Backache, Neuralgia, Sprains, Strains, Lumbago, Diphtheria, Sore Lungs, Rheumatism and all Stiff Joints

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Cornhill, Tex.—"One bottle Gombault's Balsam did my rheumatism more good than \$150.00 paid in doctor's bills."  
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Price \$1.50 per bottle. Sold by druggists, or sent by express prepaid. Write for Booklet R. The LAWRENCE-WILLIAMS COMPANY, Cleveland, O.

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## HOOD FARM BREEDING POWDER

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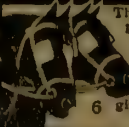
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B-K disinfecting protects live-stock against disease. Ten times stronger than carbolic, yet not a poison. Contains no acid. For caustic. Safe—cheap—used in barns of leading breeders. Awarded Gold Medal at Panama-Pac. Expo. Write us, or ask your dealer for our free book "Disinfectant." Special Trial Offer. Dealers wanted in every town.

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The old, reliable remedy you can depend on for Spavin, Curb, Splint, Ringbone or lameness. Thousands have proved it invaluable. Get a bottle from your druggist. Price per bottle \$1.00. "Treatise on the Horse" free at drugists or from Dr. R. J. KENDALL CO., Enosburg Falls, Vt., U. S. A.

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## Marsh's Big Type Poland-China Hogs

"MODEL MAJOR" winner of three firsts and two Grand Championships is at the head of my herd of prize winning sows. My sows are the easy feeding, big litter kind that have quality. Now booking orders for June delivery of spring pigs. Satisfaction guaranteed or money refunded. H. I. MARSH, Modesto, Cal.

## Finely Bred Holstein Bulls

from dams of the best blood lines. They are well developed, of splendid individuality and type. Our place is within one mile of the city, so they are easy to see.

H. B. Cowan

Modesto, California

## Berkshire Hogs—Milking Shorthorns

Breeding Stock For Sale

G. A. Murphy - Perkins, Cal.



# Who's Who

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photographs and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Other sketches and portraits will appear in the next and following weeks.

Written for California Cultivator By F. F. Stonerod

## E. B. McFARLAND

**T**HE honor of establishing the first purebred Ayrshire herd of cattle in California must go to Bailey McFarland. His fondness for the breed and his faith in its future in this state influenced him in the selection of a foundation herd about five years ago. He got some of his best stock from J. W. Clise, the noted Seattle breeder, who owned Peter Pan, Lily of Willowmoor Farms, and other animals with a world reputation. The first seven head he purchased came from the McMillan herd in Quebec. Then he got 19 head from Clise, and later on at the world's fair at San Francisco he bought seven more.

During 1914 and 1915, Mr. McFarland was associated with Wm. Caruthers in the Berkshire business, but has since closed out his Berkshire holdings and has devoted his entire time to his cattle.

"Mac," as he is familiarly known by the stock men, likes the show game. He will fit a full herd each year and take along several head in addition for, be it known, he is a first class salesman as evidenced by the fact you can find Ayrshire cattle from his herd in many parts of the Pacific coast.

Two of his biggest deals were the sale of 20 head to an Hawaiian breeder last winter and the recent sale of 30 head to the state industrial school at Ione. Ayrshire and McFarland go well together as they are both Scotch, and if the reader doubts that statement let him visit the Steybrae farm situated on top of a mountain over-

looking the Spring Valley Water concession on one side and the Pacific Ocean on the other. The hills are unusually steep and, as Mac says, no other dairy breed of cattle could subsist and produce so liberally under these harsh conditions as the Ayr-



E. B. McFarland

shire. Steybrae is a beautiful country estate and the owner is justly proud of it. He was born in California, is married, and has a family consisting of two daughters and a lusty young son.

When in the "City" Mr. MacFarland enjoys a few hours at the club and a visit with his father, who has offices in the Spreckels building, and is one of the pioneers in San Francisco in his line.

## Creamery Operators Convention

**C**ALIFORNIA Creamery Operators' Association will hold its eighteenth annual convention at Petaluma, October 4-6. There will be a butter scoring contest, entries due October 1. Buttermakers entering this scoring contest will be entitled to compete for a special cash prize of \$10 for contestant coming closest to judge's score on a given number of entries. Scoring will be under supervision of the state university at 10 o'clock, on the morning of Thursday, October 4. In the afternoon Pres. Hopkins will speak. At 8 p. m. there will be addresses on Creamery Refriger-

eration by Thos. Marshall; Creamery By-Products, G. E. Frevert. Friday, 8 a. m., buttermakers' scoring contest, auto trip; 2:30 p. m., address, S. H. Greene; Silos and Silage, Chas. Crane; 8 p. m., Production of Pure Milk and Cream, Dr. Wm. C. Hassler; Live Stock and Labor Problem, D. O. Lively; Cow Testing, H. J. Baade. Saturday, 9:30 a. m., address, Prof. C. F. Doane, United States cheese specialist; Butter vs. Other Fats, E. H. Webster; address, Prof. Van Norman; 2 p. m. reports of committees, election of officers, etc. In the evening the Petaluma chamber of commerce will act as hosts at a banquet. Prizes will be announced at this time.

## California Swine Breeders Meet

Written for California Cultivator By C. A. Briggs

An important meeting of the State Swine Breeders' Association was held at Sacramento on Thursday evening, September 13. About 150 breeders and their friends partook of a banquet which was followed by speeches of a high character. The address of D. O. Lively advocating the establishment of central markets at San Francisco and Los Angeles was well received.

President C. B. Cunningham presented the question of swine shows for the Coast along the lines of the great Eastern shows. The idea of two shows and possibly three, (at San Francisco, Los Angeles and some point in Oregon or Washington) met with the hearty ap-

proval of speakers representing all the leading breeds. Dues for the ensuing year were collected. The meeting was enthusiastic, largely attended and every one present felt that the good work of the association in the past would be greatly enlarged and be more successful.

### MAYBE

The teacher had told the class that Milton, the poet, was blind.

The next day she asked if any of them could remember what Milton's great affliction was.

"Yes'm," replied one boy. "He was a poet."



## LOUDEN STEEL STALLS

We Will Deliver to Any Railroad Station in California

**30 TUBULAR STEEL STALLS**  
Complete With  
**30 TUBULAR STEEL STANCHIONS**  
**For \$187.00**

Why Not Have a **SANITARY** and **MODERN COW BARN**

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For a 30 COW MILKING BARN of Average 35x50 ft. Size will be Furnished and Delivered to Any Railroad Station in California for \$120.00

Such an Outfit Will Save You Its Cost in One Year  
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An Opportunity to Secure a Choice Lot of Young Holstein Heifers Sired by Registered Bulls from Full Blood Unregistered Dams.

30 Head of 15 to 18 months old Holstein heifers now being bred to Registered Holstein Bull.

4 Head of Grade heifers.

7 Head grade four and five year old cows.

1 Registered two year old Holstein Bull, Segis Paul Pontiac de Kol Burke.

1 Two year old Guernsey Bull, sired by May King of Fern Ridge, a bull that took third at the San Francisco Exhibition in 1915, Dam Imported Lady of the Forgettes.

Wish to sell in single lot and will make special price, on the above stock.

ALSO a choice lot of brood mares, Jacks and Jennets at a bargain price.

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## Santa Anita Rancho

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**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by imported Stallion Ibn are the choicest thoroughbred mares of Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahrus, world renowned imported Stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months Poland-China herd boars. Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the very best blood lines. Meet all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted Prince Gelash Walker, and bulls from one World Record sow and two California State Record Cows. Write for details.

Correspondence Invited

**Anita M. Baldwin**

W. H. TAYLOR, Superintendent

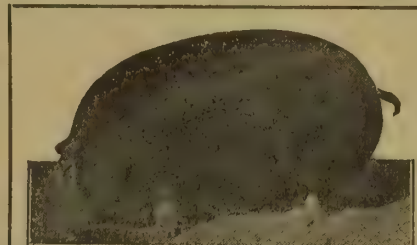
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## Poland Chinas, Medium Type

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain. 12 firsts, Junior Champion and Reserve Grand Champion Boar. Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

**M. Bassett**

Hanford, Kings County, Cal.



## Shorthorn Bulls and Heifers

We have twenty bulls and ten heifers for sale at present. This is the best lot that we have ever had for sale. Mostly two year olds, registered, tuberculin tested and all reds in excellent condition and splendid individuals. Write for prices or better come and see them.

**H. L. & E. H. Murphy**

Six miles from Sacramento

Perkins, Cal.



## Egg Laying Contest at Mountain Grove

By C. T. Patterson, Director

**S**IXTH National Egg Laying Contest, held at Mountain Grove under the direction of the Missouri College of Agriculture, has made a gain of 35 eggs per hen over the first contest held at this place.

The Bureau of Labor Statistics census 1910, the year before the contests began, shows 41,913,210 fowls raised, of which we may estimate that 20,000,000 were females. The same census shows that less than 70 eggs were produced per hen that year.

If the 20,000,000 hens of Missouri should make the same gain as the contest, 35 eggs each, there would be 700,000,000 more eggs produced in the state per year, and at 2½ cents each, would increase the value of eggs \$17,500,000.

It is easier to increase the production of the average hen in Missouri from 70 to 105 eggs than to increase the average in the contest from 135 to 170 eggs each. This increase in egg production is easily possible if the breeders follow the same rule used at the experiment station, which is, "Supply proper conditions for egg production." Heredity and environment are the two factors which determine egg production. Heredity is all characters transmitted from the parent to the offspring while environment includes all things which affect the life of the bird, not included under heredity.

The life of a fowl may be divided into three parts. First, the embryonic stage, or life in the egg; second, the growing stage, which is from the time it hatches till it is mature; and third, the nature or reproductive stage.

In as much as the pullets are usually mature when they reach the contest we have no influence on heredity or the environment during the embryonic and developing stages. Therefore, environment during the reproductive stage is all the influence which can be exerted during an egg laying contest. Experiments show that environment is greatly responsible for the increased egg production.

Many think the number of eggs a hen can produce is fixed by the number of ovules or miniature yolks in the ovary, but a count of the ovules in the ovaries of a number of hens does not reveal any relation between the number of ovules in the ovary and the number of eggs produced, the numbers ranging from 2000 to 4000 as seen with a small hand lens. This is more than any hen ever produced during her life. A point of greater importance is for the hen to be able and inclined to develop the ovules into eggs.

In as much as the hen has many times as many ovules as she ever manufactures into eggs, the number of ovules is not a limiting factor in egg production. This being the case, it is not necessary for anyone to wait till next year or the next to get the increase which comes through environment, but can increase the egg production of his present flock by supplying proper conditions, then make a still greater increase later on through breeding.

### The Contest

The hens in the Sixth National Egg Laying Contest have made a very high record to date, having produced 157.6 eggs per hen in ten months.

During August 4305 eggs were produced, or an average of 14.8 each for the month.

Seven pens representing seven varieties occupy the five highest places for August. They are as follows:

White Plymouth Rocks, Missouri, 122 eggs; S. C. W. Leghorns, Pennsylvania, 113; S. C. Brown Leghorns, Missouri, 108; White Wyandottes, Missouri, 97; S. C. White Minorcas, Missouri, 97; S. C. R. I. Whites, Michigan, 96; Anconas, Missouri, 96.

All hens in the five highest places to date have averaged 225 eggs or more in ten months. They are as follows: White Wyandotte, Missouri, 243 eggs; S. C. White Leghorn, Missouri, 243; Barred Rock, Missouri, 239; White Wyandotte, Missouri, 228; S. C. R. I. White, Michigan, 227; White Wyandotte, Missouri, 225.

The ten highest pens to date are as follows: White Wyandottes, Missouri, 1066 eggs; R. C. R. I. Whites, New Jersey, 997; S. C. White Leghorns, Missouri, 990; S. C. White Leghorns, Pennsylvania, 983; White Rocks, Missouri, 956; S. C. R. I. Whites, Michigan, 901; S. C. White Leghorns, New Jersey, 900; Barred Rocks, Missouri, 894; S. C. Reds, Iowa, 982; White Rocks, Idaho, 872.

## Poultry Awards at the State Fair



**P**OULTRY classes were judged by R. V. Moore of California and Will Purdy of Washington. Both of these judges were unqualified in their commendation of California quality, and especially of 1917 quality. Judge Moore, who has been at state fairs for years, said this year's showing surpassed that of all former years in both as to breeding and quantity.

Awards in utility classes are as follows:

### AMERICAN CLASS

Barred Plymouth Rocks—Ck. 1, Mr. and Mrs. C. W. Presher; 2, Geo. D. Lubben; 3, Ed Ellis. Ckl. 1, Cameron Bros.; 2, Geo. D. Lubben; 3, Ed Ellis. Hen 1, 2, Cameron Bros. Pullets, 1, 2, 3; pen, 1, 2, Cameron Bros. Ckl. Pen 1, Mr. and Mrs. C. W. Presher; 2, Cameron Bros.; 3, Ed Ellis. Pullet Pen 1, Cameron Bros.

White Plymouth Rock—Ck. 1, Pleasant Valley Poultry Farms; 2, Mrs. G. R. Winslow. Ckl. 1, Pleasant Valley Poultry Farms; 2, 3, Mrs. Geo. R. Winslow. Hen 1, Pleasant Valley Poultry Farms; 2, 3, Mrs. G. R. Winslow. Pullet 1, Pleasant Valley Poultry Farms; 2, 3, Mrs. G. R. Winslow.

White Wyandotte — Ck. 1, James J. Whyte. Hen 1, W. O. McCubbin; Pullet 1, W. O. McCubbin; 2, James J. Whyte.

Columbian Wyandottes — All awards, Mrs. P. H. Chaussee.

Sliver Wyandottes—Ckl. 3, Hen 1, 2, Wm. A. French. Pullet 1, J. L. Harrison; 2, Wm. A. French.

S. C. R. I. Reds—Ck. 1, Joseph Fowler; 2, McCartney Farms; 3, Brookdale Ranch; ckl. 1, McCartney Farms. Hen 1, Joseph Fowler; 2, J. L. Harrison; 3, McCartney Farms. Pullet 1, Goodacre Bros.; 2, J. L. Harrison; 3, Mrs. John R. Porter. Pen 1, J. L. Harrison; 2, Brookdale Ranch; 3, Joseph Fowler.

R. C. R. I. Reds—Ck. 1, Ckl. 1, 2, Hen 1, 3; Pullet 1, 2, Pen 1, Harold Walthew; Hen 2, A. R. Mills.

### ASIATIC CLASS

Light Brahma—Ck. 1, 3, Hen 2, Pen 1, 3, Mr. and Mrs. Charles Munce; Ck. 2; Ckl. 1, 2, Hen 1, Pullet 1, Mrs. Walter A. Babb.

Dark Brahma—All awards, Mr. and Mrs. C. Munce.

White Cochins—All awards, J. Will Blackman.

Black Cochins—All awards, J. Will Blackman.

Black Langshans — All awards, J. R. Crabtree.

### MEDITERRANEAN CLASS

S. C. White Leghorn — Ck. 1, Henry Sharp; 2, 3, Stirling Farms; Ckl. 1, 2, 3, Henry Sharp; Hen 1, 2, 3, Pleasant Valley Poultry Farm. Pullet 1, 2, 3, Henry Sharp. Pen 1, Henry Sharp; 2, 3, Stirling Farms.

R. C. White Leghorns—All awards, R. G. and G. E. Baxter.

S. C. Brown Leghorns—Ck. 1, 2, 3, Ckl. 1, 2, Hen 2, 3, Pullet 1, 2, 3, Pen 1.

Williams Bros. Hen 1, Wm. A. French. Pen 2, Kenneth Starr.

S. C. Buff Leghorns—Ck. 1, 3, Hen 1, 2, Manuel Roberts. Ck. 2, Mr. and Mrs. Wm. McGee. Hen 3, Pullet 1, 2, Pen 1, W. L. Bartholomew.

S. C. Black Minorcas—Ck. 1, Ckl. 1, 2, Hen 1, 2, Pullet 1, 2, Pen 1, McCartney Farms. Ck. 2, Pullet 2, Mrs. R. B. Spaulding. Hen 3, Wm. McGee.

S. C. White Minorcas—All awards, Wm. A. French.

S. C. Buff Minorcas—Ck. 1, Ckl. 1, Hen 1, 2, Pullet 1, Wm. P. Williams. Ck. 2, Hen 3, Pullet 2, Pen 1, L. M. Erickson.

Blue Andalusians—All awards, Mrs. V. Kate Hamilton.

S. C. Anconas—Ck. 1, Ckl. 1, Pleasant Valley Poultry Farms. Ck. 2, 3, Hen 1, 3, Pullet 1, 3, Pen 1, 2, 3, Hocking Poultry Farm. Ckl. 2, 3, Mrs. Cora Bamford. Hen 2, Pullet 2, Quality Ancona Yards.

### ENGLISH CLASS

Buff Orpington—Ck. 1, 2, Hen 1, 3, W. L. Bartholomew. Ckl. 1, Pullet 3, L. E. Nance. Pullet 1, Robt. DuBois.

Black Orpington — All awards, A. J. Hoffman, Jr.

White Orpington — All awards, Robt. DuBois.

Speckled Sussex—All awards, Jos. A. Donohoe.

Dark Cornish—Ck. 1, Ckl. 1, 2, Hen 1, 2, Pullet 1, 2, B. P. Lausten. Ck. 2, Hen 3, McCartney Farms.

White-Laced Red Cornish—All awards, B. P. Lausten.

### FRENCH CLASS

Houdans—Ck. 1, 2, 3, R. G. and G. E. Baxter. Hen 1, 2, Pullet 1, Manuel Roberts. Hen 3, Mrs. B. Hocking.

### TURKEYS

Bronze Turkeys—Old Tom, 1, Earl Sanders. Yearling Tom, 1, 3, J. Will Blackman. Yearling Tom 2, Old Hen 3, Yearling Hen 1, 2, 3, John G. Mee. Young Tom 3, N. E. Mullick.

Bourbon Red Turkeys—Old Tom 1, Young Hen 1, Mrs. Emma V. Miller. Old Tom 2, Yearling Tom 1, Old Hen 2, The Ferris Ranch. Old Hen 3, Mrs. B. Hocking.

White Holland Turkeys—All awards, Mrs. B. Hocking.

### DUCKS

Gray Call Ducks—All awards, R. G. and G. E. Baxter.

Fawn Indian Runner Ducks — All awards, Wm. McGee.

Buff Ducks — All awards, The Ferris Ranch.

Rouen Ducks—Old Drake 1, Old Duck 1, Pen 1, Wm. A. French. Old Drake 2, Old Duck 3, Young Drake 1, 2, 3, Young Duck 1, 2, 3, Mrs. Emma V. Miller. Old Drake 3, Old Duck 2, Goodacre Bros.

Continued on Page 315

**DRY MASH**

**GLOBE A-1**

**The Best Feed on the Market**

Has the highest protein at the lowest price, \$2.90 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or

**The Globe Mills, Los Angeles**

**Try COULSON'S EGG FOOD**

FOR GREATER EGG PRODUCTION

FULL PARTICULARS IN FREE BOOK "CHICKENS FROM SHELL TO MARKET"

**Coulson Co.**

PETALUMA, CAL.

## Science Says Buttermilk



Bulletin 162, just issued by the Department of Agriculture, states that Buttermilk is the only preventative of White Diarrhea. It has been proven that many birds apparently in perfect health have these germs in their system and that they are transmittable to their progeny. Science has discovered that the Lactic Acid Bacilli of Buttermilk kills these poison germs. Write to Berkeley for this important bulletin, free.

The Dry Buttermilk in GLOBE A-1 BUTTERMILK MASH contains 10,000 live Lactic Acid Bacteria to the cubic centimeter.

Globe A-1 Buttermilk Mash is a high protein feed, free from any filler.

Globe A-1 Buttermilk Mash will prevent bowel troubles, keep your flock in glowing health, produce more eggs to market, better eggs to hatch.

Costs no more than non-buttermilk mash.

Satisfaction or Money Back.

**GLOBE MILLS, Los Angeles**

Write at once for valuable feeding information and sample, free.

## Buttermilk GLOBE A-1 Dry Mash

**PETALUMA INCUBATORS & BROODERS**

**"STANDARD OF THE WORLD"**

**Ducks Never Cackle**

Neither do all people write us who are making big hatches in different parts of the world in the

**PETALUMA INCUBATOR**

but thousands have and we would like to tell you what they say. Present Models better than ever. You should know about *The Electrified Hen*. Write us. Just say "Send your big envelope of free literature. We Pay Freight."

**PETALUMA INCUBATOR CO.**

248 Main Street Petaluma, Calif.

**Mr. Poultryman:** **TRI-STATE MOLT MASH** will help your hens through the molt and make it possible for you to stay in the business.

SOLD by our agent in each town or inquire of **GLOBE MILLS, LOS ANGELES**, Southern Wholesale Distributors, or **TRI-STATE POULTRYMEN'S COOPERATIVE ASS'N.**, Headquarters, Fresno, California.



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Is Your Opportunity to Secure A1 citrus trees. We offer several thousand 2-year-old lemons; Eureka and Villa Franca, also Washington navel; also several hundred Valencia on sweet root. Call these good trees and we know ereof we speak. ALBERT JACKSON, Land, Cal.

Far the Lowest Priced means of reaching a buyer for what you have to is through classified advertisements California Cultivator. The cost is only cents per word per issue, with a minimum of 35 cents.

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us Trees — All kinds, any quantity. Butler's Morning Side Nursery, Landana Park, Cal.

us Nurseries, Murphy Oil Company, East Whittier, California. Selected ck for sale; inspection invited.

### WANTED

anted — Man in each California county to represent established California company. Should have rig or auto to get round. Good pay and several weeks' work to right parties. Address J. H. ter, Sales Department, 822 Santa Maria Building, 112 Market St., San Francisco, Cal.

anted—Energetic young married man to take charge of herd of 140 registered steins. Must be an all around practical dairymen, competent to do anything connected with a dairy and breeding establishment, including the making of weekly and yearly records. Geo. A. ith, Corcoran, California, Phone 241.

anted to Purchase good second hand pipe and screwed well casing. I can finish all sizes of pipe and casings in st class condition. Write for prices. J. Leahy, 1002 Santafe Ave., Los Angeles.

anted—Position as head milker and herdsmen. Familiar with testing, scientific feeding and treatment of disease. od reference. Box D, Cultivator.

e Buy Weed Seeds—Mustard, rape, anise, bitter clover, etc. Send samples, rice us, stating quantity and price. obe Mills, Los Angeles.

is of the Most perplexing problems to farmers and ranchers is that of help. A all liner ad in California Cultivator is e quickest and easiest means of securing farm help.

eds Wanted—Flowers, seeds, berries, leaves, barks, roots, 2c. to \$2.50 lb. National Drug Co., Yakima, Wash.

an—to wear fine suit, act as agent; get pay, easy work. Banner Tailoring Dept. 738, Chicago.

### POULTRY

White Leghorn Baby Chicks—We are hatching from 2 and 3 year old hens at are proven good layers. We did not ll our last year cocks but have them to eed from and are not forced to use ung immature cocks. We are hatching limited number of R. I. Reds. Lyon ichery, Gardena, Cal.

ly Old Chix—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown rhorns, Buff and White Orpingtons. her popular breeds a matter of correspondence. Enoch Crews, Seabright, iff.

oultry Wanted — We pay the highest market price for all the local poultry e can get, no matter how large the quantity; also fresh ranch eggs. We re it immediately. National Poultry Co., 7 E. Third St., Los Angeles, Cal.

0-290 Egg Fall Chicks, Eggs, Stock, reasonable. Rocks, Reds, Wyandottes, neonas, Leghorns, C. Beeson, Pasadena, Cal.

Eastman's Bred-to-Lay" Barred Plymouth Rocks. Fall chicks, eggs, cocks. Fairmead Poultry Farm, Fairmead, Cal.

### SEEDS AND PLANTS

Alfa Planters, fill your fall requirements NOW with GREEN-GOLD seed. High quality because of personal field section. Low price because of direct selling. Send for samples and prices. omberger Seed Co., Modesto, Cal.

\*\* ORDER YOUR SEEDS NOW \*\* you are going to need any seed for xt season now is the time to render ur order. It may be impossible for you to buy what you need later. V. A. Peterson Alfa Seed Co., Arbuckle, Cal.

ALFALFA SEED OUR SPECIALTY\*\* Alfa Seed—Common variety. Hairy and Smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with ed others offer. E. F. Sanguinetti, uma, Arizona.

hubarb—\$112.00 from one acre. A crop every month of the year. Write to me id I will tell you how you can do as ell. J. M. Stone, Lodi, Cal., Route 4.

etch Seed—New crop clean seed, \$4.00 per 100 lbs., on car. Alsike, Red Clover. rice on application. Carlton Nursery o, Carlton, Ore.

1,000 Yellow Calla, Elliottiana; Pink Calla, Rheanni. Spotted Leaf White alla. William Richard Nursery, Santa ruz, Cal.

or Sale—Some very fine Strawberry plants; 5 different kinds; Charlotte eagen, 718 3rd Avenue, Oroville, Cal.

ew Crop Alfa Seed now ready. Not e lowest in price, but high in quality. eo. Turner, Yuma, Arizona.

UTOMOBILE STORAGE BATTERIES itian Batteries for Service, get our prices before buying or having an old attery repaired. Call or write, Olive reet Electrical Co., 910 South Olive St., os Angeles, Cal.

### HOGS

Registered Durocs—We offer for sale a choice service boar out of a daughter of Modesto King and by a grandson of Burk's Good E Nuff; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col.; three young boars out of a great sow of Crimson Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. Derryfield Farm, I. O. O. F. Building, Sacramento, Cal.

Chester Whites, the Billiken Brand.—Your duty is to raise more hogs and increase the meat supply. The demand for pork exceeds the production. Get started with some of these Chesters: 3 bred sows farrowed in April 1916, due to farrow in September, and October; 18 October gilts bred to farrow in October; 3 October boars ready for service. All first class in every respect and good enough to fit and show at the different Fairs this fall. All are cholera immune and will be registered free. Write for price list and booklet. C. B. Cunningham, Box C, Mills, California.

Grape-Wild Farm Berkshires — World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

Large Yorkshires — Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

Wanted—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

Poland-Chinas—A number of magnificent young boars for sale, just ready for service. Don't overlook my offering of splendid sows at the Poland-China sale on October 17 at Hanford. Will Bernstein, Hanford, California.

Duroc-Jerseys—The best Durocs in the West will be at Riverside, October 9-13. See our Golden Models there. Peters, Lamson & Walker, Devore, San Bernardino County.

Rancho Rubio Durocs.—Nothing to sell at present. A fine bunch of gilts and a few extra good service boars for this fall. Elmer Lamb, Ceres, Cal.

Big Type Durocs. Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

Most Money in Duroc-Jerseys. Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.

Large Type Poland Chinas are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Calif.

Large Type Poland-Chinas—Very best stock! Prices reasonable. Weanlings my specialty. C. R. Hanna, Riverside, Cal.

Model Herd Berkshires bred for size and quality. Weanlings and gilts. J. L. Gish, Laws, Calif.

Carruthers' Farm Berkshire Hogs. Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

For Sale Poland-Chinas—Big type choice bred gilts from registered stock. G. E. Shelford, Healdsburg, Cal.

Poland-Chinas — A few good breeding boars. S. F. Williams, Orland, Cal.

### LIVE STOCK

Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

Registered Shires — Blackhawk Stock Ranch. Importers and Breeders, Easton & Ward, Burlingame, Cal.

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### CATTLE

Pedigreed Bull Calves, Registered \$50.00, unregistered \$25.00. Service bulls \$75 and up. Good individuals from producers. Cows with yearly records at a profit, tuberculin tested. Write or come and select. Horses. N. H. Locke Co., Lockeford, Cal.

Registered Holsteins out of A.R.O. Dams. Grandsons of King Korndyke Henger, veld Ormsby who has 20 A.R.O. daughters with records of over 29 pounds. Look up this sire, Geo. Kounias, Modesto Farms, Modesto, Cal.

D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.

Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

Veramont Stock Farm Pure Bred Herefords. Location Plumas County. Ideal for stamina and vigor. Bulls for sale. Address H. M. Barngrover, San Jose, Cal.

Registered Holstein Bulls from high producing dams for sale at reasonable prices. Also a few choice females. McAlister Sons, Chino, Cal.

Sunshine Farm Jerseys—Bulls from officially tested dams for sale. E. E. Greenough, Merced.

Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Calif.

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Holstein Bulls from record cows. Prices right. A. M. Bibens, Modesto, Calif.

### MACHINERY

WHY BUY NEW? SAVE HALF Material guaranteed. It's second hand after used few times, but not worn out.

Few engine snaps: new 1½ h. Olds, cost \$75, for \$39; 6 Stearns, \$89; 8 Stover; 2 h. Fairbanks like new, \$42.50. 9 Foos, \$145; 18 White & Middleton, \$295; 34 Lambert, \$390. Many others.

NEW, USED WOOD, GALV. TANKS All sizes, fine 900 gal. galv. wagon tank \$48; 3500 swell corrugated galv. tank, \$78. 100 gal. galv., \$7.50; 10,000 redwood, \$75. Fine, heavy 10,000 galvanized, \$135; 16,000 corrugated galv., \$195; 5000 gal. redwood, \$48; 25,000 gal. redwood with fine stand, \$135; 8000 redwood and stand, \$75.

WINDMILLS, SPECIALLY PRICED 8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel; 12-ft. Aermotor and swell steel tower, \$38; 16-ft. Aermotor and tower, \$135. Many other snaps.

PUMPS, CYLINDERS, PIPE 2½-in. two-runner hor. centrifugal pump, \$50; 2-in. rotary, \$22; No. 3 hor. cent., \$35; 5-in. two-stage Byron Jackson hor. cent. pump, \$150; 8-in. hor. cent., \$150, pumps 200 in. water; 7 vert. cent. Krough, deep well double-acting No. 2 Ames, \$145. 30 Ames double-acting deep well pump, latest model, all steel frame, high efficiency, less power required, cost \$900, used less than year, our price \$295. Large Bulldozer jacks, \$68. Small size Bulldozer, \$42.50. Plunger pumps, \$2 up. 5x6 air compressor, \$29. 600 ft. 7-in. irrigating pipe, 35c. All kinds brass pump cylinders, rods, big pipe fittings of every description.

### RANCH MACHINERY

Walking plows, harrows, cultivators, Fresno's, wheel barrows, \$2.50 up; 350 ft. ¾-in. cable 6c; water troughs, \$4; hose grinder, \$6.50; feed mill; sprayer; mowers; buck rake, \$20; belting, all sizes; sundries too numerous to advertise. Material guaranteed as represented or money refunded. Down town office DEMMITT CO., UPSTAIRS 120 N. Main. Yards, 816 Yale, Los Angeles. Phones 15191; Bdwy. 1984, Bdwy. 3650.

Gasoline Engines, the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles.

For Sale—Exceptional Bargains. Gas engines, centrifugal pumps, concrete mixer, box nailing machine, friction clutch pulleys. Complete irrigation plants furnished. We also buy and sell all kinds of machinery for every purpose. Let us know what you have and what you want. We can meet your needs. Out of town machine work given special attention. Commercial Iron Works, 497 Fifth Street, San Francisco.

For Sale—Yuba Tractor No. 12 in A-1 condition. Plow and cultivator if wanted. Satisfactory reason given for selling. P. O. Box 306, Colton.

### MISCELLANEOUS

Famous Hairy Peruvian Alfalfa Seed—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.

Slacked Lime—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road Pasadena.

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

For Sale, Small Hotel—On account of poor health. A bargain. H. W. Luhrs, Chino, Cal.

### FARM LANDS FOR SALE

NO PAYMENT DOWN FARMERS ARE MAKING GOOD IN THE "PROJECT OF NO REGRETS" AT ORLAND, CAL. WATER FURNISHED BY UNCLE SAM WE SUPPLY THE LAND AND ASK NO PAYMENT UNTIL YOU CAN MAKE SAME FROM CROPS. NO BETTER SOIL FOR ALFALFA, ALMONDS, OLIVES, ORANGES, LEMONS, ETC. WRITE US FOR U. S. GOVERNMENT REPORT AND BOOKLET "ORLAND FARMS." F. D. BURR CO. 253 RUSS BLDG., 235 MONTGOMERY STREET, SAN FRANCISCO.

Oregon, California Government Lands. Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

### HORTICULTURAL PRINTING

Catalogues — Good Printing. Specialists in preparing nursery, seed, poultry and live stock catalogues and all kinds of commercial printing. For prices and information address WOLFER PRINTING CO., 424 Wall St., Los Angeles.

Our Printing Will Get Results for You.—It will help to sell your goods and earn you profits. Send for samples and price list. G. C. Gallagher, 441 Sacramento St., San Francisco.

### RODENT EXTERMINATORS

United States Government Formula—Poisoned barley for killing rodents. In competition with other dealers we were awarded the contract to furnish this poison to the United States Government. How much do you need? Write for prices. UNITED STATES SUPPLY COMPANY, MANUFACTURING CHEMISTS, NEW CALL BUILDING, San Francisco, Cal.

### LUMBER

Lumber—Sash—Doors — Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A \*R.W Shingles 50c per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.

### POULTRY AWARDS

Continued from Page 314

White Pekin — Old Drake 1, Old Duck 1, Young Drake 1, Young Duck 1, 2, Pen 1, Wm. A. French; Young Drake 2, Young Duck 3, Manuel Roberts.

White Muscovy — Old Drake 1, Old Duck 2, Young Drake, Young Duck 1, Wm. A. French; Old Drake 2, Old Duck 1, Mrs. B. Hocking.

Black Muscovy—All awards, Wm. A. French.

Penciled Runner Ducks—Old Duck 1. Young Drake 1, Young Duck 1, Good-acre Bros.; Old Duck 2, 3, Wm. McGee.

### GEESE

Gray African Geese—All awards, The Ferris Ranch.

Toulouse Geese—All awards, Wm. A. French.

Embsen Geese—All awards, Mrs. John G. Mee.

### STORRS EGG LAYING CONTEST

Storrs, Connecticut, August 31, 1917. —Report for the forty-third week ending August 29, 1917.

The light breeds are still out-laying the heavy American breeds in the laying contest at Storrs. During the forty-third week the 55 pens of heavy birds, Rocks, Reds and Wyandottes, laid a total of 1673 eggs or an average of 43.5 per cent. The 45 pens of light birds laid 1655 eggs or an average of 52.5 per cent. The total production for the week amounted to 3328 eggs or 144 less than for the previous week. The problem confronting the management now is not how to increase production, but rather how to delay as long as possible the drop that is sure to come incident with moulting. When a bird continues to lay until after September 1, it is more than a good guess that she has been a high producer for the year. Consequently if we cull out all birds which have stopped laying before September 1, we automatically get rid of the poor individuals. Not only this, but we also automatically increase the average production of the flock. The poultrymen who have not already culled their flocks should do so at once.

The three best pens in each of the principal varieties are as follows:

#### Barred Plymouth Rocks

Fairfield's Poultry Farms, 1805; Merritt M. Clark, 1609; Michigan Poultry Farm, 1543.

#### White Wyandottes

Merrythought Farm, 1599; Obed G. Knight, 1476; Jay H. Ernisse, 1467.

#### Rhode Island Reds

Allan's Hard to Beat Reds, 1668; Hillview Poultry Farm, 1560; Pequot Poultry Farm, 1541.

#### White Leghorns

A. P. Robinson, 1922; J. O. LeFevre, 1754; Hilltop Poultry Yards, 1744.

#### Miscellaneous

Cloyes & Sullivan, (Buff Wyandottes) 1601; Holliston Hill P. Farm, (White Rocks) 1521; Obed G. Knight, (White Orpingtons), 1446.



## Household Department

### ALFALFA

What makes the landscape look so fair;  
What blossoms bright perfume the air;  
What plant repays the farmer's toil,  
And will enrich the worn-out soil?  
Alfalfa!

What is the crop that always pays,  
And will mature in forty days;  
Resisting drought, the frost and heat,  
Whose roots reach down one hundred feet?  
Alfalfa!

What grows in loam, clay and sand;  
What lifts the mortgage off the land;  
What crop is cut six times a year,  
And no foul weeds in it appear?  
Alfalfa!

What makes the swine so healthy feel,  
And never raise a hungry squeal;  
The wholesome food that never fails  
To put three curls into their tails?  
Alfalfa!

What makes all other stock look nice,  
And bring the highest market price;  
What fills the milk pails; feeds the calf,  
And makes the old cow almost laugh?  
Alfalfa!

—Author Unknown.

### MAGIC RAIMENT

By James Ravenscroft in Youth's Companion

**W**ELL! Since when did you get so coy that a common codger of a man can't even enjoy your company for a few minutes? What's the matter with you?"

Braxton started toward her again, but Brindle tossed her head in a disdainful manner, and again galloped away.

Braxton set the milk-pail down, and pondered. It was about his tenth attempt that evening to induce Brindle to let him milk her.

"Tan your handsome hide!" he grumbled. "And I've been feeding you night and morning ever since I got

you, too. Yet you have the nerve now to pretend that you don't know me well enough to let me milk you!"

It was the first time that circumstances had made it necessary for him to milk the cow. When Braxton Randall and his young wife, Frankie, had come from Virginia to Southern California two years before, and bought on time a little farm in a corner of the foothills, the heavy expense of making the payments had compelled Braxton to hire out as a hand on the McCrory ranch. McCrory's, or Mack's, as it was called by everybody, was near enough so that Braxton could come home at night, and he was always at home on Sunday, but never had he milked Brindle. Frankie, to help him all she could, had included that duty in her household chores.

"I might as well do it on Sundays, too, Braxton," she had said, cheerfully, "for you have your hands full looking after the place when you are here."

So it had come about that Brindle, their first chattel and the mainstay of their prosperity, had been milked by the hand of woman only.

But now Frankie had been taken suddenly sick. She was so ill that Braxton had to go to Alhambra for a doctor, and then ask Mack to let him off so that he could nurse her.

Braxton had prepared supper very successfully, even to the making of some chicken broth, which Frankie praised liberally, although she partook of it sparingly. He was get-

ting along well enough till he came to the milking. Brindle had eyed him with apparent misgiving when he approached her, for she could not recall that he had ever carried feed to her in a tin pail. She smelled of him suspiciously, and when he put out his hand with a conciliatory "So," she wheeled and ran. It was plain that she either mistrusted him or objected to being milked by one of the male sex.

"Now what am I going to do?" Braxton asked himself. "We need the milk, and there's not a woman nearer than two miles who can milk a cow. Guess I'll have to let it go to-night."

"Moo!" remarked Brindle from a safe distance, as if commending his decision.

Braxton started back to the house; but he had taken only a few steps when he stopped. An idea had come to him of a way to solve the milking problem. He looked back at Brindle, still mooing and grinned.

"You wait, old lady, and see if I don't fool you," he said.

He went into the house, and without saying anything to Frankie, he found the gingham wrapper that she wore when she worked in the garden and did the milking. He managed to squeeze into it, although the sleeves were a tight fit, and there was a yawning gap where it should have buttoned down the back.

"I won't disturb her by letting her see my back," he thought, with a smile.

He smoothed the garment down the front, and chuckled when he saw his coarse working shoes protruding beneath the hem.

"If you want a woman to milk you, why, you'll have to have your way, Brindle, and that's all there is to it!" he declared.

"Anything the matter, Braxton?" came a faint call from the bedroom.

"No, Frankie—not yet," he answered. "You want anything?"

"No-o-o-o."

"I'll soon be done," and he hurried out—and then hurried back.

"What do you think of that?" he muttered to himself. "Put on the wrapper, and then forgot and left my hat on. That would make a cow laugh, for sure."

He rummaged quietly till he found the sunbonnet that Frankie wore when she worked outdoors. He put it on, and clumsily tied the strings under his chin. "Now," he remarked, "I ought to look feminine enough to satisfy the most particular cow."

Brindle saw him before he reached the gate of the lot, and came trotting to meet him.

"Well—well—" Braxton began, and stopped. He did not know what to say. He had started out merely to play a trick on the cow, if he could, and now he was surprised, almost awed, at the magical effect that the wrapper and the old sunbonnet produced on her.

He passed through the gate, and paused. He did not have to go a step farther. With deep-throated murmurings, Brindle trotted up and brushed her moist nose along the sleeve of the wrapper, as she joyously identified it in loud, satisfied whiffs. Then out came a rasping but loving tongue, and caressed his hand.

Braxton was afraid to speak, lest his voice should betray his stratagem. What he was thinking was that it would be deceiving a child to destroy Brindle's trust in the old wrapper and sunbonnet.

He held the milk-pail in front of him, and Brindle at once swung round with her side to him, and obligingly set her leg back.

In silence Braxton milked her, but something new and fine was going on in his mind. He was conscious of an inner hurt, poignant but precious, that at first he could not analyze. When he had finished, he patted Brindle affectionately. Her response was a grateful gurgle.

What Braxton had suddenly seen was Frankie's two lonely years on the little ranch and his neglect of her. He had not meant to neglect her; he had only been very busy—in fact, overworked. Still, he knew that at times he could have arranged differently, so that the dreary monotony of her life could have been broken occasionally. She had worked early and late, doing much more than she should have done, unceasingly enthusiastic in the task of paying for the new home. Not once had she complained, but that did not alter the case.

Continued next week.

### SOUPS THAT NOURISH

**W**E note in the Good Thrift Series of the United States department of agriculture information regarding the value of soup in the diet with economical recipes for its preparation. Where there are growing children or hungry men this valuable article of diet should appear on the menu at least once each day.

"A generous serving of thick meat soup or fish chowder yields more energy than an ordinary portion of roast beef, and even a moderate helping of vegetable milk soup usually furnishes fully as much body fuel as a moderate sized-rib chop of lamb.

There are other things to be considered besides energy in computing value of different foods. One is the amount of protein, without which the body cannot build and maintain its tissues. Meat and milk soups contribute some of the needed protein. Meat, poultry, fish, eggs, milk, cheese, dried peas, beans, and other legumes are the common foods in which protein is most abundant, though it also appears in fair amounts in the cereal foods.

#### Dried Fish Chowder

Half pound salt fish, 4 cups potatoes, cut in small pieces, 2 ounces salt pork, 1 small onion, chopped, 4 cups skim milk, 4 ounces crackers.

Salt codfish, smoked halibut, or other dried fish may be used in this chowder. Pick over and shred the fish, holding it under lukewarm water. Let it soak while the other ingredients of the dish are being prepared. Cut the pork in small pieces and fry it with the onion until both are a delicate brown, add the potatoes cover with water, and cook until the potatoes are soft. Add the milk and fish and reheat. Salt, if necessary. It is well to allow the crackers to soak in the milk while the potatoes are being cooked, then remove them and finally add to the chowder just before serving.

#### Milk and Cheese Soup

Three cups milk, or part milk, 2½ tablespoons flour, 1 cup grated cheese, salt and paprika.

Thicken the milk with the flour cooking thoroughly. This is best done in a double boiler, with frequent stirrings. When ready to serve, add the cheese and the seasoning.

#### Mixed Vegetable Soup

Three quarts water, 1 quart shred-

## The test of to-day is the Pocket Book test

Today home management is on a war, not a peace basis. "How much am I getting in nutriment for what I pay?" is the home manager's problem.

In peace or war Ghirardelli's Ground Chocolate makes good as an economical and appealing food. A blend of pure cocoa and sugar, two of the most nourishing foods known, it supplies energy and resupplies waste tissue at lowest cost. Use it freely as a food and you will practice food conservation.



**Ghirardelli's**  
Ground Chocolate

comes in ½-lb., 1-lb., and 3-lb. cans.  
Order from your grocer.

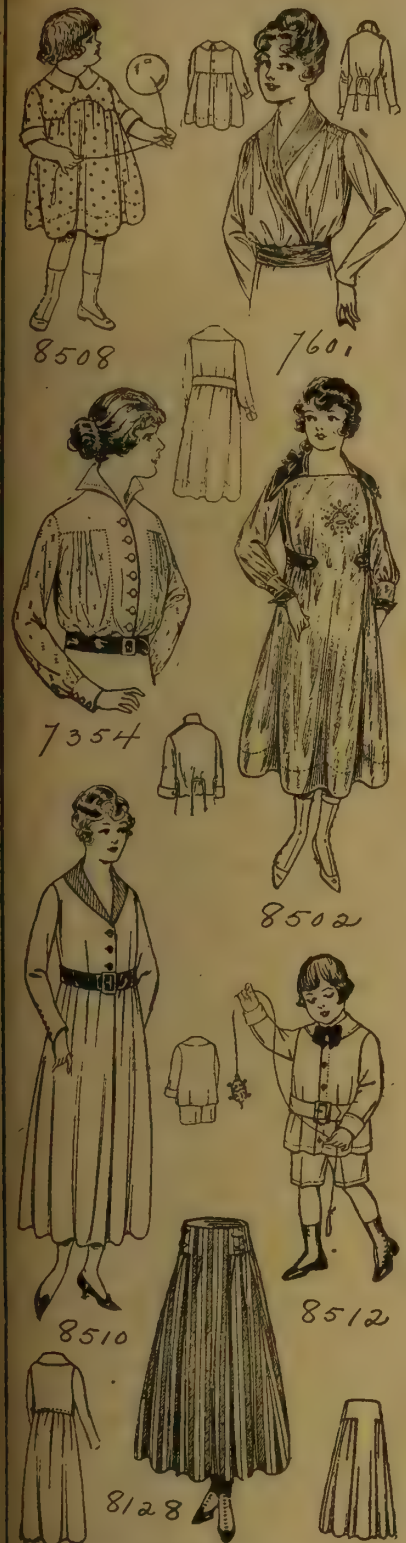
D. GHIRARDELLI COMPANY

Since 1852

San Francisco



# The Cultivator Patterns



8508—Children's Yoke Dress. Cut in sizes 1, 3 and 5 years. The long or short sleeves may be used.

7601—Ladies' Waist. Cut in sizes 34 to 44 inches bust measure. The waist may be developed in linen, crepe de Chine or madras.

7354—Ladies' Waist. Cut in sizes 34 to 46 inches bust measure. One or two materials can be used for this waist.

8502—Misses' Dress. Cut in sizes 14, 16, 18 and 20 years. Serge or taffeta can be used for this dress.

8510—Ladies' Dress. Cut in sizes 34 to 40 inches bust measure. The dress has a semi-fitted waist and a one-piece skirt.

8512—Boys' Suit. Cut in sizes 4, 6 and 8 years. The suit consists of a blouse and straight trousers.

8128—Ladies' Skirt. Cut in sizes 24 to 32 inches waist measure. The skirt is cut in four gores.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

## HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send ten cents in coin or (1 or 2c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department  
California Cultivator  
Los Angeles

ded cabbage, ½ pint minced carrot, 1 pint sliced potato, ½ pint minced turnip, ½ pint minced onion, 1 leek, 2 tomatoes, 2 tablespoons minced celery, 2 tablespoons butter or drippings, 2 tablespoons green pepper, 3 teaspoons salt, ½ teaspoon pepper.

Have the water boiling hard in a stewpan and add all the vegetables and tomatoes. Boil rapidly for ten minutes, then draw back where it will boil gently for one hour. At the end of this time add the other ingredients and cook one hour longer. Have the cover partially off the stewpan during the entire cooking. This soup may be varied by using different kinds of vegetables.

## WHY BABIES WAKE AT NIGHT

Dr. Sadler of Utah gives in the Utah Farmer some common sense hints on the care of the baby which are particularly valuable during warm weather.

### Lack of Fresh Air

Babies cannot sleep peacefully in a hot, stuffy room, or in a room filled with the fumes of an oil lamp turned low. A crying, fretful baby often quiets down as if by magic, providing he is not hungry and the diaper is dry, when taken into a cool room with fresh air.

### Clothes and Bedding

If baby's neck is warm and moist you may know that he is too warm. If the diaper is wet it should be changed at once. One of the worst habits a baby can possibly get into is to become so accustomed to a wet diaper that it does not annoy him.

### The Food

Too little, too much, or the wrong kind of food will disturb baby's sleep. Many mothers who sleep near their babies nurse them every time they wake up, and this soon becomes one of the biggest causes of disturbed sleep.

### Spoiling

A lighted nursery or bedroom, rocking to sleep, jolting the carriage over a door sill or up and down, the habit of picking baby up the moment he cries, late romplings—any and all of these may disturb sleep, as well as unsettle the tender nervous system of the child, thus laying the foundation for future nervousness, neurasthenia, and possibly hysteria.

### Reflex Causes

Wakefulness is sometimes due to reflex nervous causes such as the need for circumcision, or the presence of adenoids, enlarged tonsils, or worms. If baby has to breathe through his mouth then you may suspect adenoids.

## AN ATTRACTIVE HOME

A Colorado writer, in commenting on the unattractiveness of many homes in his section, quotes a remark recently made to him by a newcomer. This newcomer said: "Perhaps you have lived in this region long enough to understand why it is that so many farmers who are prosperous enough to own an expensive automobile are satisfied to live in such homely little shacks of houses with such unattractive surroundings."

I wonder if he would make the same comment on some of our California communities?

Our Colorado friend adds: "When it becomes more generally known how much may be done by the judicious planting of trees, shrubs and vines, and the cleaning up and proper disposal of rubbish, weeds and discarded farm machinery our homes will be-

come not only more inviting in appearance but will attract the best buyers when sold. It is not necessary to build an oversized, expensive, ornate house to realize the truest home qualities. Much better results often

follow the planning and carrying out of a well designed, inexpensive planting plan, with suitable flowering plants, vines, shrubs and trees."

"Fools burn trash off their fields." It was a wise man who said that.

## "The Range with a Reputation"



## Majestic means "strict economy"

**Economy in fuel**—its heat-tight construction requires less fuel to maintain perfect baking temperature.

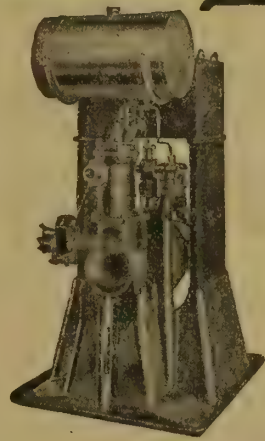
**Economy in food**—its scientific oven bakes right always—prevents food waste.

**Economy in service**—Its unbreakable malleable frame and rust-resisting charcoal-iron body save repairs and make the Majestic outlast three ordinary ranges.

Do you know that now much less crops will buy a Majestic than a few years ago? Less than 2 acres of corn pays for it—think how little seed and labor you give for an article that means so much to the whole family. One quality; many styles and sizes. There is a Majestic dealer in every county of 42 States. Send for free booklet and name of dealer near you.

Majestic Mfg. Co., Dept. 203 St. Louis, Mo.

U.S. Government orders over 150 carloads of Majestics —because the Army must have the best range service



## MORE BETTER LIGHT

Install a PRIVATE GENERATING PLANT and have ELECTRICITY FOR LIGHT AND POWER. The Uni-Lectric system generates the standard 110-volt direct current, which will operate from 1 to 50 lights. It will run your sewing machine, electric iron, vacuum cleaner, churn, washing machine, etc.

### NO BATTERIES---NO SWITCHBOARD

High speed gasoline motor, generator and automatic governor, all complete. Uses standard lamps and fixtures. Can be used for one or more houses.

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104-106 Clay St. San Francisco, Cal.

## Bartlett Music Co.

MOVES TO THE



## Heart of the New Shopping District

Before we move we will sell every piano in stock no matter what the price. A postal card will bring a list of bargains. All new

### PIANOS

Write or call at this address until October 1st. Don't delay. Talking Machines and Records.

Special Terms.

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### EASY PAYMENTS IF YOU DECIDE TO BUY

Mail Postal today for our catalog No. 1, illustrating all the different models of phonographs. Address

FRANK J. HART

Southern California Music Co.

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OF EVERY DESCRIPTION

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BUTTRISS & McCLELLAN

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# Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

## Weevils in Beans

What can I do to keep worms out of dry beans?—Subscriber, Santa Cruz.

See answer to same question in last week's Cultivator on Page 281, "Keeping Beans."

## Fattening Turkeys

Would like to fatten 11 young and six last year's turkeys for Thanksgiving. Would you kindly advise me what is the best and cheapest way to fatten them? We have our own corn

on the ranch. Would they have to be penned up or not and for how long?—Subscriber, Santa Barbara.

Whole corn is the best of fattening feeds for turkeys, but it must be thoroughly dry. Half ripened corn is dangerous. If you have not been feeding corn begin gradually. It is better not to confine the birds. Just let them run, and do not try to stuff them with the corn. Keep them hungry. You can't fatten a turkey or a chicken either that is "off its feed" from overeating.—J. A. K.

## Inflammation of Crop

A deadly disease has attacked our poultry, young roosters, and best laying hens. They sit on the roost with heads hanging very low as if they would lose their hold of the roost. Then they go to the ground, move about a little with head in the dirt and finally die. One hen would give a sharp cough like roup (didn't notice this in any others); but there is no roup. Bowels not loose. They have been fed the mash from feed store, mixed with green feed, and sometimes dry leaves from alfalfa hay. They have milk. They have had access to the bone hard dry barley in the barley hay for horses, lots of grain in the barley bales, and it goes out in the manure which the hens also scratch over.

A friend sometime ago fed such barley to his rabbits, throwing the leavings over in the chicken pen, and he lost fowls in this same way. The trouble stopped when he threw no more barley over to the fowls. We have shut our hens up from the barley, hoping they may be saved if that is the trouble. We opened one laying hen—nothing much in crop but a few grains of barley, foul smelling.—Subscriber, Burbank.

Your hens have inflammation of the crop, due probably to the irritating effect of the bearded barley. Too much dry barley frequently has this effect. If you had steamed or soaked or sprouted the barley it would have been more easily digested. What is called "scoured" barley, i. e. barley with beards removed, costs a little more than the seed barley, but is more wholesome. You were right in putting the hens where they could not reach the barley. The next thing is to get rid of any that may be irritating their crops and intestines. If the crops seem distended their contents may be removed by holding the bird with head down and gently pressing and working at the contents of the crop till they run out of the mouth. When the crop is nearly empty make the bird swallow a couple of tablespoons of warm water and repeat the massage. When the crop is quite empty give a scant teaspoon of castor oil. It would be a good plan to give all the birds, both sick and well, a dose of Epsom salts. Dissolve a half

teaspoon of salts for each bird in a small quantity of water and moisten some of the dry mash with the water. If more moisture is needed use sour milk. Mix just what the birds will eat up quickly, and give when they are quite hungry. This will help to cleanse the system and may keep some birds which do not as yet show signs of illness from developing it. Feed plenty of greens and sour milk and give no irritating food such as barley or oats till the birds have entirely recovered.—J. A. K.

## When Casabas are Ripe

When is the best time to pick casabas, the winter kind? Do you leave them on the vine until vines die or pick them when they turn color? What is the best way to keep them through the winter?—Subscriber, El Toro.

Without referring to the color as each variety of casaba has a different color, or shade, the ripeness can be ascertained by the complexion. The melon is ripe when its complexion is clear, that is, the skin attains a certain transparency that is never present in a green melon. To the slight pressure of the fingers the melon should be firm, but a smoothness should be noticeable, and as the fingers are drawn over the melon there should be slight resistance. The knack of picking a melon or casaba when it is ripe is only attained by practice. Casabas ripen before the vines die and should be picked before the vines begin to die, for the dying vine takes away the juices and crispness of the melon. To keep casabas put them in a well ventilated cool place, placing them so that they do not touch each other. Packing in straw is very satisfactory.—D. F. R.

## Disease of Fig

I send leaf from fig tree which seems to be affected with some disease. Is this a fungous trouble or is it simply a physical condition caused perhaps by overirrigation in the fall, injury by frost, or dieback?—Subscriber, Los Angeles.

This question was referred to the pathological laboratory of the University of California. Mr. J. T. Barrett writes: "The fig leaf bears a saprophytic fungus in abundance but there are no evidences of any organism which would seem to be responsible for the trouble you describe. I should be inclined to suspect that the difficulty is in some of the branches which are bearing these leaves. There is a disease of fig trees which has come to our attention the last two years which attacks the bark of the smaller branches, thus causing the death of the foliage and I thought perhaps this might be similar."

## Heading Back Young Walnuts

Young Placentia walnut trees grow here very rapidly forming branches which are long and slender and easily bent by the wind or their own weight. Will you kindly inform me if it is advisable to cut back such branches in order to stiffen them and make the tree more sturdy?—Subscriber, Spadra.

It is never advisable to head back young growth on walnut trees. If done early in the season branches will be thrown out which are not well united with the branch from which they grow or the branch will sometimes die back a considerable distance. If the heading back is done late in the season a new growth is likely to be made which will not fully mature before the cold weather and is often winter killed even in localities having only light frosts. The safest method is to pinch out the terminal bud of any shoots which

may be growing too fast. This will often stop further growth in length, if done as late as August, and cause the wood to thicken and harden before cold weather. Branches which have already grown too long and are in danger of breaking in the winds or from their own weight should be tied to a stake high enough to give them the desired angle, or sometimes they can be tied to the main stem of the tree but always be sure there is plenty of room for the growth of the branches inside the loops made in tying.—J. B. N.

## WEEKLY MARKET REVIEW OF FRUITS AND VEGETABLES

Jobbing prices and shipments for the United States for the period September 4-11. Reported by United States bureau of markets.

### Apples

Virginia, Illinois and New York have the markets well supplied with barreled apples this past week, while California has shipped a considerable supply of boxed stock. Wealths have been jobbing at \$4.50 to \$6.00 per barrel and Duchess at \$3.50 to \$6.00. New York has shipped only 83 cars to date, which is only about one-third as many as up to the corresponding time last year. Illinois, however, with a movement of 566 cars to date, has shipped about three times as many as up to the same time last year.

### Other Fruits and Vegetables

The supply of grapes was slightly heavier the past week. California still leads in shipments, although Iowa, Kansas, Missouri, and New York have been factors this past week. Grapes were reported as selling at 27 cents per six pound basket f. o. b. Council Bluffs, Iowa, yesterday.

Pear shipments from California and Oregon, which are the two heaviest shipping points at present, have been considerably lighter this past week. Illinois, Michigan and New York are now shipping in large quantities. Pears are selling at \$1.35 to \$1.40 per 50-pound box, f. o. b. Washington. This is about the same price as a week ago. Bartlett are bringing \$2.00 per bushel, f. o. b. Benton Harbor, Michigan.

Onion shipments have been slightly heavier this past week. New York, Massachusetts, California and Ohio are all moving a considerable quantity. New Yorks are selling at \$1.00 to \$1.25 per bushel, f. o. b.

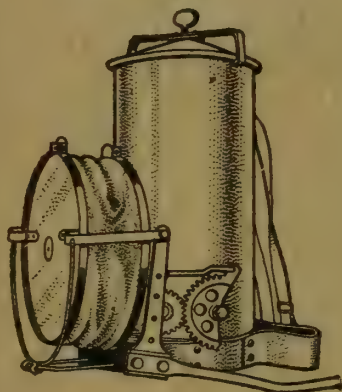
## "FARM THE FARM UNDER THE FARM"

**A** MISSOURI farm paper editor once coined this expressive phrase, "Farm the Farm under Your Farm." Thousands of farmers who had been unmoved by long and learned articles on "Deep Tilling" were stirred to action by this homely and forceful expression. Have you ever stopped to think that the repeated turning back and forth of the top soil on your farm has left just below the usual plowing level a deposit of richness that needs only to be brought up where it can nourish your plant roots to greatly increase your crop yield?

In reality then there is a "Farm Under Your Farm"—a farm richer than the one you have been working. But the problem is how are you going to get down to it. Plow deeper by means of a farm tractor—that is the answer. If you have not had an opportunity to judge for yourself of the increase in yield that follows this deeper tractor plowing, you will be astonished at the facts.

Two wheat fields, side by side, as near alike as two peas in a pod and differing only in the depth plowed, showed a difference in yield of nearly ten bushels to the acre. This is not the experience of one farm, but of thousands wherever the tractor has gone with its greater power and consequent ability to plow deeper and better. So aside from all the other advantages a good tractor will bring to you, such as enabling you to get your crops in on time and to harvest them when they are ready, the cutting down of hired help and the big saving in your own labor, the doing away with so many chores and the saving it makes in farming costs, you should not overlook the fact that with the tractor will come bigger, better crop yields.

## American Beauty Dust Sprayers



AT YOUR DEALERS  
or we will send it to you for  
Standard Size .....\$16.00  
Junior Size .....\$13.50

The California Sprayer Co.  
6029 Pasadena Ave., Los Angeles



**OLD FAITHFUL** is a term that describes the Commercial Engine. It is always ready for work and works as long as you want it. Guaranteed. Write for Illustrated Catalog.

## COMMERCIAL ENGINE CO.

2416 Porter St., Los Angeles, Cal.  
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## IRISES

August to November is the time to plant for best results next flowering season.  
The DEAN IRIS GARDENS, Moneta, Cal.

## Shoes are High

Its Easy to Get One



most complete and serviceable outfit that will always give satisfaction.  
**SPECIAL OFFER:**—You can obtain this Economy Home Cobbler Outfit by securing and sending only two \$1.00 subscriptions to California Cultivator, one of which must be new. Show a copy of the paper to your friends and secure two subscriptions. Send the names and \$2.00 to California Cultivator, 115-117 North Broadway, Los Angeles, and the cobbler outfit will be sent to you by parcel post prepaid.

## Do Your Own Mending and Save Money.

Any One can Mend Shoes with our Combination Outfit

Economy Home Cobbler Outfit should be in every home. With it you can mend men's, women's and children's shoes thereby saving many dollars each year. Shoes for the average family of five, now cost approximately \$30 per year. Half soling and healing five pairs once will cost \$6.25. With the Economy outfit you can do this repairing with \$1.00 worth of material.

The outfit consists of an iron stand for lasts, one 9 inch last for men's shoes, one 7 1/2 inch last for women's shoes and one 5 1/2 inch last for children's shoes, all reversible; shoe hammer, shoe knife, peg awl and handle, sewing awl and handle, stabbing awl, paper clinch nails, paper heel nails, reel waxed ends, a special package of hob nails for mountain boots and directions for half soling. This is a



Los Angeles Market

Los Angeles, Sept. 19, 1917.

BUTTER

Produce Exch. Quotations.  
Price to trade 4c higher.  
California extra creamery .....44  
Dairy Exch. prices past week.  
Sept. 12 13 14 15 17 18  
17 41 41 44 44 44 44  
Rcts. wk. ending Sept. 18, 291,700 lbs.

CHEESE

Brokers prices:  
California fresh, lb. ....26  
Oregon Longhorn .....28  
Tillamook Trip. ....26  
Domestic Swiss .....32

EGGS

Exchange quotations. Prices include  
cases and fillers valued at 35c.  
Fresh extras .....48  
Case count .....47  
Pullet .....39  
Dairy Exch. prices past wk.  
Sept. 12 13 14 15 17 18  
17 47 48 48 48 48 48  
Rcts. wk. ending Sept. 18, 920 cs.

POULTRY

We quote to producers:  
Broilers, 1 1/2 lbs. and up, 25; small .....23  
Fryers, 2 1/2 lbs. and up .....23  
Hens—Leghorns, 13@16; Heavy Cold .....23  
Roasters, 3 lbs. and up .....23  
Ducks, lb. ....15@17  
Squabs, doz. ....2.00@3.00  
Rooster, old .....10  
Geese .....10

LIVE STOCK

We quote cwt. f.o.b. L. A.  
Corrected Wednesday morning, Sep-  
tember 12 by the Cudahy Company.  
Cattle—  
Beef steers, av. 1000 to 1100 lbs. 8.50@9.00  
Heifers, good .....6.50@7.00  
Cows, good .....5.50@6.50  
Canners .....4.50@5.00  
HOGS—  
Av. 125 lbs. ....14.00  
Av. 150 lbs. ....15.00  
Av. 175-200 lbs. ....15.50  
Rough, docked 20 lbs.; piggy sows, 40  
lbs., stags, 40 per cent. ....9.50@10.00  
Prime wethers .....9.00@9.50  
Ewes .....13.50  
Lambs .....10.00@10.50  
Yearlings .....10.00@10.50

POTATOES

Wholesale selling price:  
Cwt. ....2.75@3.10  
Sweet, lug .....1.25

ONIONS

Wholesale selling price:  
Brown, cwt., 2.25; white .....2.25  
Garlic .....3

VEGETABLES

Wholesale prices:  
Artichokes, doz .....1.00  
Beans—Wax .....6@6 1/2  
Limas, lb. ....6@6 1/2  
Ky. Wonder .....6@6 1/2  
Beets, sk. ....1.10  
Cabbage, lb. ....1.10  
Carrots, doz .....1.35  
Cauliflower, doz. ....65  
Celery, doz. ....65  
Corn, lug .....70@75  
Cucumbers, lug .....70@75  
Egg Plant, lb. ....3@3 1/2  
Horseradish, rt. lb. ....15  
Lettuce, doz. ....35  
Leeks, doz. ....30  
Mint .....40  
Onions, green, doz. ....25  
Okra, lb. ....10@12  
Peas, lb., Telephone .....8 1/2@9  
Peppers, Chili, lb., 3 1/2@4; Bell. ....3@3 1/2  
Parasips, doz. ....40  
Parsley, doz. ....20  
Radishes, doz. ....20  
Rhubarb—Strawberry .....1.10  
Romaine, doz. ....40  
Spinach, doz. ....25  
Squash, Summer, cr. ....50@55  
Crockneck .....50@55  
Hubbard, lb. ....2  
Tomatoes, lug .....50@65  
Turnips, doz. ....30

FRUITS

Wholesale prices:  
Skinner's Seedling .....1.50@1.75  
Bellflowers .....1.15@1.35  
Avocados, doz. ....7.00@8.50  
Bananas, lb. ....5  
Cantaloupes—Standard .....1.40  
Tip Top .....65@1.85  
Ponies .....1.10  
Pineapples .....1.75  
Persian .....2.00  
Casabas, lb. ....1 1/2  
Grapes—Black .....90  
Black .....1.10@1.15  
Malagas, lug .....90  
Muscat, lug .....1.50  
Tokays .....1.25  
Nectarines, lug .....90@1.25  
Peaches, lug .....1.25  
Pears, Bartlett, lug .....75@1.50  
Plums, lug .....75  
Quinces, lug .....1 1/2@1 1/4  
Watermelon, lb. ....1 1/2@1 1/4

CITRUS

Lemons, 4.25@5.75; juice .....2.25  
Grapefruit .....3.00@3.50  
Limes, basket .....1.00  
Valencias .....3.25@3.35

HONEY

Wholesale prices:  
Extr. White, lb. ....11 1/2@12 1/2  
W. W., lb. ....12@14  
Comb. case, W. ....3.75  
W. W. case .....4.25@4.50

NUTS

Almond Growers' Exch. announces  
prices on 1917 nuts.  
Nonp. ....21 1/2  
I. X. L. ....19 1/2  
N. P. L. ....18 1/2  
Drakes .....16  
Peanuts, raw .....12  
Pine Nuts .....20  
Pecans .....19

RICE

Wholesale quotations:  
Cal. ....6.25  
Broken .....4.75@5.60

BEANS

Wholesale Prices:  
Lady Washington .....13.50  
Limas .....13.50  
Pinks .....10.00  
Manchurian Reds .....10.50  
Baby Mex. ....9.00  
Jarbanzos .....9.00@10.00  
Small White .....13.50  
Blackeyes .....8.00  
Tepary .....7.00  
Lentils .....18.00

HAY

Quotations by Nichols-Loomis Com-  
pany. Wholesale prices to grower f.o.b.  
L. A. carlots.  
Tame Oat .....20.00@22.00  
Volunteer Oat .....14.00@16.00  
Wheat .....16.00@19.00  
Barley .....18.00@21.00  
Alfalfa .....17.00@20.00  
Straw .....7.00  
The Alfalfa Growers' Association of  
Southern California quotes: No. 1 Cow  
alfalfa hay \$22.50 f. o. b. Los Angeles,  
and Southern California points. No. 1  
horse alfalfa hay \$21.50 f. o. b. Los An-  
geles and Southern California points.  
Market has been good and demand has  
been exceeding the supply.

GRAIN AND FEEDSTUFFS

Wholesale cwt. f.o.b. L. A.  
Alfalfa Hay .....1.75  
Alfalfa Molasses .....1.80  
Barley, Rolled .....2.80  
Barley, Re-cleaned, Whole .....2.85  
Barley, Hulled .....3.40  
Beet Pulp .....1.80  
Bran, Heavy .....2.45  
Cocoanut Meal .....2.30  
Cottonseed Meal .....3.30  
Corn, Yellow .....4.45  
Corn, White .....4.55  
Corn, Cracked .....4.50  
Corn, Feed Meal .....4.55  
Corn, Egyptian .....4.00  
Middlings .....3.05  
Milo .....4.00  
Oat Chop .....1.90  
Oats, White .....2.85  
Oats, Rolled White .....2.90  
Oats, Hulled .....4.75  
Oats, Rolled Chicken Groats .....4.85  
Oatmeal .....3.40  
Wheat, No. 1 .....4.00@4.05  
Wheat, Cracked, No. 1 .....4.40  
Rye .....4.00  
Blood Meal .....5.10@5.20  
Bone, Green .....2.85@2.95  
Bone, Dry .....3.05@3.15  
Charcoal, 50-lb. sk. ....2.70@2.80  
Clam Shell .....70@80  
Grit, Granite .....65@75  
Oyster Shell .....1.25@1.35  
Sunflower Seed .....4.10@4.20  
Soya Bean Meal .....3.40@3.50  
Scratch Feed .....3.70@3.80  
Gritless .....3.90@4.00  
Rice Bran, ton .....40.00  
Middlings, ton .....45.00  
Rice Polish, ton .....49.00

San Francisco Markets

San Francisco, Sept. 18, 1917.

BUTTER

Dairy Exchange quotations, lb.:  
Fresh extras .....44 1/2  
Prime firsts .....43 1/2  
Dairy Exch. quotations past wk.  
Sept. 11 12 13 14 15 17  
17 42 1/2 42 1/2 43 1/2 45 1/2 45 1/2 44 1/2  
CHEESE  
Dairy Exchange quotations:  
Cal. Flats. 18@23 Y. Am. ....22@24 1/2  
Ore. Young Am. ....24 1/2  
Jack Cheese, full cream .....22@23

EGGS

Dairy Exchange quotations:  
Extras .....47 1/2  
Firsts .....46  
Select Pullets .....44  
Firsts .....43  
Dairy Exch. quotations past wk.  
Sept. 11 12 13 14 15 17  
17 45 45 1/2 46 1/2 47 47 1/2

POULTRY

We quote from producers, lb.:  
Hens, large, 25@27; Leghorns .....20@22  
Small colored .....22@23  
Broilers .....23@25  
Roosters .....23@25  
Squabs, doz. ....2.00@3.50  
Ducks .....12@16  
Geese .....18@19  
Belgian Hares, live, 12@15; dr. ....17@19  
Turkeys .....20@30

LIVE STOCK

Prices gross weight:  
Cattle: The following prices are for  
grass fed stock. Hay fed bring 1/2 to 3/4  
more.  
Steers, lb. 6@9; cows and heifers,  
4@7 1/4; calves, 7@9 1/2.  
Sheep: Wethers, 10 1/2@11; ewes, 8 1/2@  
9 1/2; lambs, lb., 10 1/2@11.  
Hogs: Hard grain-fed, weighing 100 to  
150 lbs. 14c; 150 to 300 lbs. averaging 175  
or less, 15 1/2c; averaging 180 or over,  
15 1/2c; 300 to 400 lbs., 14 1/4c.

POTATOES

Wholesale selling prices at wharf:  
Cwt. ....2.00@2.25  
Salinas Burbank .....3.00  
Sweets, lb., .....3@3 1/4

ONIONS

Wholesale selling price on wharf:  
Australian Brown .....1.40@1.50  
Yellow .....1.40@1.50  
Garlic, lb., new .....3@3 1/2

VEGETABLES

Wholesale selling price:  
Beans, string, lb. ....2@3  
Fy. Garden, 2@3; Lima .....3@4  
Celery, doz. ....40@85  
Corn, Green, sk. ....75@1.50  
Cucumbers, lug .....30@50  
Pickling lug .....40@1.00  
Egg Plant, lug .....50@75  
Okra, box .....65@75  
Onions, Pickling .....5  
Peas, lb. ....3@7  
Peppers, Bell, lug .....25@40  
Squash, summer, lug .....65@75  
Marrowfat, sk. ....65@75  
Tomatoes, lug .....60@90

CITRUS FRUIT

Lemons .....2.50@7.00  
Lemonettes .....3.00@4.00  
Grapefruit .....2.00@3.25  
Valencias .....75@3.50  
Limes, Mex. ....4.50@5.50

FRESH FRUIT

Wholesale selling price:  
Apples—  
Alexanders .....1.10@1.15  
Bellflowers .....90@1.10  
Crabapples .....75@1.00  
Bananas, bunch .....1.25@2.00  
Cantaloupes—Turlocks .....1.00@1.25  
Delta, lug .....25@50  
Turlock Standard .....50@1.00  
Turlock Ponies .....25@40  
Persian, doz .....1.25@1.50  
Honey Dew .....1.25@1.50  
Casabas, doz. ....1.25@1.75  
Figs, White, single box .....50@65  
Black, double .....60@75  
Grapes—Tokays, lug .....75@1.25  
Isabella, cr. ....75@1.00  
Seedless, lug .....50@85  
Muscat, lug .....60@65  
Huckleberries, lb. ....14@16  
Peaches, basket .....30@60  
Ton .....50.00@75.00  
Pears—Bartlett, lug .....1.25@1.50  
Pineapples, doz .....2.50@3.50  
Plums, cr. ....1.00@1.25  
Pomegranates, bx .....75@1.25  
Nectarines, cr. ....1.00@1.25  
Blackberries, ch. ....4.00@5.00  
Strawberries, chest .....5.00@6.50  
Raspberries, chest .....6.00@8.00  
Watermelons, doz. ....1.00@3.50

DRIED FRUITS

Manager Niswander of the California  
Peach Growers advises that a limited  
quantity of peeled peaches, either in as-  
sortments or carload lots, will be sold.  
Raisins—The California Associated  
Raisin Company announced on August 22  
new 1917 crop prices effective at once:  
Muscats, Package Seeded, cs. of 48 lbs.,  
\$4.40; cs. 36 lbs. Sun-Maid and Fy.  
\$3.15. Ch. \$3.00; cs. of 45 lbs. Fy. \$3.25,  
Ch. \$3.10. Bulk Seeded, 25 lb. bx. Baker's  
Sun-Maid \$1.75, Fy. \$1.90, Ch. \$1.75. Loose  
Muscats, 50 lb. cs. 1 cr. Re-cleaned and  
Floated, \$4.15, 2 cr. \$3.40, 3 cr. \$3.65, 4  
cr. \$3.90. Layers and Clusters, 20 lb. bx.  
3 cr. London Layer \$1.60, 4 cr. \$1.85, 6  
cr. Imperial Cluster \$2.70.  
Thompson's Seedless, Package, cs. of  
47 lbs., Sun-Maid Seedless \$4.65, cs. of  
35-12s Re-cleaned, \$2.80, other brands, cs.  
of 48 lbs., \$4.75, cs. of 50 lbs., \$4.00. Bulk  
Re-cleaned Baker's, 50 lb. cs. \$4.90.  
Sultanas, Package, 48 lbs. \$4.75, 50 lbs.  
\$4.00. Bulk Re-cleaned, 50 lb. cs. \$4.50.  
Bleached Thompson Seedless, Northern,  
50 lb. cs. Ex. Fy. \$5.37-1/2, Fy. \$5.12-1/2,  
Ch. \$4.87-1/2, Soda Dipped, \$4.75; San Joa-  
quin Ex. Fy. \$5.50; Fy. \$5.25, Ch. \$5.00.  
Regular California dried fruit contract,  
Pacific coast rail shipping points prices  
on all but bleached and dipped raisins,  
guaranteed against our decline (sales to  
United States government excepted) to  
January 1, 1918.  
All Muscats, October-November, sell-  
er's option; also November or December,  
buyer's option.  
Thompsons and Sultanas, September-  
October, seller's option; also November  
or December, buyer's option.  
No rebate allowed on export sales.  
Prices subject to change without no-  
tice.  
DRIED FRUITS—Apricots, per lb.,  
bulk basis: Standard, 1 1/4c; choice, 1 1/2c;  
extra choice, 1 5/8c; fancy, 1 3/4c; extra  
fancy, 1 7/8c; fancy Moorpark, 1 7/8c; ex-  
tra fancy Moorpark, 1 3/4c; prunes, 60s  
to 90s, 6 1/2c basis; 60s to 60s, 1/2c pre-  
mium; 40s to 50s, 1 1/2c premium.  
APPLES—In 50-pound boxes, per lb.:  
Fancy, 1 3/4c; extra choice, 1 1/2c; choice,  
1 1/2c.  
PEARS—Bulk basis, per lb.: Fancy,  
1 1/4c; extra choice, 9/4c; choice, 8c;  
standard, 6c.

HONEY

Comb, W. W., lb. ....13@15  
Lt. A., 11@12; A. ....8@10  
Extr. W., lb., 13; Lt. A. ....11  
Beeswax, lb. ....38

BEANS

Jobbers' prices, cwt. re-cleaned:  
Limas .....12.00@12.75  
Bayous .....8.50@9.00  
Small Whites .....12.50@14.00  
Mexican Red .....8.50@9.25  
Large White .....12.00@12.50  
Pinks .....8.75@9.00  
Black Eyes .....7.50@7.75  
Cranberry .....10.00@10.50

HOPS

Per lb.: California crop of 1917, 30@33;  
on contracts, spot, 1916 crop, 17@21; old,  
8@13.

HAY

Under date of September 15, Scott,  
Magner & Miller say:  
Receipts past week 2854 tons, last  
week 3496 tons. The market has been  
firm throughout and prices have been  
well maintained and at times when re-  
ceipts were light hay has sold in excess  
of top quotations. Alfalfa from the  
river districts is now moving in greater  
volume. Receipts of straw have been  
heavy, trade light.  
Fancy Wheat Hay (light 5 wire  
bale, ton .....22.00@23.00  
No. 1 Wheat or Wheat and  
Oat Hay .....19.00@21.00  
No. 2 Wheat or Wheat and  
Oat Hay .....16.00@18.00  
Choice Tame Oat Hay .....19.00@21.00  
Other Tame Oat Hay .....16.00@18.50  
Wild Oat Hay .....16.00@19.00  
Barley Hay .....16.00@19.00  
Stock Hay .....14.00@16.50

No. 1 Barley Straw, bale .....50@90

GRAIN

Grain Exchange prices, ctl.  
Corn, California Yellow .....3.75@4.00  
Barley, Feed .....2.30@2.35  
Shipping .....2.37 1/2@2.40  
Oats, Red Feed, cwt. ....2.30@2.35  
Oats, New Black .....3.35@3.50

FEEDSTUFF

Wholesale prices per ton:  
Bran .....41.00@42.00  
Cornmeal .....83.00@84.00  
Cracked Corn .....83.00@84.00  
Middlings .....50.00@55.00  
Alfalfa Meal .....28.00@30.00  
Cocoanut Meal .....40.00@41.00  
Rolled Barley .....49.00@50.00  
Shorts .....43.00@44.00

SEEDS

Prices in round lots, lb.:  
Millet, re-cleaned .....4 1/2@5  
Alfalfa .....20@21  
Flax .....6@6 1/2

Citrus Fruit Market

Los Angeles, Sept. 18, 1917.

The orange market is not as strong as  
formerly, some auction sales having  
been made at disastrously low prices.  
On the other hand the five dollar mark  
has been touched by some of the better  
brands. This appears to be in part at  
least a result of careless packing and of  
sending a grade of fruit which should  
go to the by-products factory.

Lemons likewise very low, this partly  
because of the season when demand ma-  
terially decreases.

Shipments

Shipments of oranges from Southern  
California since November 1, 1917, 38-  
137 cars, lemons 7420, total 45,557; to  
same date last year oranges 30,023, lem-  
ons 6572, total 36,600. From Central  
California to date this season oranges  
5044, lemons 164, total 5208; to same  
date last season oranges 5398, lemons  
146, total 5544. From Northern Califor-  
nia to date this season oranges 845; last  
season oranges 610, lemons 1.

FROM THE AUCTION

September 13  
New York: 19 oranges, 1 grapefruit,  
1 lemon. Oranges lower, Val. 75@4.05.  
Philadelphia: 4 cars. Val. \$1.90@3.30.  
Boston: 9 cars. Val. \$2.30@3.20, lem,  
\$2.35@2.95, grapefruit \$1.50@2.40.  
September 14  
New York: Val. \$1.60@4.60, grape-  
fruit \$2.00@3.65.  
Boston: 9 cars. Val. \$2.00@3.25,  
lem. \$2.40@3.35.  
Cleveland: 5 cars. Val. \$1.25@3.00,  
lem. \$1.75@2.85.  
Pittsburgh: 3 cars. Val. \$1.80@3.30,  
lem. \$1.70@5.25, grapefruit \$1.75.  
September 17  
New York: 16 oranges, 1 lem., or-  
anges stronger, Val. \$0.90@5.60, lem.  
\$3.00@3.75.  
Philadelphia: 4 cars. Val. \$1.60@3.35,  
lem. \$2.35@3.30.  
Pittsburgh: 8 cars. Lower. Val.  
\$1.20@3.50, lem. \$1.55@4.65.  
Cincinnati: 4 cars. Val. \$1.90@2.80,  
lem. \$3.70@4.65.  
St. Louis: 4 cars. Val. \$2.20@3.45,  
lem. \$4.00@4.65.  
Boston: 10 cars. Lem. stronger, Val.  
\$1.50@2.95, lem. \$5.40.  
September 18  
New York: 12 oranges, 1 grapefruit,  
1 lem. Val. \$1.10@3.65; lem. \$3.20@  
\$4.05.  
Boston: 9 cars. Val. \$1.65@3.10,  
lem, \$5.35@5.50. Grapefruit halves, \$0.95  
@1.30.  
Philadelphia: 3 cars. Val. \$2.10@3.50.

MARKET NOTES

Corn has been advancing and declining  
on the Chicago Exchange according to  
the weather reports or perhaps accord-  
ing to the speculator's fears of early  
frost.  
December contracts on cotton are hov-  
ering around 20 and 21 cents in New  
York market.  
Weather in the cotton belt has been  
favorable.  
Humboldt County dairymen predict  
that butter will yet sell at \$1.20 per two  
pound square. Butterfat in that county  
is already commanding 5 1/4 cents.  
Some market observers are predicting  
even dollar per pound butter and dollar  
per dozen eggs.  
California rice is not being offered but  
it is thought it will soon be on the mar-  
ket and at prices materially above East-  
ern or Asiatic grown.  
Onions are taking on a more satisfac-  
tory price; Brown are often commanding  
as high as \$2.25. The San Joaquin delta  
increased its acreage over 1916, which  
was 3700 acres, to 3300 acres.  
Sugar has declined materially; it is  
thought largely because of fear of pos-  
sible food commission control.  
In Los Angeles cold storage are 63,752  
cases of eggs, 235,978 pounds of butter,  
over a million pounds of cheese and  
nearly 50,000 boxes of apples. The but-  
ter, egg and cheese storage is much  
greater than preceding years at same  
date, while the apple storage is only  
about a third of that of 1916. The butter  
and egg holdings are decreasing at a  
very rapid rate.  
Poultry supplies, both storage and  
fresh, are large. It is thought this is the  
result of reducing stocks on the ranches  
because of high feed prices.

Alfalfa Land for Dairying

Land already checked, leveled and in good stand of alfalfa. For sale on  
easy terms in tracts of 20 acres and up. Also first-class orchard and bean land.

BRENTWOOD IRRIGATED FARMS

Sixty-three miles from San Francisco in Contra Costa County. For prices,  
etc., address  
BALFOUR, GUTHRIE & CO., Land Dept., 350 California Street, San Francisco.



# MAXWELL

Most Miles per Gallon - Most Miles on Tires

## A Good Investment— The Maxwell Motor Car

"Webster" says: "*Investment: the laying out of money in the purchase of property, especially a source of income or profit.*"

We maintain that that definition exactly fits the purchase of a Maxwell.

American industries have hundreds of millions of dollars invested in labor saving devices.

That's what the automobile is today—a saver of human energy and time.

And, friends, energy and time are you—are *your* life.

Can you afford to waste time and energy when you can run a Maxwell for \$2 a week?

You can drive a Maxwell 5,000 miles a year at a cost of \$2 a week.

This is not a theory.

Scores of thousands of Maxwell owners are doing it.

In our great economy contest on May 23rd, last, 1,092 Maxwells averaged 27.15 miles on a gallon of gasoline each.

In our great economy contest in June and July last, 2,040 Maxwells averaged 29.04 on one gallon each.

The Maxwell engine holds the world endurance record—22,022 miles without stopping.

The Maxwell clutch runs in oil—is wear-proof, smooth, efficient.

Maxwell transmission is simple, trouble-proof.

The mighty Maxwell axles stand the strain of the road.

Every vital part is built to do its work smoothly and well for years.

Whether for farm or city use, the Maxwell is *your* car.



Touring Car \$745

Roadster \$745; Berline \$1095

Sedan \$1095. All prices f. o. b. Detroit

Write Today for Catalog A

# Maxwell

Motor Sales Corporation  
Detroit Michigan





# CALIFORNIA CULTIVATOR

*THE LIVESTOCK* *Combined* *CALIFORNIA*  
*and DAIRY JOURNAL* *with* *CULTIVATOR*

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

September 29, 1917

SAN FRANCISCO

## Scenes at the Tractor Demonstration



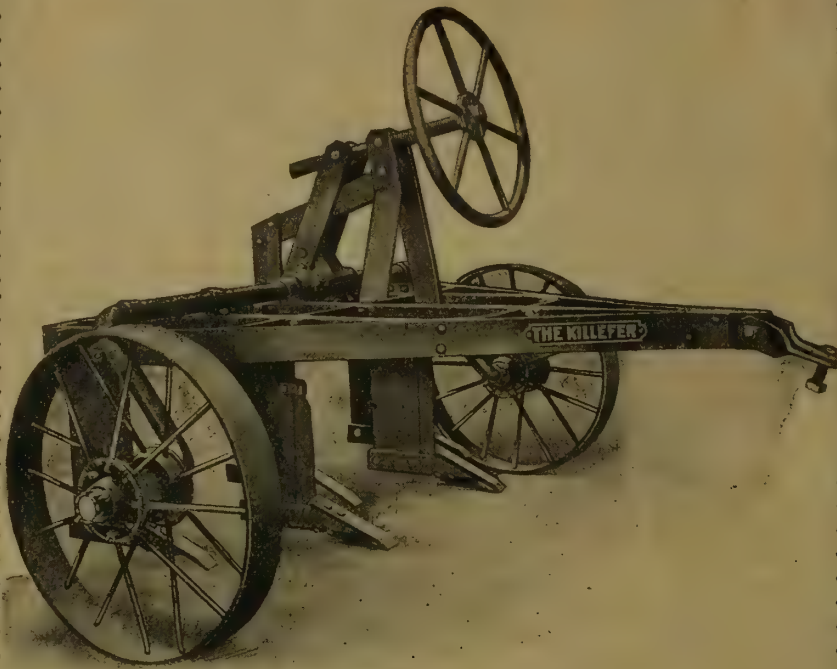


## Five Standard Subsoil Plow

Killefer  
Quality



Killefer  
Efficiency



This is one of the line of subsoil plows shown at the Tractor Demonstration at Vail's Ranch. The value of good subsolling was shown by the work on this ranch and the large five standard plow was ordered to finish the acreage left by the Tractor Demonstration. Subsoil work should be done as early as possible:—do not delay—get your orders in and begin work as soon as possible.

**The Killefer Manufacturing Co.** 2209 Santa Fe Ave.  
LOS ANGELES, CAL.

Uncle Sam Says:  
"Make  
Each  
Acre  
Produce  
to the  
utmost"



Germain's Hairy Peruvian is a wonderful improved type of alfalfa—a thoroughly tested plant that will produce the greatest alfalfa tonnage known—and under all climatic conditions.

Plant Germain's Hairy Peruvian  
**ALFALFA**—and get 2½ more  
tons to the Acre!

Germain's Hairy Peruvian Alfalfa is all leaves clear down to the bottom of the stem. I would use nothing else.—W. R. Doctor, 616 W. Vernon Ave., Los Angeles.

Hairy Peruvian Alfalfa does all that you claim. It pays for itself in a larger yield.—Miss Lindo, Monrovia, Cal.

Hairy Peruvian has far exceeded my expectations. It certainly is wonderful.—P. F. Johnston, R. F. D., Compton, Cal.

Place Your Order  
Today to insure  
delivery

**Germain**  
Established 1871  
**Seed & Plant Co.**  
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SOUTH MAIN STREET  
LOS ANGELES • CAL.

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## P & O WHY?



**Why did They Pull the P & O Light Draft Little Genius Power Lift Tractor Plow at the Tractor and Implement Demonstration held at Los Angeles, Cal?**

**WHY? BECAUSE** it was only natural and a matter of choice. Results were essential, and obtained with the P & O LITTLE GENIUS TRACTOR PLOWS back of some 20 Tractors. Depth, Light Draft and Good Plowing followed. Demonstrated positively a one man outfit and easily operated.

### SOME FEATURES

Single trip rope controls plow.  
Power lift feature is real.  
Power lift in and power lift out of ground.  
High level lift.  
Ample clearance under beams and between bottoms for all conditions.  
Heavy beams and braces.

Strength.  
Levers low when plowing and when bottoms are raised.  
Bottoms with proper suction built in.  
A reinforced frog.  
Quick detachable shares.  
Adjustable hitch with wood break properly designed and assembled.

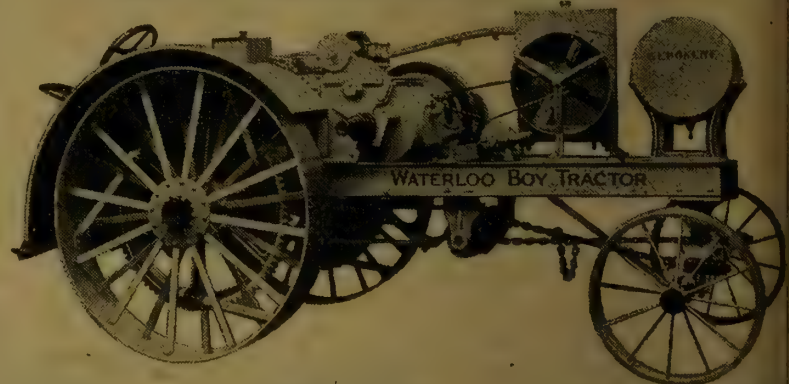
Actual field work under severe conditions has demonstrated more than we can tell you, and all backed by a successful three years world's field record.

**DIXON & GRISWOLD** 146-148 N. Los Angeles St.  
WHOLESALE DISTRIBUTORS LOS ANGELES, CAL.

"HE ALSO FIGHTS WHO HELPS A FIGHTER FIGHT"  
A SURE WINNER

## The Waterloo Boy One-Man Tractor

A FINISHED AND STANDARDIZED MACHINE OF PROVEN EFFICIENCY



SIMPLE  
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RELIABLE  
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Nearly four years of demonstrated success in the fields and orchards of California.

The Popular Tractor—every seventh tractor made and sold in America last year was a Waterloo Boy.

Admitted by all who witnessed operation of the Los Angeles Demonstration was superior to anything in its class.

**W. L. CLEVELAND CO.**

209-211 No. Los Angeles St. Los Angeles, Cal.

## SEED POTATOES

Place your order now for spring delivery. Hill Selected Salinas Burbank White Rose and American Wonder varieties.

Telephone for our price on any variety of Beans

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## LIME

Our Ground Limestone Will Increase Your Soil Production. Write for Book

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640 Title Insurance Bldg.  
LOS ANGELES, CAL.

"Fertilizer Dept."

**California Cultivator**

**Costs \$1 per Year**



# California Cultivator

Vol. XLIX No. 13

LOS ANGELES: September 29, 1917

One Dollar Yearly

## Southern California Tractor Demonstration

Complete Success of Demonstration of Use of Farm Power, Especially Tractors, on All Types of Farm Implements. Soil Hard and Almost of a Hardpan Nature, but Powerful Engines Show Ability to Negotiate Difficulties. Attendance Nearly 100,000

The upper and lower photos on the cover were taken at time of taking the photos on Friday. Middle left shows main exhibition tent. In the far distance the rows of smaller tents of individual exhibitors. Middle right one of the many rows of tractors, with the main tent and all the larger exhibits in the background. Over 2000 tractors were parked at one time.

**W**HEN the International Tractor Demonstration, the only one east of the Rockies this year, was recently held at Fremont, Nebraska, all

thunder shower and wind storm made puddles of the entire demonstration field and razed every tent and structure on the field—this a few days before the demonstration was to occur.

However, the demonstration went on and it is chronicled that no single engine laid down on the job but everyone demonstrated itself built to negotiate Nebraska clay and gumbo, and great were the praises for the

at the time of Southern California's demonstration this year was doing its prettiest. But that soil—the big 75's with the plows built for any task any farmer may ask of them turned it up in clods as large as some



Officers of the Traction Engine & Implement Dealers Association

The larger man at reader's right is President O. H. Stevens, at his right Vice-President H. L. Marsh, at his right Treasurer Alex McCluskey; at reader's left Manager M. O'Neill. Secretary Cleveland had flown before the Cultivator camera could see him.



Arnett & Company's Tent

With exhibit of Threshers and all kinds of farm implements



Cleveland 12-20 Tractor

It is making a circle with a six-foot double disk P. and O. Harrow

roads of obstacles were encountered and for a time it was felt that it might be necessary to postpone or all of the demonstration. First a

The opening day saw another continued rain, accompanied by wind which tore tents into shreds and left the gumbo soil a mass of thin putty.



In the Dixon and Griswold Tent  
Exhibit of all types of farm implements



The Killefer Subsoiler

A big "75" is just hitching on to this subsoiler, which easily handles hard soil to a depth of 20 or even 24 inches.



Yuba Ball Tread 20-35 Tractor

It is pulling four John Deere Engine Disks

tractor after that demonstration under those conditions.

California's demonstration this year was under somewhat different circumstances. The weather was perfect and there was no wet gumbo to wallow through for California climate is always perfect and

of the people attending the demonstration. At other places where the clods had been worked down to the consistency of exceedingly fine flour by various pulverizers and harrows it lifted itself to heaven and we all breathed it and swallowed it and carried it home on our persons.



At the great Nebraska demonstration where all manufacturers east of the Rockies vied with each other in showing their best at its best there were about 90 tractors, pulling at times 290 bottoms. Down in the Southwestern corner of the United

for some hard problem by which he could prove the efficiency of power farming.

We took occasion to converse with several farmers—prospective buyers. They had no complaint of their treatment and frequently were heard to

ers' Association erected tents of their own. Some of these are shown in the engravings, which give a much better idea of the demonstration than does the written word. These photographs taken with the Cultivator camera also show something of the crowds of people who attended. "How many were there?" We don't know for there were no turnstiles. There were no gate receipts for everything was wide open, even to free ice water with individual cups, free lemonade, freedom and the glad hand everywhere, but there were 2000 autos counted in one parking place at one time and from this and fairly close observation on various days of the demonstration it is generously estimated that there were not far from 100,000 people inspecting these tractors as they turned up the earth

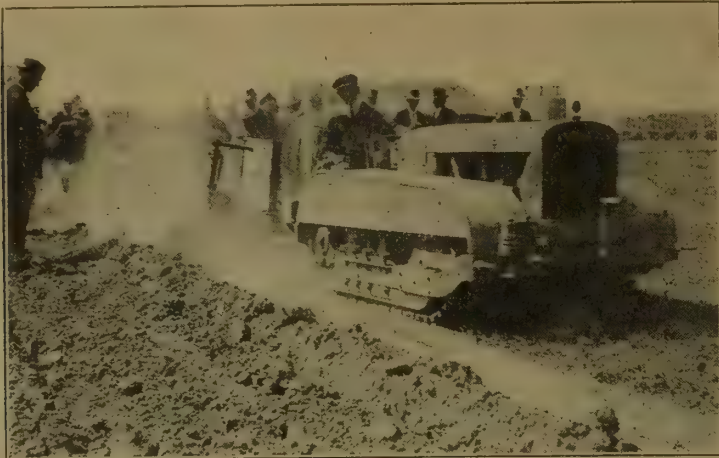
#### TAKE GOOD CARE OF THE TRACTOR



THE man who buys a tractor with the idea that it will do his work and be able to take care of itself will be sadly disappointed, but the man

who buys expecting to give the tractor good care, keeping it well housed as clean as possible, finding loose broken and wornout parts as soon as they need repair, will find the tractor will more than pay him back.

The first consideration in taking care of a tractor is to see that it is properly housed. The man who buys a tractor without a good, dry place to keep it starts to lose money soon as he gets the machine. Weather, with its rust and dirt, will start work on an exposed new tractor once, and it is too costly a piece of machinery to treat that way.



New Lambert Chain Tread 8-16 Tractor  
It is handling the No. 1 four-furrow power lift P. and O. Disk Plow

States, at the Southern California demonstration there were more than three score of firms exhibiting, 49 of whom made a showing of over 60 tractors, which were pulling moldboard plows, disks, pulverizers and clod crushers, chisel tooth, spring tooth and pretty nearly every kind of cultivator or soil tiller in ex-

remark, "We have learned more of the tractor and its possibilities in these few days at this demonstration than we ever knew before of tractors and tractor propelled implements."

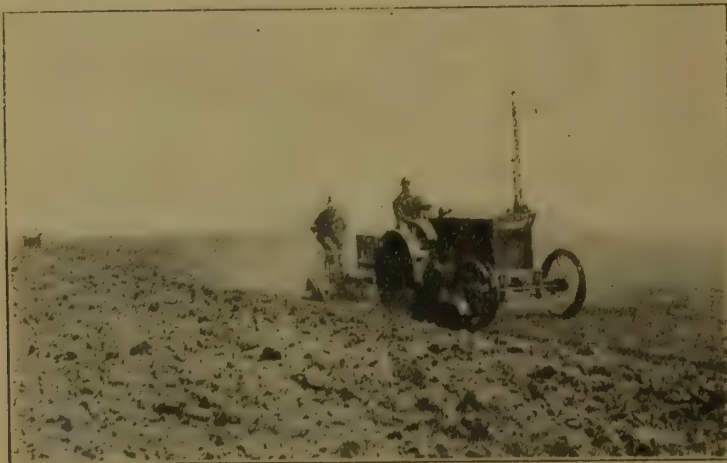
Besides the demonstration feature immense tents were erected which gave place to exhibits of manufactures equal to those of a county fair.



Samsco Sledge-Grip 8-25 Tractor  
It is attached to a No. 47 fifteen-foot Forkner Tiller

istence. There were big 75's, a foundation for war tanks if needed, and there were all types and grades from that down to the little garden motor-propelled hand cultivator. The members of the Southern California Association and their manager, Mr. O'Neill, have to be congratulated on the great success of their demonstration.

Of course automobiles, tires, oils and greases for auto and tractors and farm implements predominated, but irrigation supplies, fertilizers, bacteria, furniture, attachments or improvements to put on almost everything, even washing machines and all household conveniences had no small place; even land promoters en-



Case 9-18 Tractor  
It is pulling a No. 9 two-furrow P. and O. Disk Plow

It was held in the eastern outskirts of Los Angeles in a field of over 600 acres, which gave opportunity of every kind for test or demonstration which the prospective buyer might demand, and they demanded and found ready response on the part of every manufacturer who was looking

tered, to the extent of giving it almost the appearance of a great land show.

The large central tents near the entrance were divided up into booths and in these were nearly 50 different exhibitors. Besides these, members of the Tractor and Implement Deal-



Moline Universal Two-Wheel Tractor

from Tuesday morning till Saturday night. In fact the work did not end on Saturday for even on Monday interested spectators were still watching power farming on a big scale.

The movies were there with their cameras. When the dust did not entirely hide their vision they had opportunity to get some real live reels. On Friday a gathering of all types of tractors and implements was staged and the procession passed in front of the camera. These reels will be ex-

A good tractor shed which will give adequate weather protection will cost very much and it can be set in some convenient place away from major farm buildings. Thus the danger from fire which might possibly be caused by the gasoline and oils which must necessarily be kept about the tractor will be lessened.

It is of the utmost importance that the tractor shed be weather proof. If it were not, the depreciation on the tractor would be enormous, due



Beeman Garden Tractor  
An effective little power tool for the garden and truck farming.

hibited in all sections of the country.

It was all good advertising. It was all good business for the farmer has intelligent eyes and opportunity to see is all he needs in such times as these.

California farming will be advanced by this demonstration.

#### HIS EXPERIENCE

"That young electrician got an answer from the girl he proposed to that was opposed to all his scientific principles."

"What was it?"

"A positive negative."

needless rust and corrosion. "Since the tractor is a finished machine and also a costly piece of machinery, it stands one in hand to take care of it after he has purchased it. A simple wall is all that is necessary, provided it has no cracks or knot holes for rain and snow to beat through. The roof should be tight and should be made either of shingle or some good prepared roofing. It is not necessary to have a very large building for a tractor shed, but it is very desirable to have it large enough to include a work shop. No matter how good a tractor a man may have, there is always more or less work necessary to keep it properly tuned up and in good



ing condition. If the work shop the tractor shed are combined in building, it is very easy to do this ssary tinkering. There is al- considerable repair work to be on the various machines about farm, so that the repair shop will

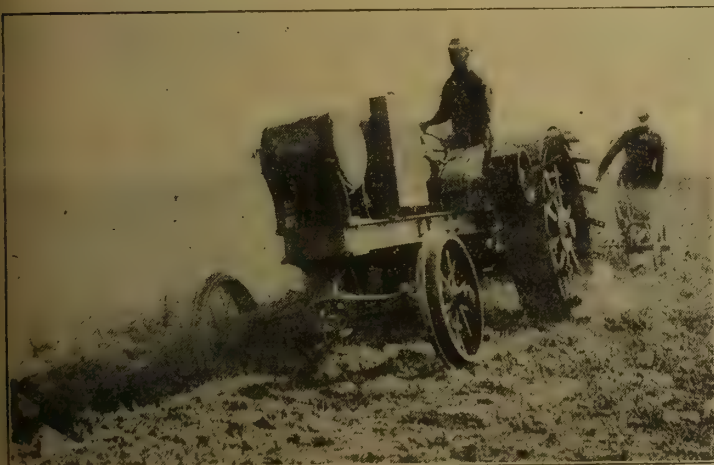
floor might not prove as desirable as one of well tamped earth or cinders. The lugs on the drive wheels of a tractor would not get much traction on a concrete floor and unless the concrete was of exceptionally good quality they would soon chew the sur-



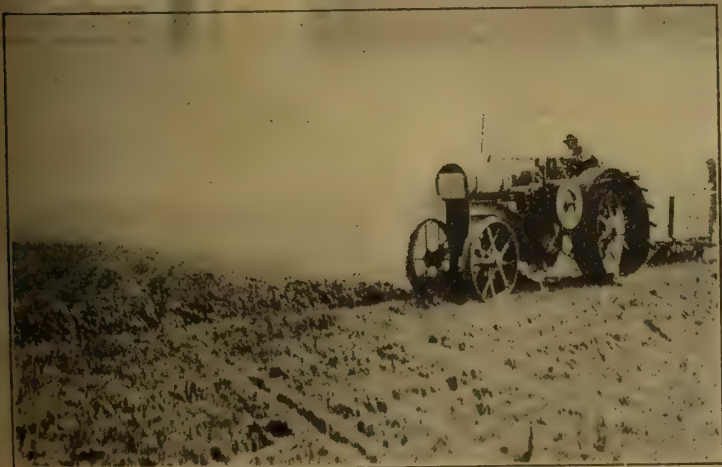
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**The Titan 10-20 Tractor**  
Drawing P. and O. No. 9 Two-Furrow Disk Plow

a great advantage for them as all. The floor of the tractor shed should compact and should not be allowed get dusty. Unless the tractor which e has is a very light one, a concrete

face up till it was quite rough. A number of farmers have put plank floors in their tractor sheds and like them very well. Where the tractor shed and the repair shop are in one room, it is a good plan to make one-half of the floor of concrete for the

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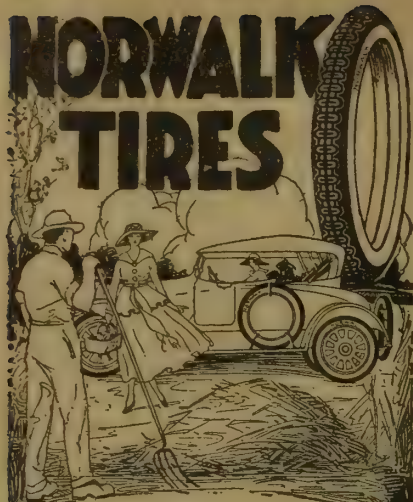
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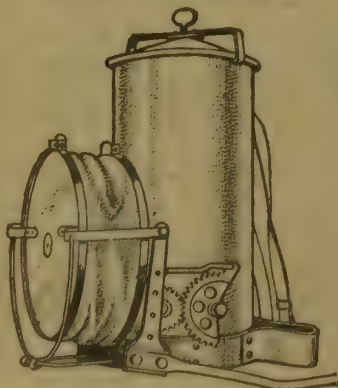
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top and leave the rest of the floor as is to keep the tractor on.

A tractor belonging to a careful farmer will spend very few nights outside of the tractor shed. During the harvest season, or any other rush season, when the tractor is being used almost continuously, it will not hurt to leave it outside over night. It is advisable, however, even then, to cover the main part of the tractor with the sort of a canvas.

Some farmers have the mistaken impression that when they buy a tractor and sell their horses they will have no more chores to do. They might find this true for a while, but sooner or later they will discover that it takes constant watchfulness and care to keep a tractor or any other machine in service. A tractor should be groomed every morning that it is to be used just the same as one would groom and feed the horses. This work involves wiping off the various parts of the engine, oiling the bearings which must be oiled by hand, filling the grease cups and the lubricator oil reservoir, seeing that the radiator is filled with water and that the gasoline tank is filled. If this is done each time the tractor is taken out, it will not take very long and will save considerable time. The best thing about a tractor is that this work is not necessary if the tractor is not in use. The writer has found that the best way to do the chores on a tractor is



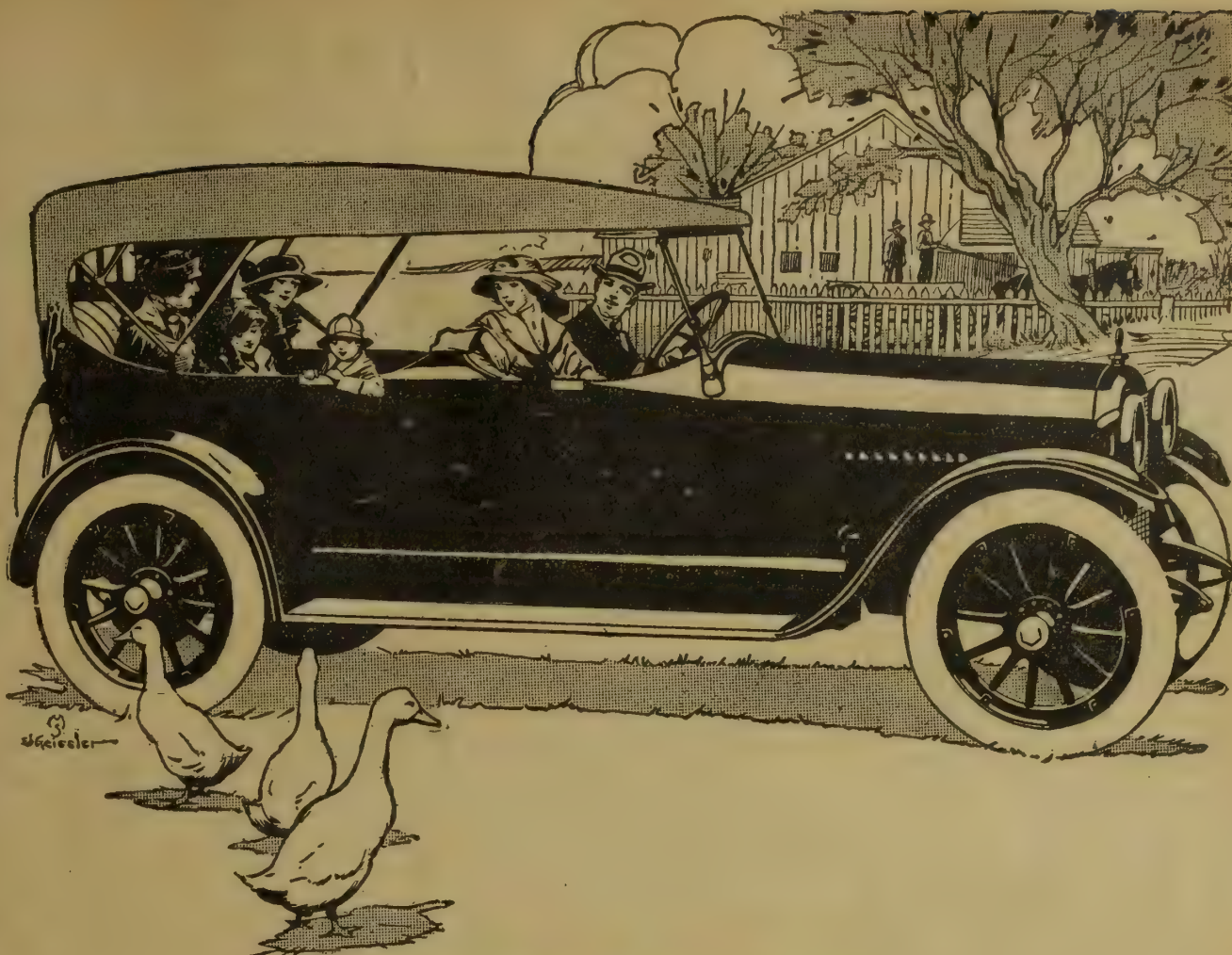
P. & O. No. 1, Tractor Power Lift Disk Plow

do them in a regular order. For instance, each morning first fill all the grease cups, then oil all places needing oil from a hand oiler, then fill the oil reservoir, next fill the radiator, then fill the gasoline tank; afterwards he can wipe off the machine and then he will be ready for a day's work. While one is doing this work, he will naturally be watching the various parts of the machine and if anything is wrong or any part is broken, the chances are he will notice it and repair it before any serious damage

Too much cannot be said to emphasize the need for continual watchfulness for things that are not right with the engine. The tractioneer who can operate his machine year after year with the least expense is the man who is continually on the lookout for strange noises and peculiar actions in any part of the engine. Then he is very seldom surprised by finding anything wrong which will require a great deal of work and the replacement of a number of parts. Just as soon as a repair or adjustment is necessary, he will notice it and will attend to the matter before it becomes serious.

Another matter which will receive considerable attention on the part of the careful tractor owner will be the kind of oil to use and the way to use it. The life of a tractor depends very largely upon this one feature. A tractor which is kept supplied with a good quality oil of the right consistency will last much longer, will do a great deal more work and at the same time use less fuel than will a tractor which is given poor oil which is too thin or too thick and which is given out at irregular intervals.

The man who takes care of his tractor and who looks it over every time before he puts it into service will find that he will get better service from it. He will have fewer breakdowns. His repair expense will be much less and yet at the same time his tractor will last longer than will the one belonging to his neighbor who will not look it over as long as the thing will run.



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## Greater Production of Food in California



RAPID fire campaign for more wheat, more of other grains, more foods of all kinds, is scheduled. The campaign for this year's production has been the training camp. Now, for 1918 the rapid fire guns are in commission. Workers—fighters may be better—are to be in action in every producing county. The 19 farm advisers now at work will have assistants and another score of agents or advisers are to be appointed.

The appointment of an adviser necessitates farm bureaus in every county with a membership of at least 20 per cent of the farmers of the county. Hence some work for somebody or bodies. The state university is the principal somebody.

However, to discuss the question from all standpoints Governor Stephens called together the council of defense, presidents of farm bureaus, their advisers, certain federal officials and others.

Governor Stephens called the meeting to order and presided through the first session and some of the others. The governor's interest or rather his appreciation of the necessity for action should inspire all to utmost endeavor in food production.

The governor's address was short, making appeal for earnest consideration of the problem and preparation on the part of California to do her part.

President Wheeler of the state university, State Horticultural Commissioner Hecke, State Leader Crocherson and others made addresses upon the needs of the hour.

Dean Thomas F. Hunt's address shows so forcefully the need and the effort to be made to meet it, that we quote from it liberally:

#### WAR EMERGENCY FARM BUREAUS

By Thomas Forsyth Hunt



WAR emergency has arisen requiring an additional expenditure in California of between \$100,000 and \$200,000.

It involves an expenditure of anywhere from \$4000 to \$14,000 in each of the agricultural counties in California for the purpose of increasing the supply of food for ourselves and our allies.

Two emergency bills have recently passed congress and been signed by the president. The one is known as the food control act, the other as the food production act, sometimes also as the food survey act. The administrator of the first of these acts is Herbert C. Hoover, and of the second, David F. Houston, secretary of agriculture.

Great interest has been taken in the food control act. Its provisions have been so widely and fully discussed in the public press that it is unnecessary to comment further upon it here.

#### Food Production Act

The food production act has, on the other hand, received but little attention. It is necessary, therefore, to outline briefly its provisions. Some idea of the organization which is available to put the act into force will help in understanding the significance of this measure. The food production act provides an appropriation of over \$11,000,000. It is a comparatively small sum as war appropriations go. Nevertheless, it means a very considerable organization, espe-

cially since most of this money is not to be expended for commodities but for the services of men and women. It is comparatively easy in these days to give an order for one or more million dollars worth of materials. It is quite another matter to expend efficiently \$10,000,000 in ten months in salaries.

There are appropriated by this act two and one-half millions to determine the basic facts concerning the ownership, production, transportation, manufacture, storage, and distribution of foods and related material. If the price of food to the producer is too low or to the consumer is too high, evidently it is the intention of congress to have it determined where the trouble lies and how to apply the remedy. It may be not without interest to note that for this particular phase of the work the secretary of agriculture is directed, so far as practicable, to engage the services of women.

If the secretary of agriculture finds that there is need for seed for particular localities, two and one-half million dollars is appropriated as a revolving fund by means of which he is enabled to furnish seeds to farmers at cost. For the diseases of livestock and the enlargement of live stock production and for the conservation and utilization of meat, poultry, and dairy products, \$885,000 has been appropriated. There has also been appropriated \$441,000 to deal with insect pests and plant diseases.

For the work of carrying on the educational and demonstrational work through farm bureaus and related agencies, four and one-third millions have been appropriated. Out of this allotment the University of California college of agriculture is to receive \$104,000. While a considerable sum in the aggregate it is small relative to the whole enterprise of which it is a part.

This \$10,000,000 appropriation is to be executed by the United States department of agriculture which already has behind it more than 5000 scientifically trained men and an annual budget of over \$25,000,000. It is to have in carrying out this work in addition the assistance of 48 state agricultural colleges whose experiment station staffs number 1900 persons and whose budgets aggregate for research considerably over \$5,000,000. No other similar organization exists or ever has existed anywhere.

In California the college of agriculture has a staff of approximately 165 scientifically trained men and a budget of \$605,000, which as far as possible will be brought to bear on this war emergency. It is estimated that in one way or another about 90 persons must be added to the staff in order to assist the federal government in carrying out the various provisions of the food production bill.

California therefore has the following resources: \$605,000 from the regular budget of the University of California college of agriculture; \$104,000 from the emergency food production act, approximately \$40,000 now appropriated by boards of supervisors of 20 counties and the possible appropriation by these and 19 other counties of approximately \$68,000 more, making a gross sum of about \$800,000. Every dollar will be used directly or indirectly in helping to win this war for democracy.

Under the farm bureau system, developed in California, there exists one of the most efficiently organized bodies of farmers in America. The people, not even the members of farm bureau themselves, are aware of it. There are in California at present 229 farm bureau centers with aggregate membership of 9200 persons.

The farm bureaus organize various activities, such as cow testing departments, cream pooling departments, swine breeders' departments, poultry raising departments, purchase and marketing departments, and loan associations. Two hundred and seventy-seven projects have been undertaken by the farm advisers in counties, such as drainage; alluvial reclamation; depth of plowing; prevention of erosion by terracing; fertilization; liming; cover crops; summer and winter forage crops; alfalfa, clover, bean, and rice culture; crop rotations; pruning orchards; trellising grape vines; tree record work; orchard management; control of cholera; control of grasshopper, squirrel destruction; control of weeds; improvement of rural schools; the construction of silos; and the installation of septic tanks on farms (Napa County has installed 264 of these septic tanks).

The \$104,000 has been allotted California for three purposes as follows: \$78,000 to extend the farm bureau movement by the appointment of additional farm advisers and assistant farm advisers; \$20,000 to employ additional women as demonstrators of food conservation; and \$6000 to increase the number of teachers of agriculture from the present number of 15 to 45, these teachers of agriculture acting under the direction of these boys' clubs and performing other forms of extension work. In order to facilitate the work of the women demonstrators the state will be divided into eight districts. To each district will be assigned a resident demonstrator trained in the science and practice of home economics. What are these women demonstrators doing? Naturally, during the present emergency their work will be devoted chiefly to the development of home gardens, to the rearing of poultry, to canning and otherwise preserving surplus products of the garden and orchard and to the study of such substitutes in the family dietary as best conserve the food needed by our Allies. At present the emphasis is being placed on the canning and drying of food materials. In all these enterprises the conservation of labor must not be overlooked.

This farm bureau movement began in California a little more than ten years ago and has been thus far administered under a plan which provided for the organization each of four or five counties, with the expectation that in 1922 the forty agricultural counties would be provided with farm bureaus and their attendant farm advisers. Suddenly there comes a war and congress asks us to do in one year what it had intended to do in five years. Obviously, if it is to be accomplished everybody must cooperate to that end. Doubtless sacrifices will have to be made. The college of agriculture is making this new responsibility its first aim and it bespeaks the help of every agency in the state to make the task successful. It will be impossible to succeed without such cooperation.

Presidents of farm bureaus in nearly every organized county are



sent and gave pithy three-minute  
as to farm bureau work in their  
nties.

Prof. John W. Gilmore discussed  
California's share in the billion bushel  
eat crop; Prof. Shaw, how idle  
is may be made productive—one  
his findings has been that fewer  
as are idle in California than  
y imagine—Dr. H. J. Weber in-  
ed on better sorghum seed and  
f Adams reported as to extending  
irrigated area. He said:

F. Frank Adams

irrigation has never been a large  
or in wheat production in Califor-

Grain growing as thus far prac-  
here is essentially an extensive  
ration in which irrigation ordinar-  
has little part. The last census  
wed less than five per cent of the  
eat acreage of California as irri-

California cereals are raised chiefly  
three main valleys,—Sacramento,  
Joaquin, and Imperial. A personal  
vass of the wheat situation under  
irrigation projects of these, and  
of Honey Lake and Shasta Val-  
by members of our division,  
ie during the past two weeks, in-  
ates that irrigation can be made a  
ided factor in the California wheat  
gram for 1918 if California farmers  
er irrigation projects are so dis-

Sacramento Valley offers a large op-  
portunity for increasing the irrigated  
eat acreage in 1918, but, generally  
aking, the use of water on this  
p in this valley has been proven to  
of advantage only in years of less  
normal rainfall. In the Durham  
Chico sections low yields are even  
d by experienced growers to result  
e from too much rainfall than  
a too little, the exception to this  
ng the late spring sowings follow-  
by deficient seasonal precipitation.  
side of the upper east-side portion  
the valley and the lower lands near  
river that are in some cases used  
wheat, however, irrigation is a  
ven distinct advantage in Sacra-  
ento Valley when the rainfall is be-  
v normal, or is up to normal for the  
ar but below it in the spring when  
ing north winds, unless counter-  
ted by rain or irrigation, may ma-  
tially check the yield. If 1917-1918  
ould be a dry season the produc-  
n on 100,000 acres of grain land un-  
r the six principal irrigation pro-  
ects of the valley could be very ma-  
tially increased by irrigation, but  
many cases this would necessitate  
ving enlargements or lateral ex-  
ensions ready. Of this 100,000 acres,  
,000 acres, not counting land in  
mmer fallow, is idle or only in  
sture in 1917. Assuming that ma-  
rial extensions will not be made on  
e basis of wheat irrigation alone,  
e area under Sacramento Valley  
jects which it is practicable to con-  
der available for irrigated wheat in  
18 if the season is a dry one is  
obably under 50,000 acres. There  
as no irrigated wheat under these  
jects in 1917 and less than 2000  
res of irrigated barley and oats.  
While experiments at the university  
rm at Davis have shown that when  
e seasonal moisture is below nor-  
al, one or two irrigations will in-  
crease the yield of wheat very mater-  
ially—the increase in two dry seasons  
anged from 160 to 250 per cent.

The San Joaquin Valley, especially  
round Tulare Lake and in Kern  
ounty, grows the chief area of Cali-  
ornia irrigated wheat, the main irri-  
ation projects reporting 57,500 acres  
n 1917 out of a total of 260,000 acres

of irrigated grain under all of the  
main irrigation projects of the valley.  
While the northern San Joaquin Val-  
ley counties were formerly banner  
wheat producing areas, they seem no  
longer to be a large factor in Califor-  
nia wheat production; and, although  
possibilities for an increase under ir-  
rigation in these northern counties in  
1918 are large, careful inquiry indi-  
cates that only an active educational  
campaign will bring about sufficient  
increase to be of consequence. North  
of Fresno there are at least 150,000  
acres under San Joaquin irrigation  
projects on which wheat can be  
grown and irrigated to the extent that  
the substitution of irrigated wheat for  
other annual crops is found wise. Of  
this 150,000 acres, at least one-sixth  
is now idle or is reported as not like-  
ly to be farmed by its present owners  
in 1918, due to labor or money or other  
shortage. Evidently, without a  
very active educational campaign in  
the counties north of Fresno, the  
largest increase in the San Joaquin  
Valley irrigated wheat acreage in 1918  
will be in those sections now giving  
most attention to this crop, — Kern  
County and the Tulare Lake region.  
These sections produced all but 600 of  
the 57,500 acres of irrigated wheat  
grown under the chief San Joaquin  
Valley irrigation projects in 1917.  
Furthermore, they report over 200,000  
acres open to irrigated annual crops,  
including wheat, in 1918, and a prob-  
able increase in the irrigated wheat  
area next year of over 20,000 acres, or  
of about 40 per cent.

Increase in the irrigated wheat  
acreage in Imperial Valley in 1918 will  
be almost entirely a matter of propa-  
ganda. Of 401,000 crop-acres irrigated  
in this valley in 1917, 76,000 acres was  
in barley and only 1220 acres in  
wheat. The area under the ten mu-  
tual companies of the valley stated to  
be normally available for grain grow-  
ing under irrigation in 1918 approxi-  
mates 85,000 acres, which of course  
does not include in excess of 100,000  
acres of land now in other annual  
crops than grain; nor does it include  
at least 10,000 acres of undeveloped  
land under Mutual Water Company  
No. 3. Yet without an active wheat  
campaign in the valley and in addi-  
tion, unless a supply of satisfactory  
seed is made available, it is not likely  
that the irrigated wheat acreage there  
in 1918 will be large. Some in the  
valley are emphatically opposed to  
wheat growing there, previous fail-  
ures due to rust and poor seed being  
fresh in mind. On the other hand a  
number of farmers there believe in  
wheat and the growers of the 1220  
acres of irrigated wheat in 1917 report  
a satisfactory yield. Furthermore, ex-  
periments at the Imperial Valley ex-  
periment station of the University of  
California show a response to irriga-  
tion by wheat exceeding that by bar-  
ley. Yields as high as 35 to 57 bushels  
per acre have been obtained with irri-  
gated White Australian wheat on the  
Imperial experiment station and in  
consequence and after careful obser-  
vation of the behavior of wheat under  
irrigation in this valley, those in  
charge have advised that on the bet-  
ter soil of the valley wheat is likely  
to be more profitable than barley.  
Conditions in Imperial Valley there-  
fore seem ripe for a substantial in-  
crease in wheat production if deemed  
necessary to make up the state's al-  
lotted quota.

There is no good reason why under  
a normal water year, the entire in-  
creased wheat production called for  
from California by the national pro-  
gram could not be produced, if deem-

ed desirable, under irrigation. De-  
cision No. 4278 of the state railroad  
commission applying to water utili-  
ties and Chapter 191 Session Laws  
of California 1917, applying to mutual  
water companies, open the way for  
furnishing water for emergency use  
on wheat and other annual crops  
where previously this might have  
been impracticable. Availability of  
fall or winter water for wheat irriga-  
tion under a number of our valley  
projects makes it possible to irrigate a  
large acreage, and thus furnish a con-  
siderable measure of insurance  
against spring drouth, if the landown-  
ers are so disposed. At least 100,000  
acres of California land now lying idle  
or nearly so or first to be ready for  
cultivation in 1918, will be open to ir-  
rigated wheat in 1918 except to the  
extent that local conditions not dis-  
closed by our survey make wheat pro-  
duction impracticable or unwise.  
Some of this will probably not be  
farmed in 1918 unless purchasers or  
tenants are found. Certainly out of  
all the areas indicated, irrigation can  
very effectively aid the war wheat  
program for the coming year.

## HOW TO DESTROY WEEVILS IN CORN

If signs of weevils or grain moths  
show the corn should be inclosed with  
carbon bisulphid in a practically air-  
tight room, bin, box or barrel for  
48 hours. The liquid bisulphid should  
be placed in shallow dishes on top of  
the box or barrel holding ten bushels  
or less. The fumes from the bisulphid  
are heavier than air and gradually fall  
to the bottom of the receptacle, per-  
meating the whole mass. One pound  
of the carbon bisulphid is enough for  
a room or bin ten feet in each dimen-  
sion. After fumigation the ears must  
be thoroughly aired, whereupon the  
unpleasant odor disappears. Great  
care should be used with carbon bi-  
sulphid; its fumes are quite as inflam-  
mable as those from gasoline.

To prevent the entrance of weevils  
and moths into seed corn the ears  
may be stored in comparatively air-  
tight boxes or barrels with one pound  
of moth balls or naphthalene for each  
bushel of corn, which is not injured.  
Ten pounds will protect enough seed  
to plant 60 acres.

Redmond, Ore., is planning for a big  
potato show October 18-20.

*"the best oil  
for our cars"*

**CHEVROLET**  
J. W. Leavitt & Co., San Francisco  
"From our exhaustive tests of Zerolene, we think it is the  
best oil for use in our cars."

**REO**  
American Automobile Co., Tacoma  
"tried Zerolene in Reo cars; results so good that we have  
been entirely converted."

**DORT**  
Leach-Frawley Motor Co., San Francisco  
"excellent mileage with minimum carbonization."

**PACKARD**  
Cuyler Lee, Oakland  
"Zerolene has given us perfect satisfaction."

**ZEROLENE**  
*The Standard Oil for Motor Cars*

Endorsed by Leading Car Distributors  
—because the records of their service departments show  
that Zerolene, correctly refined from California asphalt-  
base crude, gives perfect lubrication—less wear, more  
power, least carbon deposits.

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COMPANY**  
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Heavy-Duty is espe-  
cially recommended.*

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A Journal of Horticulture, Agriculture and Live Stock

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Saturday, Sept. 29, 1917

## OUR ADVERTISERS RELIABLE

We guarantee our subscribers against  
 loss through dishonesty of any adver-  
 tiser in the Cultivator. We do not at-  
 tempt, however, to adjust trifling differ-  
 ences between subscribers and honest,  
 responsible advertisers, nor will we pay  
 the debts of honest bankrupts. Notice  
 of complaint must be sent us within 30  
 days from date of the transaction, and  
 the subscriber must have mentioned the  
 Cultivator when writing the advertiser.

## THIS WEEK'S COVER

See the movies on the cover of  
 this issue. There were some things  
 moving in the scenes besides the  
 the cranks of the movie cameras. In  
 fact, the dust was swirling everywhere,  
 and it was with difficulty that the  
 dozens of photographs of the tractor  
 demonstration were caught by the  
 Cultivator cameras. The tractors  
 shown were taken on Friday of dem-  
 onstration week. The upper one, were  
 it not for the people, would show an  
 excellent line-up of every tractor at  
 the demonstration. At the far end  
 beyond the clouds of dust stands the  
 big water wagon on which the movie  
 cameras were placed. At the bottom  
 the big tractors with plows attached  
 are just passing.

But more regarding that great dem-  
 onstration is given on the third,  
 fourth, fifth and sixth pages of this  
 week's Cultivator. The Cultivator  
 camera is always on hand where there  
 are features of agricultural interest.

## ORGANIZE BUREAUS

The two pages preceding edi-  
 torial give an account of the meeting  
 called by Governor Stephens and held  
 at Sacramento during the fair week.  
 The members of the state council of de-  
 fense, the chairmen of many of the  
 county councils of defense, President  
 Wheeler, Dean Hunt and many others  
 of the state university, as well as  
 members of farm bureaus and farm  
 advisers, gathered and discussed how  
 California can best respond to the  
 call for greater production.

One result of that meeting was ac-  
 tion in more than a score of counties.  
 This activity is being directed by some  
 member of the faculty of the college

of agriculture. We think that Dr.  
 Webber, perhaps, wears the largest  
 coat of any of this body of professors,  
 and to him was given the county in  
 California largest in production of  
 crops—according to the census of  
 1910 surpassing all counties in all  
 states of the Union. Under the pro-  
 visions of the federal law each coun-  
 ty which secures a farm adviser must  
 secure as contributing members of its  
 farm bureau one-fifth of the farmers  
 in the county. In the case of Los An-  
 geles between 1600 and 1700 members  
 must pay their membership dues an-  
 nually. If this is done, a county farm  
 bureau will be organized with dele-  
 gates from Centers in various sections  
 of the county. The farm adviser, or  
 county agent, will be appointed, and  
 in a county of such size some five or  
 six assistants will also be appointed.

We refer to this one county more  
 particularly because of the size of  
 the job to secure its complete organi-  
 zation, but proportionately the effort  
 required will be as great in every  
 other county, for at this moment,  
 with the shortage of labor and the  
 great demands upon the farmers, they  
 have little patience with interruptions  
 even in so important a work as that of  
 securing greater efficiency. But we  
 hope farmers in every county will  
 lend assistance to this movement, for  
 it is chosen as the one method best  
 suited to present times to answer the

sion that the borrowers through the  
 federal farm loan banks were bor-  
 rowing federal funds. Such is not  
 the case, excepting that at the incep-  
 tion of the movement, to give a work-  
 ing capital, a certain amount of stock  
 in the federal farm loan banks is pur-  
 chased by federal funds, and, of  
 course, at all times the management  
 will be under the supervision of the  
 secretary of the treasury. As the  
 loans are made, certain bonds secured  
 by mortgagees will be sold in the open  
 market. These will provide the funds  
 for future loans, and in this way, with  
 these bonds made secure through care-  
 ful management, an institution which  
 will have permanent value for farm-  
 ing interests will be established.

In many orchard sections there has  
 been a feeling that the federal board  
 has not been just. The central board  
 at Washington has ruled that the ag-  
 ricultural value of lands shall deter-  
 mine their appraised valuation. Mor-  
 al risks and even improvements on a  
 36 or 40-year loan cannot be consid-  
 ered. An orchard, however, may large-  
 ly enhance the productive value of  
 the land. To determine how much,  
 the board should consider this en-  
 hanced value is the occasion of the  
 meetings that are being held.

A forenoon and an afternoon meet-  
 ing in Los Angeles last Tuesday re-  
 sulted in resolutions, in the retire-  
 ment of the executive committee of  
 the Berkeley bank, its return and the  
 formulating and reading:

Principles to be Used by the Federal  
 Land Bank of Berkeley in Making  
 Loans on Orchard Lands

## Class "A" Orchard Definition:

1. Proven, adaptable land, with valid  
 and sufficient water supply which could  
 be profitably used for crops other than  
 orchards. Trees not exceeding 20 years

"ARE YOU SAVING Your Money to Invest in the Second  
 Issue of THE LIBERTY LOAN?"

call of our country. It is already or-  
 ganized in many counties and in every  
 state in the Union.

Dr. Hunt informs us that he al-  
 ready has in mind a number of men  
 qualified to fill the positions of these  
 helpers to the farmers. The first  
 county to secure complete organiza-  
 tion will be the first also to have these  
 men in the field aiding in the produc-  
 tion of more food and in the in-  
 crease of wealth in the county.

## FARM LOAN BANK

The newly appointed directors  
 of the federal farm loan bank at Berk-  
 eley are not only putting in their  
 banking hours but are working nights  
 and Sundays on the problem of fed-  
 eral loans on the Pacific Coast.

Something over a year ago the first  
 board was appointed. Complications  
 arose and almost an entirely new  
 board has been appointed. The new  
 officers have been on the job for  
 something over a month, and the mass  
 of detail business is being handled  
 as effectively as possible. But this is  
 far from the speed desired by the  
 man who months ago applied for a  
 loan. Members of the board are visit-  
 ing various sections to explain the  
 situation and to secure data which  
 will enable more intelligent direction  
 of the bank.

As President Joyce said in Los An-  
 geles last Tuesday: "We are ven-  
 turing on an uncharted sea." Noth-  
 ing like this has ever been at-  
 tempted; at least, nothing like it in  
 all respects, and President Joyce and  
 all the directors feel that not only  
 the success of the movement, which  
 means much to agriculture, lies large-  
 ly in their hands and they must make  
 no mistakes, but the fact that they  
 are handling the people's money im-  
 pels them to adopt the slogan, "Safe-  
 ty first."

Note that we say the "people's  
 money." There has been an impres-

of age and to be in full bearing, free  
 from disease and which have a record of  
 better than average crops over a period  
 of not less than five years.

2. Where a loan is desired on a parcel  
 of land less than five acres in area, it  
 must be demonstrated to the satisfaction  
 of the bank that such land constitutes  
 an actual farm and that its products pro-  
 vide the applicant's principal source of  
 income. Otherwise no loan can be made.

3. Upon lands which have no substan-  
 tial agricultural value, except for or-  
 chard, no loan will be made.

4. Upon young groves not yet in full  
 bearing, loans will be based on the land  
 as to its adaptability for other agricul-  
 tural crops, plus a reasonable considera-  
 tion based on the cost of planting and  
 the age of the trees.

5. On other than young orchards  
 trees will not be regarded as a basis for  
 enhancing the basic agricultural value of  
 the land unless satisfactory profits evi-  
 denced preferably by packing house re-  
 turns for a series of years can be shown.

6. Where loans are based on high  
 value,—such as a Class "A" orchard  
 land,—the term of the loan will be relat-  
 ed to the age of the orchard and its  
 proven productivity. Where high pro-  
 ductivity is shown, it must be assured  
 that borrowers will be willing and able  
 to meet the increased payments of short-  
 er termed loans. On such land the term  
 of the loan will be limited to 15 years.

7. Upon orchards, while not consid-  
 ered as Class "A" but which show an  
 average profit return, reasonable consid-  
 eration will be given as to the enhance-  
 ment of the general value of the land,  
 provided such land meets the proper re-  
 quirements as to its adaptability for other  
 agricultural crops.

8. No loans exceeding \$400 an acre  
 will be made. This is subject to the ap-  
 proval of the full board of directors of  
 the Federal Land Bank of Berkeley.  
 September 25, 1917.

At the Los Angeles meeting an  
 impulsive lady made an appeal to  
 everyone present at the meeting to  
 borrow their money of bankers who  
 would treat the orchardists fairly and  
 ignore absolutely the federal farm loan  
 bank. Better counsel prevailed, how-  
 ever, and after adjournment of the  
 general meeting H. M. Sheehan called  
 delegates of the associations together  
 and in a moment a temporary or-  
 ganization of Southern California As-  
 sociated National Farm Loan Asso-  
 ciations was launched. Mr. Sheehan  
 was made temporary chairman with  
 power to call a meeting which should  
 be represented by two delegates from  
 each association in the southern part  
 of the state. There were delegates  
 from about 40 associations present."

## Agricultural News Note

Make the millions of acres of  
 land busy in 1918.

The government has contracted  
 1,687,000 pounds of canned pineapple.

Indiana holds its seventh ann-  
 apple show November 21-27 at In-  
 anapolis.

Individual licenses must be secur-  
 ed from the government for all expo-  
 to Canada of sugar, flour, butter  
 wheat.

Securing of evidence of a sche-  
 to corner the tomato output of  
 Pacific Coast is announced by  
 government.

The late potato crop of Michi-  
 and Wisconsin, Minnesota and  
 Dakotas has been considerably da-  
 aged by frosts.

The Restaurant Keepers' Asso-  
 ciation of Seattle has formed an orga-  
 nization to buy potatoes and other  
 applies co-operatively.

New York apple growers are re-  
 ed securing readily \$3 to \$4 per  
 rel for their fruit. The buyers  
 said to be many and eager.

The Italian government has  
 upon a price for coke of \$54 per  
 and a severe penalty for any de-  
 who charges in excess of that pri-

Ten battalions of foresters are  
 be raised in the United States to  
 to Eastern France and aid in  
 work of getting out lumber and  
 tecting the forests of that country.

"The Packer" says: "The slogan  
 'Eat an apple, send a biscuit,' pro-  
 mises to materially stimulate the  
 of apples, regardless of the  
 thought that an apple may not  
 take the place of a biscuit as food."

At a recent meeting at Washing-  
 of growers and dealers with the  
 administration it was recommen-  
 that official potato grades be es-  
 tablished and that steps be taken to  
 that the official grades are adhered

According to a statement from  
 Washington "the food control  
 does not prohibit the manufact-  
 of wine from grapes and the food  
 ministration has no intention at  
 present of prohibiting the use of grapes  
 wine making."

Advices from Washington regard-  
 the bean crop state that the food  
 administrator has requested of the  
 growers and shippers not to offer  
 more future shipments until the  
 crop is entirely harvested and then  
 sell for delivery not more than 30  
 in the future.

As a means of protecting work-  
 agricultural workers in England  
 rooms have been established in  
 fields of various parts of the coun-  
 The rooms are supplied with reas-  
 matter, with tables where lunch  
 may be eaten and a cup of tea ser-  
 ed at cost and, best of all, with  
 stockings, shoes and skirts for the  
 which have become soaked in the  
 fields.

Yung Kee, near Canton, China  
 one of the largest markets for  
 cocoons in the world. There are  
 large shedlike structures for re-  
 ceiving the cocoons, which are brought  
 from the surrounding country. There  
 is a continuous stream of small  
 boats down the river to the mar-  
 ket. The cocoons are delivered in  
 bales, which after inspection are  
 weighed and the producer is given a  
 red slip of paper on which is  
 weight and other particulars, includ-  
 ing the price, are given. The buyer  
 presents these red slips to the col-  
 lecter's window and is paid in Chinese  
 coin of about 20 cents value.



# Agricultural News Notes of the Pacific Coast

## Northern California

A red spider has seriously damaged the prune crop in the Meridian section of Sutter County.

The largest exhibition of poultry ever made at a state fair was made at Sacramento this year.

Early Japanese varieties of rice are now being harvested in the district about Biggs, Butte County.

Humboldt County has had a dry summer and consequently is suffering from a shortage of hay and grain.

The San Francisco Poultry Association will have an exhibition at the old show to be held October 13-18.

Forty counties have reserved space for exhibits at the land show to be held in San Francisco October 13-18.

Growers of wine grapes have begun shipping. Sutter County reports a price of \$12 to \$15 a ton for Zinfandels.

The Sonoma County Prune Growers' Association has opened packing plants at Santa Rosa, Geyserville and Eidsburg.

The management of the Glenn County fair has decided to continue the fair one more day, closing on the evening of September 30.

The anthrax scare in Yolo County has subsided. Dr. Hayes of the University farm reports that no new cases have come within his notice.

The Glenn County farm bureau has held no night meetings during the month of September because of other important meetings scheduled.

The government food controller has asked sugar refiners to be prepared October 15 to establish a wholesale price for sugar of \$7.25 per cwt.

Dean Van Norman of the state university farm at Davis announces that compulsory military training will be established at the farm from now on.

Yolo County took first prize at the state fair for "largest, best and most complete exhibit of products by any county in the state," bringing home a total of over \$1000 in cash prizes.

Manager Virden, of the California Fruit Distributors, predicts that California's 1917 output of deciduous fruit will exceed last year's by 2000 carloads, amounting to about 20,000 carloads.

B. N. Hedegard of Plainfield in good old Yolo County has begun to harvest his rice. His 160 acres of rice grain is in good condition. This is the first of the rice harvest but now on the work will be pushed rapidly. The crop will be the largest and best the county has ever had and will be handled by the new rice mill plant at Woodland.

## Central California

The Denair creamery was burned to the ground last week.

The California Peach Growers will pay cash on delivery for this season's crop.

Merced County fig growers are receiving 11¼ cents for Calimyrnas, 8 cents for Adriatics.

The Kern County fish and game commission has planted 100,000 fish in streams of that county.

Women grape pickers in the Clovis section, Fresno County, are earning from \$3.50 to \$5.00 per day.

Bean growers of Fresno County attended a farm bureau bean conference in Fresno last Saturday to arrange for bean threshing.

An experimental planting of cotton at Turlock has proved very satisfactory. The cotton bolls are just beginning to open.

The cannery at Kingsburg in Fresno County has contracted for 200 acres of tomatoes and has already begun operations.

Much interest throughout the East has been attracted to the Turlock section by the Valley exhibit train which has recently returned after a 3000 mile journey.

The California peach growers have received notification from the patent office at Washington giving it monopoly in manufacture and sale of peeled and dried peaches.

The Corcoran beet sugar factory has been closed for the season and all beets of the district will be handled at the Visalia factory, which will resume 24-hour runs.

Yielding to the appeals of growers to provide workers to harvest the peach crop the board of trustees of Turlock have ordered the schools closed temporarily.

The big warehouse being erected by the Turlock Merchants and Growers' Association is nearly completed. It will be ready for the operation of the bean cleaning department by the first of October.

A Home Protective League has been formed at Denair, Stanislaus County, for the purpose of apprehending anyone found molesting crops of that locality. Patrols and a system of signals will aid in this work.

With the recall of C. A. Paulsen from New York City, where for the past two years he has acted as Eastern representative of the California Associated Raisin Company, the association will enter upon a world-wide campaign to put raisins into every home.

## Southern California

The warehouse at Owensmouth is receiving daily consignments of 1500 sacks of beans.

A producers' association at Van Nuys will erect a canning factory at a cost of \$15,000.

The packing of apples in the Yucaipa Valley is now under way and carload shipments have already begun.

Orange County reports damage to her orange crop by the June heat wave much less than at first estimated.

R. L. Knox has been chosen secretary and manager of the San Antonio Fruit Exchange, to succeed P. J. Dreher.

Two hundred beekeepers recently attended a meeting at the A. K. Whidden Apairy at Fruitdale, Riverside County.

According to an authority San Bernardino County has 30,000 laying hens which are producing 2,500,000 eggs annually.

Carload shipments of beans are now moving from the Pomona Valley. Shipments will probably continue until December.

Palo Verde, Imperial County, will make exhibits at both the Riverside Fair and the California Land Show to be held in San Francisco.

The Hemet section in Riverside County reports a yield of beans from irrigated land of six to twelve sacks per acre, against two to four sacks on unirrigated land.

Short staple cotton growers of Blythe, Riverside County, are planning the erection of a gin and oil mill. This will be the third gin to be established by the growers.

A three-year-old filly entered in the state fair races by the Hemet Stock Farm captured first prize in the Stanford-Occidental three-year-old trot, winning a purse of \$3000.

Because of scarcity of help to aid in fumigation, the work is not being carried on as rapidly as desired in the Covina section. Fumigators are offering high wages to laborers.

Working under the direction of Chief Engineer Clarke, a large force is employed in dumping rock in the 90-foot break in the weir in the Colorado River in the Imperial Valley.

The picking and drying of prunes is in full swing at Banning. The season in this section is about three weeks late, and it is hoped the rains will hold off until the crop is harvested.

## The Coast

Polk County, Oregon, has a very light hop crop this year.

Farmers' Week at Caldwell, Idaho, will be the fourth week in October.

Wheat growers of the Northwestern states are asking a Pacific coast basis of \$2.20.

Southern Arizona has had her long desired rains and everybody is feeling happier.

Twenty silos have been built in Grays Harbor County, Washington, during the past year.

The Arizona Cattle Growers' Association is listing with its secretary all salable stock of members.

The Water Users' Association of Boise, Idaho, held its annual picnic at Larson's Grove, near Caldwell this week.

Potato growers in various sections of Idaho are complaining because of the sprouting of young potatoes in the ground.

The production of cherry juice in the Boise Valley, Idaho, which had its initial trial about two years ago, promises to become a permanent industry.

A big cattle company at Cananea, Mexico, has bought beet top pasturage in Butte County and will move 1500 head of cattle up from Mexico in a short time.

The schools of Chelan County, Oregon, started several weeks earlier than usual this fall, expecting to take a vacation during apple harvest in October so that the children can work.

Windmills are to be used in reclaiming marsh lands north of Klamath Falls, Ore. The windmills will be installed so as to pump off the winter flood waters at the earliest date possible in the spring.

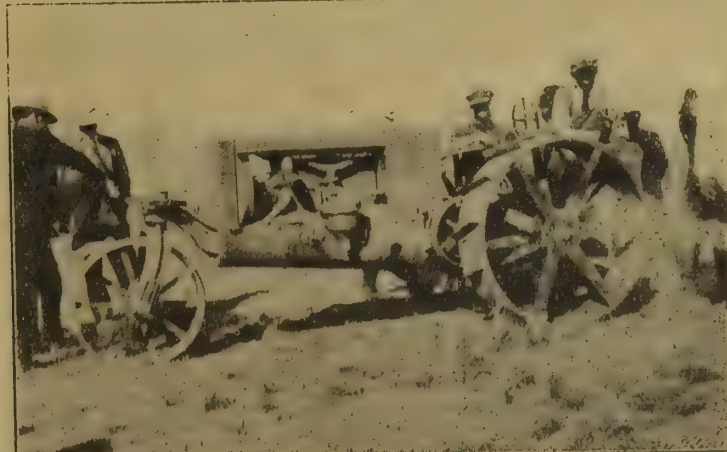
The executive committee of the Cattle and Horse Raisers' Association of Oregon is now making a tour of the state. They will be at Bly on the 28th, at Ft. Klamath on the 29th and at Prineville October 1.

A boys' cow testing club is being formed in Arizona under direction of the university. Boys contesting must be between the age of 12 and 16 and must enter at least two cows, keeping records of milk, butter fat and value of feed.

The fourth week in October is to be farmers' week at Caldwell, in connection with boys' and girls school clubs. The week is to be featured by an exhibition of good stock, and the boys and girls are to judge and demonstrate in different lines.



Avery Distillate-Burner 5-10 Tractor  
It is hauling a Sanders Single Disk Orchard Plow



Wallis Cub, Jr., 8 H. P. Tractor



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An Opportunity to Secure a Choice Lot of Young Holstein  
Heifers Sired by Registered Bulls from Full  
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30 Head of 15 to 18 months old Holstein heifers now being bred to Registered  
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4 Head of Grade heifers.  
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1 Two year old Guernsey Bull, sired by May King of Fern Ridge, a bull that  
took third at the San Francisco Exhibition in 1915, Dam Imported  
Lady of the Forgettes.  
Wish to sell in single lot and will make special price, on the above stock.  
ALSO a choice lot of brood mares, Jacks and Jennets at a bargain price.

**El Cerrito Rancho Company**

CORONA

CALIFORNIA

## Prize Winning HAMPSHIRE

The farmer who  
wants a hog that  
puts on 200 lbs.  
of firm meat at  
six and a half  
months of age  
buys the Hamp-  
shire.



F. A. Langdon  
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Boars, gilts, bred  
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from the P.P.I.E.  
Champion Hamp-  
shire stock, just  
as nearly perfect  
as they make  
them.

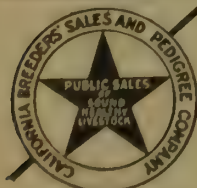
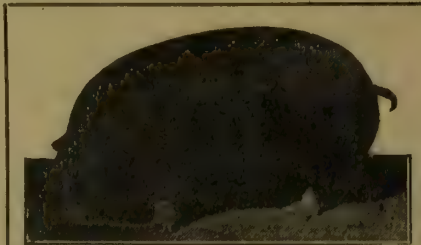
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## Who's Who

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photograph and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Written for California Cultivator By F. F. Stonerod

CHARLES WILLIS WARD.



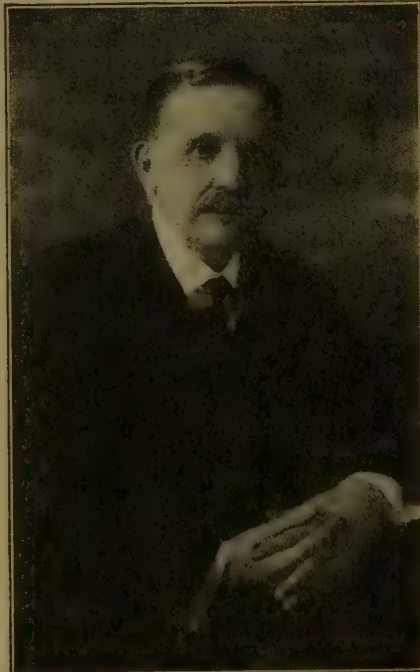
COMPARATIVE newcomer to California, Charles W. Ward is more widely known that many men who have been lifelong residents of the Golden State. It might be said that he is a national figure since his name in the world of flowers is as much an authority as that of Luther Burbank in the vegetable world. He has spent most of his 50 odd years in studying and experimenting in the science of breeding plants. He has written several books on carnations and other flower subjects which are used as text books all over the world. Born in Mt. Pleasant, Mich., in the pine timber belt of that state, he grew up in an environment which proved of vast influence in his career. Tramping through the dense Michigan woods in all kinds of weather, cruising and scal-

East so he could devote his entire time to his new home. He has spent money lavishly in Humboldt County, and knows what he is doing. Like many others, he claims that this part of the state is one of the finest dairy sections in the world, and there are few who will dispute the assertion.

Mr. Ward backed up his faith in Humboldt's future by purchasing the finest lot of registered Jersey cattle he could find. He went to his friend Charles Pratt, the man who owns the world's champion Jersey cow, Doson Park Lily, and persuaded him to sell two of her daughters. He wanted four but could only get two. Then he went to Hugh Van Pelt, the famous dairy judge and breeder of Waterloo, and after using the same persuasive methods as those used on Mr. Pratt, succeeded in getting 19 head of Mr. Van Pelt's finest cows. Together with another lot of cows and bulls selected from Eastern herds with the assistance of an expert, this bunch of Island cows was shipped to Mr. Ward's ranch near Carlotta, where they are adapting themselves to that ideal climate, which is so much like that of the Island of Jersey.

It is worth any man's time to listen to Mr. Ward's theories on the science of breeding. He says animals are just like plants and that the same basic principles used with success in breeding flowers and plants should be used in breeding animals.

Mr. Ward is doing big things in Humboldt County, and California is fortunate indeed in attracting a man of his caliber, and the livestock industry, particularly the dairy end, will feel his influence when his herd becomes acclimated and his plans are perfected.



Charles Willis Ward

ing timber, establishing lumber camps, were just a few of the incidents in his boyhood days. He has never lost his love for Mother Nature, and one of his first big investments after coming to Humboldt County a few years ago was to purchase 5000 acres of redwoods on the Klamath River, where he had a hunting lodge built. Mr. Ward and Luther Burbank are close friends. They are never happier than when they steal off to Mr. Ward's mountain home, where they can talk about plants and flowers without any fear of interruption.

Mr. Ward owns a 50,000-acre game refuge in Louisiana, is heavily interested in oil, has coal mines in West Virginia, and numerous other investments in different parts of the country. He has traveled extensively and is one of the most interesting of men to talk to for this reason. Of late years his health has not been of the best, and after seeking several places to find relief for his particular ailment he struck Humboldt County and realized that was the place he had been looking for. He immediately set to work to sever his connection with many of his principal interests in the

### THE KIND OF COWS THAT PAID

The American Jersey Cattle Club at one time reported a Jersey cow which once attracted the attention of the dairy world by her remarkable performance, in which she displayed how early maturity and persistence can be combined to a most satisfactory degree. Up to this time she is still the "nonesuch" of all dairy cows in this particular class, but her record is threatened by another promising Jersey. The newcomer is Salee Golden Lucy, and she shows ability as a youngster and for persistence. The records and the order in which they were made are given here, as produced at one year eight months, 8738.6 pounds of milk, 435.3 pounds of fat. At two years eleven months, 11,891.1 pounds of milk, 609.6 pounds of fat. At four years three months, 12,543.6 pounds of milk, 653.5 pounds of fat, and at five years seven months, 11,763.9 pounds of milk, 600.8 pounds of fat.

Lucy's records show that she produced 2874.1 pounds of commercial butter before reaching her prime as a dairy cow.

Dairymen and farmers of Thurston County, Washington, have formed a dairy and farm produce association for marketing purposes.



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### REGISTERED BERKSHIRE PIGS

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Whittier, Calif.

## HOLSTEIN-FRIESIAN CATTLE

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One bull calf, whose eight tested nearest dams averaged 31 pounds weekly butter record.

One service bull from 29 pound dam. 102 pounds milk one day. His two nearest dams through sire yearly record average 21,000 pounds milk and 512 pounds butter.

Write me for low prices and further information.

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## Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count Glory, 426982, grand champion at the California State Fair, 1916. Berkshire herd won Premier Exhibitor's banner at P. P. I. E.

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# Breed Leaders

Every breed of live stock has its outstanding character the same as the human kind. A great dairy cow has proved her ability to produce anywhere up to 15 tons of milk annually; the trotting horse has secured his record around two minutes; the beefmaker has shown his ability to make the least amount of feed into the greatest amount of food; swine, sheep and others of the live stock family have shown themselves great characters. In addition—and here is where their worth is proven—these animals can transmit their productive power to their offspring.

Beginning with the issue of August 4 the Cultivator gave an account of Pietertje Bloom of the university farm dairy herd. Some things she has done and more that her daughters have done were chronicled. She was a most worthy leader in this series of articles. Others of her kind follow. More of the "handsome is as handsome does" type of animals will be given in the columns of the Cultivator during the next few months.

Written for California Cultivator By C. L. Hughes.

### SIR SKYLARK ORMSBY HENGERVERELD.

**P**ASSING through several different ownerships, standing for the greater part of his life in grade dairy herds, and in spite of these handicaps forcing his way to a point that compels recognition of him as a breed leader, such in brief is the story of the grand old Holstein sire, Sir Skylark Ormsby Hengerveld 39138, owned by Frank Hatch, Modesto. And it is fitting that in his closing years he should be owned by the man whose belief in him has in no small measure contributed to his success as a sire. For while he did not own him

stands at the head of all sires on the Pacific Coast, for he is the only sire that has three 30-pound daughters, also the only sire on the Pacific coast that has two 30-pound daughters and a 30-pound granddaughter all under mature age.

The records of his entire list of tested daughters average over 23 pounds butter in seven days, and many of them were made at past the age at which the average cow makes her high record.

Following is a list of his seven leading daughters, with seven-day milk and butter records and age at which test was made:

Gerben Abbekerk Maid, five years,



Sir Skylark Ormsby Hengerveld

for many years Mr. Hatch paid service fees to breed some of his cows to him, and from these matings have come some of Skylark's best daughters.

As an individual Sir Skylark Ormsby Hengerveld ranks high, and he transmits excellent type, as those who have seen any number of his sons and daughters know.

And in breeding he carries the blood lines that have made a number of world's champions. He is sired by Sir Ormsby Hengerveld De Kol, whose daughters include five with records above 30 pounds butter in seven days, among them the former world's record cow and wonderful transmitting dam, Pietertje Maid Ormsby, 35.56 pounds butter in seven days, 145.66 pounds butter in 30 days. Sir Skylark Ormsby Hengerveld is also over 50 per cent the same blood as the sire of the present world's champion butter producer, Duchess Skylark Ormsby, 1506.36 pounds butter in one year.

Thus this great bull inherits the tendencies to high production that should carry him to a high place as a sire, and he has reached the heights but under very great difficulties. With only a limited number of cows bred to him, none of them high record cows themselves, and with the offspring scattered in many different herds and his daughters tested out in as many different hands, he now has a list of 26 A. R. O. daughters, a number equalled by only one other sire in California.

In number of 30-pound daughters Sir Skylark Ormsby Hengerveld

686.9 pounds milk, 34.2 pounds butter; Christeria Overton Mechthilde 4th, four and one-half years, 463 pounds milk, 31.69 pounds butter; Belle Josephine Ormsby, ten years, 543.4 pounds milk, 31.57 pounds butter (in 365 days at nine years of age, 27,678.4 pounds milk, 1127.80 pounds butter, highest yearly butter record in Northwest); Belle Setske Josephine 2d, five years, 506.8 pounds milk, 28.19 pounds butter; Christeria Ormsby Hengerveld, six years, 445.6 pounds milk, 25.92 pounds butter; Ormsby Cristeria Mechthilde, seven years, 485.3 pounds milk, 25.90 pounds butter; Sir Skylark May Peoples, seven years, 579.4 pounds milk, 25.72 pounds butter.

His highest record daughter, Gerben Abbekerk Maid, made an official record of 30.10 pounds butter in seven days as a four-year-old, and freshening again within 12 months made the 34-pound record listed above.

A senior three-year-old granddaughter of Sir Skylark Ormsby Hengerveld, Stanislaus Princess Cleopatra, was for a time the California leader in her class, with an official record of 31.04 pounds butter from 513.9 pounds milk in seven days, and she still has the second highest senior three-year-old record in California.

**LONG MOHAIR**

At the time of the P. P. I. E. the Cultivator gave illustration of "Dodo," exhibited at the world's exposition, who had a fleece measuring 41 inches in length which sold for \$372. At the recent state fair Dodo's half brother, Leo, owned by Mr. Pierce of Oregon, was exhibited. His fleece was 35 inches in length. After the removal of the fleece he was sold to George Moody, a California breeder.

# Calf Scours

## This Treatment is Saving Many Calves

Scouring calves indicate a germ infection that is likely to run through your entire herd with serious losses.

The loss of one calf is bad enough, but nothing compared to your loss when the infection spreads, as it will unless checked. Then your year's work in building up your herd is wasted and your profits lost.

Our method of handling calves will promptly stop scours and finally banish it from the premises. One good calf saved will repay the expense of protecting your stock for a long time against the disease. This plan is simple and practical.

Our germicide and disinfectant is especially adapted to this work. It is called Bacili-Kil (B-K for short). The remarkable germ-killing strength of B-K is plainly marked and guaranteed on every package. B-K contains no poison, acid or oil. When used internally it destroys germs, heals inflamed membranes, relieves irritation, restores healthy action. B-K may be given freely in the milk and drinking water.

B-K is convenient. Just add water as directed, and you have your treatment for calves, bulls and cows and also your disinfectant for general use.

B-K is used so successfully by leading breeders that it is now sold over the entire world and the demand for it has increased five hundred per cent in three years. A well known breeder of registered stock says:

**Clean and clear as water**

"We found vaccines of no value in stopping calf scours, but the prompt, efficient treatment with B-K checked the trouble quickly and saved us the loss of many valuable calves."

B-K is sold by dairy and farm supply houses, druggists, general stores, etc., everywhere. Dealers wanted in every town.

Write us for more evidence from users and for our bulletin No. 136, "How to Save Every Calf."

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## Hembree Jersey Herd

### Dispersion Sale

**Orland, Cal., Oct. 10, 1917**

Our entire herd goes in the sale, including our exhibit stock which won the bulk of big prizes at Sacramento, 1917—two firsts and grand champion on bulls, five firsts, grand champion, junior champion and reserve on cows, first authenticated cow, first get of sire, first on aged herd, young herd and calf herd and a whole string of seconds and thirds.

If you want the highest type of the Jersey breed, be at this sale and buy at your own price. Send to undersigned at Monmouth, Ore., for big illustrated sale catalog.

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Dr. Michael Creamer, Brockman Bldg., Los Angeles.  
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Double Pills should be used for pure bred and high grade stock.

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Cutter's Pill Injector.... 1.50

Insist on Cutter's. If unobtainable, order direct.

Write for new booklet, "The Control of Blackleg." It tells about Anti-Blackleg Serum which cures Blackleg and may be used simultaneously with vaccine to combat outbreaks and safely protect valuable stock.

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Idaho is holding her state fair this week.

## Hereford Men Meet at Sacramento

Written for California Cultivator By F. F. Stonerod

If the Hereford exhibit at Sacramento suffered by comparison with some of the other breeds in number of animals shown, the lovers of the Whiteface cattle were out in force at the meeting held at Sacramento and determined that next year will have a different story to tell. The fact of the matter is that the demand for Herefords in this state has been so broad that the comparatively few breeders of registered stock have been sold out of surplus stock and are unable to replace it with fresh blood. But a number of new herds have been established the past year, and more are in the making, so that we are looking for a much larger ex-

hibit at next year's shows. Cattlemen from all over the southwest came to Sacramento and were overjoyed to see that the breeders had made such a creditable showing. Gov. Packard of Arizona made the long trip from Phoenix and was one of the boys all week. He could be found any time around Hereford headquarters.

President Gable presided at the banquet Tuesday night, which was attended by more than 30 Hereford men. Professor G. H. True, of the state experiment station made a stirring address in which he said that the Hereford had proved itself to be the ideal breed under our peculiar range conditions, and that this breed could make more meat off the same amount of ground than any other. D. O. Lively talked about the popularity of the Hereford from Texas to Montana in the days when he rode the range. He said that such famous ranches as the King and Good Night, Bar L, and others of over a million acres, bought Hereford bulls by the thousand. Professor Caine, who judged the beef classes, said that breeders should sacrifice little points of fashion in breeding at this time, or

until the world shortage of meat animals was relieved. He advised: "Work toward the early maturing, rugged, meat-making type and get away from too much pedigree, fancy markings, etc." W. D. Duke of Likely, told how he sold off hundreds of purebred bulls every year at reasonable prices in order to get Hereford sires on the range. He said he could have sold three times as many had he had them. Clifford B. Harris, eldest son of Overton Harris, and one of the famous Hereford men of the country, gave an interesting talk about high priced cattle and why they were high priced. He said that the day had passed when you could secure proven breeding blood for a song. If the purchaser thought too long about the price somebody else stepped in and got the animal. He said the California breeder was asking too little for his best quality stuff because the wonderful improvement a good sire can make on a bunch of ordinary range cows in one season was proof of its value.

Other meetings will be called from time to time, sales will be discussed, and when all the owners of purebred Herefords on the Pacific Coast join the association it will be strong enough to accomplish big things. Certainly it has made an auspicious start.

## SHORTHORNS

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Will reduce Inflamed, Strained, Swollen Tendons, Ligaments, or Muscles. Stops the lameness and pain from a Splint, Side Bone or Bone Spavin. No blister, no hair gone and horse can be used. \$2 a bottle at druggists or delivered. Describe your case for special instructions and interesting horse book 2M Free.  
W. F. Young, P. D. F., 244 Temple St., Springfield, Mass.

### Berkshire Hogs—Milking Shorthorns

Breeding Stock For Sale

G. A. Murphy - Perkins, Cal.

## Butter and Cheese Scoring Contest

By H. S. Baird

Twenty-three cubes of butter, 25 cheese and 81 samples of milk and cream were entered in the state fair contests. The number of butter entries was smaller than usual. A great deal of interest was taken in the milk and cream contest and considerable credit is due the various city and state dairy and milk inspectors for their efforts in assisting in the promotion of the contest.

P. Peterson of the Valley Flower Creamery, Ferndale, received high score on butter with 93%. High scores on cheese were as follows: Cheddar, John Reber, Watson Cheese Factory, Belber, 93%; California (Granular), R. N. Weedmark, University Farm, Davis 92; Jack, Chas. Basciarini, Dixon, 93; Imitation Swiss; Chas. Basciarini, Dixon, 92.

The butter and cheese judging contest was won by Ed Hooper of San Francisco.

The judging of butter and cheese was done by G. E. Frevert of the United States department of agriculture, T. J. Harris, official inspector of the San Francisco Wholesale Dairy Produce Exchange, S. L. Denning and H. S. Baird of the dairy division, University Farm, Davis.

The milk and cream was judged by C. F. Hoyt, milk specialist, of the United States department of agriculture and Dr. Geo. Hart of the veterinary division, University of California.

In the butter awards Creameryman Ed Hooper of Spreckels Creamery, San Francisco, G. G. Plunkett, Exeter Creamery, and W. J. Grinsell, Loleta Creamery, made highest scores each with a score of 93. Other high scoring butter was exhibited by H. Downs, University Farm Creamery, 92½; J. T. Hague, McCloud Dairy, 92½; John Canaham, Manchester Creamery, 92½; H. E. Nelson, Gold Medal Creamery, Stockton, 92; J. E. Thorp, Lockeford, 92; Geo. Foltz, Red Bluff Creamery, 91½. Five other scores ranged above 90.

Cheddar Cheese scored from 87½ to 90½.

Jack Cheese from 88 to 91.

Market milk exhibits showed some remarkably fine milk. One score was 96.9. Sixteen others were all above 90.

Pasteurized milk scored from 90.5 to 97.

Guaranteed milk scored even higher than certified milk. There were five exhibits of the guaranteed, showing from 91.2 to 96.6.

Certified cream scored 94.2 and guaranteed cream 96.6.

Display of creamery butter was made by John Canaham of Manchester.

General display of products was awarded first to fourth places in order given: University Farm, Davis; G. Basciarini, Dixon, John Canaham, Manchester, and Chris. Holbeck, Gal.

S. L. Denning, who was one of the judges, makes the following comments on the butter:

"The butter of this scoring was very good in quality. The average of the 23 cubes was 92.31 per cent while 74.7 per cent scored 92 or above. No entry scored below 90. One of the most common defects was the curd flavor. This usually comes from too thin cream or from over-ripe starter and is very objectionable. In some sections of the state where very thick cream is received this flavor can be expected. When the starter becomes a little old or over-ripe it is best to churn without it because a starter in this condition will do more harm than good. Some of the entries lacked flavor and a few were flat. Some of these appeared to have received an excessive amount of washing, making a sweet cream butter very good results can be obtained by little washing. Too much washing takes out the fine delicate butter flavors. A few of the cubes had a bitter flavor suggesting the use of neutralizer. The feed flavors were again noticeable in



## Santa Anita Rancho

Anoakia Breeding Farm



ARABIAN THOROUGHBREDS: Two-year-olds, sired by imported Stallion Ibn are the choicest thoroughbred mares on Santa Anita Rancho.

SADDLE HORSES: Some of which were sired by Ibn Mahru, world renowned imported desert stallion, and Don Castano, a five-gaited Kentucky saddle stallion. These horses are mostly three-year-olds.

POLAND-CHINA AND BERKSHIRE BOARS: Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

HOLSTEINS: We will sell a number of young bulls. Some sons and grandsons of the noted California State Record Cows. Write for details.

Correspondence Invited

Anita M. Baldwin

W. H. TAYLOR, Superintendent

Santa Anita, Cal.



Lady Beatrice

Senior and grand champion cow at the 1917 California State Fair and a big winner in the English show yards.

## MILKING SHORTHORNS

The cow for the California farmer. Make milk and butter in large quantities. Make choice beef. Are free from diseases common to other breeds. Calves will weigh 900 pounds at one year of age. Our herd consists of animals from leading herds of England and the United States. All milk records from females are official. We have cows giving as high as 8000 pounds of milk a year. Buy bulls from these cows and use them in either your beef or dairy herd and be convinced.

Alexander & Kellogg

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## SHORTHORNS

H. L. & E. H. Murphy

Perkins - - - California

8

BULL

CALVES

10

2 Year

Old

BULLS



not so prominent as in some previous scorings.

The body was very good although a few of the entries were cut for being greasy. Several had a very leaky body and a few were sticky and gummy. The body together with the color indicated that a great many of the buttermakers made special churnings for the exhibit. Of the 23 entries ten, or 43 per cent, criticised for

being mottled. Some of the entries would have scored much higher had it not been for the mottle. A tallowy brittle body was also common indicating that excessively cold wash water had been used. The cubes were very uniform in size and shape and as a whole made a very good appearance."

The next contest will be held at Davis during the special buttermakers two weeks short course which begins November 5, 1917.

## Shorthorn Breeders Banquet

Written for California Cultivator By F. F. Stonerod

For an organization that has been in existence for but a few months the California Shorthorn Breeders' Association has accomplished a great deal.

During fair week at Sacramento the men and women identified with the association got together in an informal banquet at the Travelers hotel and discussed matters of importance and listened to some excellent addresses. After the banquet an interesting and instructive motion picture of the 1916 International Shorthorn show was thrown on the screen. Those present could easily imagine themselves at this great show where the best in the land is annually exhibited. This was Mr. Stollery's idea and the pictures were well worth seeing.

President A. W. Foster called the meeting to order and presented such well known men as ex-Assistant Secretary Cowan of the American Shorthorn Breeders' Association, Frank Brown of Carleton, Oregon, and others. Mr. Cowan's talk was confined to the earlier history of the Shorthorn in California and evidenced a knowledge of the subject both broad and thorough. He impressed those present with the importance of improving grade cattle, and that the pure breeds would take care of themselves. Mr. Foster favored annual stock shows at both San Francisco and Los Angeles and said he would be the first one to support the movement when it was appropriate, that nothing but the labor and war troubles prevented shows this year.

Frank Brown was asked to tell how

the stock shows at Portland, Oregon, improved the popularity of pure bred stock, and also as to the value of combination sales made up from the herds of the individual breeders. This question has been agitated many times in California but until the breeders organized nothing tangible came of it. After the meeting adjourned several of those present got together and talked about the advisability of holding a sale of Shorthorn cattle during the land show at San Francisco in October. C. N. Hawkins, Mr. McDonnell, Mr. Stollery, and several others were heartily in favor of holding the sale, and while some expressed doubts as to the advisability of such a movement the result of the discussion was that Mr. Stollery was charged with investigating the feasibility and expense of holding the sale and he wired back from San Francisco a few days later that the sale could be held, and in all probability will be. Some of the breeders will have to sacrifice stock to put it in this sale as females are mighty scarce in California—it is a buying rather than a selling market. However, as Mr. Hawkins said, if we never make a start we cannot hope to get anywhere and once these sales are made a fixed feature of our shows they will be well worth the initial sacrifices.

One cannot fail to see the awakening interest in livestock affairs in California. Shows, sales, and cooperation are coming apace and it will not be long before we will have solved many of the vexing problems of the past.

## Swine Awards at the State Fair

### Poland-Chinas

Exhibitors securing awards—J. H. Hansbrough, Modesto; H. I. Marsh, Modesto; John M. Bernstein, Hanford; M. Bassett, Hanford; E. Miner, Lodi; W. Bernstein, Hanford; Raymond Beckman, Lodi; George V. Beckman & Sons, Lodi; A. L. Bassett, Hanford; Fred. D. Ross, Hanford; Howard C. Peterson, Reedley; W. A. Young, Lodi.

The awards:  
Boars, two years old or over—1, J. H. Hansbrough on Major Hadley Wonder; 2, Marsh on L. B. A. Wonder; 3, Bernstein on President; 4, M. Bassett on Chief Victor; 5, M. Bassett on Model Fellow.  
Boars, junior yearling—1, M. Bassett on Surprise; 2, Miner on Ursus Jr.; 3, Marsh on Smooth Orphan.  
Boars, junior yearling—1, Bernstein on Rosebud Chief 1st; 2, M. Bassett on Spell's Corridor; 3, M. Bassett on Hustler's Model 2nd; 4, Raymond Beckman on Duke of Lakeside; 5, Beckman & Sons on C's Charmer.  
Boars, senior pig—1, A. L. Bassett on Model Wonder; 2, W. Bernstein on King's Lad; 3, Ross on Panama Prince; 4, M. Bassett on Wonderful Victor; 5, Bernstein on Some Revenue.  
Boars, junior pigs—1, A. L. Bassett on Big Bone Hustler; 2, M. Bassett on Hustler's Chief; 3, M. Bassett on Wonderful Hustler; 4, Marsh on Giant Wonder; 5, Marsh on Major Wonder.

Sows, two years old or over—1, Bernstein on King's Rosebud; 2, M. Bassett on Dewdrop; 3, Marsh on Big Beauty; 4, Bernstein on Candy Kid; 5, M. Bassett on Gold Drop.  
Sows, senior yearling—1, Bernstein on Sunshine Maid; 2, Bernstein on Lillie B; 3, Marsh on Miss Giantess; 4, Ross on Silver Bell; 5, Bassett on Wonderful 2nd.  
Sow, junior yearling—1, Bassett on Good Style; 2, Bernstein on Ruby B; 3, Bassett on Hustler's Girl; 4, Bernstein on King's Rosebud 2nd; 5, Hansbrough on Queen Bess Hadley.  
Sow, senior pig—1, Bassett on Long Model; 2, Bernstein on Belle of Revenue; 3, Miner on Mollie Giantess; 4, Peterson on Bell of Fowler;

5, Bassett on Wonderful Style.  
Sow, junior pig—1, Young on Major's Lady; 2, Young on Fairview Model; 3, Marsh on I. B. A. Wonder—Miss Countess, gilt; 4, Bassett on Lady Chief; 5, Bassett on Perfect Lady.

Herds, over one year—1, Bernstein on Rosebud's Chief, Candy Kid, King's Rosebud, Sunshine Maid; 2, Marsh on I. B. A. Wonder, Miss Giantess, Miss Graver, Model Giantess; 3, Bassett on Surprise, Dewdrop, Black Beauty 2nd, Wonderful 2nd.  
Herds, under one year—Bassett on Model Wonder, Model Lady, Long Model, Miss Big Bone; 2, Bernstein on The Kid II, Candy Bess, Belle of Revenue, Baxie's Beauty; 3, Bassett on Miss Quality Victor, Wonderful Style, Good Style, Wonderful Victor.  
Herds, boar and three sows, bred by exhibitor—1, Bassett on Model Wonder, Model Lady, Long Model, Miss Big Bone; 2, Bernstein on The Kid II, Candy Bess, Belle of Revenue, Baxie's Beauty; 3, Bassett on Wonderful Victor, Wonderful Style, Good Style; Un-named.

Get of sire—1, Bernstein on get of President, Lilly B, Ruby B, Hanford Maid; 2, Marsh on get of model Major, Major Hadley Wonder, Miss Giantess, Model Giantess, Miss Giantess; 3, Bassett on get of Chief Victor, Wonderful Style, Good Style, Miss Quality Victor, Wonderful Victor.  
Produce of dam—1, Bassett on produce of Miss Quality Style, Wonderful Style, Good Style, Un-named, Wonderful Victor; 2, produce of Chief's Lady, Hustler's Chief, Wonderful Hustler, Lady Chief, Perfect; Perfect Lady; 3, Bassett on produce of Morning Glory, Giant Hustler, Big Bone Hustler, Miss Big Bone, Mammoth Hustler.

Senior champion boar—1, Hansbrough on Major Hadley Wonder; 2, Bernstein on Rosebud Chief 1st.  
Junior champion boar—1, Bassett on Model Wonder; 2, Bassett on Big Bone Hustler.  
Senior champion sow—1, Bernstein on King's Rosebud; 2, Bernstein on Sunshine Maid.

Continued on Page 342

# Montelena Herd

## Large Yorkshire Swine

### TWENTY-ONE AWARDS ON ELEVEN ENTRIES AT THE 1917 STATE FAIR



LAKE PARK KING 25211

Senior and Grand Champion Boar

—Other Awards—

Reserve Junior Champion Boar

Junior and Reserve Grand Champion Sow

Champion Sow Bred by Exhibitor

Reserve Senior Champion Sow

Fourteen Class Awards

Long, large and deep, strong, healthy and prolific, making quick, economical pork of the quality so desired by packer and butcher, Yorkshires stand ready to do their share in this world crisis.

# A. L. Tubbs Company

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## RINCON FARM BERKSHIRES

Exhibited at the  
California State Fair, 1917

Were Awarded

JUNIOR and RESERVE GRAND CHAMPION BOAR

For Rincon's Rival a Senior Boar Pig by Ames Rival CII Out of Rookwood Lady CII

SENIOR and RESERVE GRAND CHAMPION SOWS

FIRST PLACES on Senior and Junior Yearling Boars, Senior Boar Pig, Senior Yearling Sow and

AGED HERD

Twelve Other Awards

Grand Champion Sow Just Added to Herd

Brush Berkshires are Selected and Bred With the Greatest Care from the Best Blood Lines. Young Boars that are Clean and Straight, With Splendid Heart, Girth, Backs and Pasterns, Offered for Sale

F. A. BRUSH, Santa Rosa, Cal.

C. E. BARROWS, Manager

## WE MAKE LOANS

on beef breeds of cattle in amounts from \$5000 up,  
and invite you to correspond with us.

Southwest Cattle Loan Company

JNO. L. KNORPP, Pres. and Gen. Mgr.

915 Citizens Nat. Bank Bldg.

LOS ANGELES, CAL.



## Stanislaus County Holds Big Stock Show and Exposition

Written for California Cultivator By F. F. Stonerod.

**S**TANISLAUS county's remarkable growth in the past few years and her rise to the position of the leading county in dairy products in the state was due to two factors—intensive farming and co-operation in marketing.

It was the get-together spirit of the business men of Modesto and the producers which made the live stock show last year the banner one of the

state next to Sacramento. That show paid a profit of over \$2000. This year the second annual show will do even better, because it was bigger and better in every way.

It was to be expected that Stanislaus would be strong in the dairy classes, but to see 50 more Holstein entries than they had had at Sacramento this year was amazing to say the least. The Jerseys were strong, too; so were the swine. Revada Farms

sent down their state fair string of prize-winning Guernseys; L. H. Smith showed for the first time and E. A. Couture, a new Stanislaus Guernsey man, brought out a few choice ones; McFarland had his Ayrshires on deck, and Alexander & Kellogg exhibited dairy Shorthorns, the first time this section of the state has had an opportunity to see the dual purpose cattle. One could write indefinitely about the other exhibits, the melons, corn, fruits, grains, etc., all of which are produced so abundantly in this great county, but space does not permit. If other California counties will establish animal fairs and stock shows of the same class as Stanislaus we will in time measure up to any state in the country. The movement has been

a long time coming, and now that it is here it deserves the support of our legislature and of business interests.

### The Cattle Show.

Probably there was never a greater reversal of judges' decisions in several of the classes at Modesto and Sacramento. Evidently the college men of Minnesota and Kansas differ widely in their judgment of dairy stock. Animals which won firsts and even championships at Sacramento finished third and fourth in Modesto, and vice versa. As one prominent breeder said, "I should think there would be more consistency in tying ribbons and not such a difference in type. Really, I expected to learn a few things about show animals, but I confess I am all at sea." But the judges' decisions were impartial and generally satisfactory at both fairs, and both judges are considered authorities.

### Holsteins.

The lineup of Holstein entries in some of the classes, notably aged cows, and in fact all the other classes except bulls, was a sight to be remembered. Eight, ten and even twelve head was a common occurrence, and the quality was there, too. The sensation of the show was the winning of the junior and grand champion ribbons by Bridgford Company's two-months-old heifer, Princess Inka Butter Girl 360987, a daughter of Segis Bergsma Butterboy. Judge Reed pronounced her one of the finest young matrons he had ever seen in a show ring and placed her above two remarkably fine cows in their class. Both the Gibson and the Bridgford herds were large winners at Modesto, but they did not get everything. George Kounias led his aged bull, King Korndyke Hengerveld Ormsby VII, into the ring in the morning and won first prize. Benoit finished second and Gibson third. When the championships came up for decision the Kounias bull had to compete with Bridgford's grand champion at the state fair and also the nine-months-old senior bull calf, King Sergis Alcartra De Kol Pledge 207033. Professor Reed walked around and around and examined every point of each individual, and after considering for perhaps 20 minutes tied the grand championship purple on the Kounias bull. It was quite a feather in the cap of this enthusiastic young breeder to win the coveted prize and every one present, including his rival exhibitors, congratulated him like the good losers they are.

The aged cow class was a wonder. Here again the judge placed the Sacramento grand champion cow down the line and tied the ribbon on J. W. Benoit's Vera—Walhalla Princess 224170, a five-year-old daughter of Acme Pontiac. She had but recently freshened and carried a wonderful udder and superb condition. This is the cow which the Bridgford Company beat for grand championship with the nine-months-old heifer, so it will be seen what the judge thought of the champion. The Gibson Company was strong in the young stuff and won many firsts. There were 125 Holsteins entered at this fair, 50 head more than in Sacramento.

### The Jerseys.

The Jerseys at Modesto were not far behind the Holsteins in point of numbers. This section is a Jersey stronghold and many state production records and show yard championships originated in the vicinity of Modesto. Professor Reed made the statement to the writer that he was in favor of showing a bull's get before the bull himself was shown, or, better still, to show both together. He said that he was agitating the matter with the Eastern show authorities. Many times a blue ribbon is given a sire whose get fails to get in the money and bulls who leave the unmistakable stamp of quality and transmitting ability on their get are placed down the line. This theory was demonstrated to be sound in the case of the Gibson Company's aged bull in the Holstein class, where he was placed third, and yet his get won consistently all afternoon.

Old Altama Interest, owned by the sterling Jersey breeder, Guy Miller, came into his own again after a sleep at Sacramento, where a strict Island type bull beat him. At Mo-



Dora Jeek



King Pontiac Netherland Segis



Daughter of a 28 Pound Cow

## 22 Splendid Bulls

will be sold during the two day sale of registered Holsteins at McClure Farm, Santa Ana, Cal., including

### 14 Grandsons of King of the Pontiacs

**Dairymen:** Grasp this opportunity to buy at your own price this splendid dairy blood.

**Breeders:** You will find in this sale bulls fit to head good registered herds. Note especially the great son of King of the Pontiacs, the son of a 34 pound cow; and the younger bulls out of young dams that are bound to increase their records.

Consult the list at the right and you will agree with us that no better blood has ever been offered to you.

And remember that great as the bull opportunities in this sale will be they are fully matched by the great female offering in this sale of

## 125 Registered Holsteins

McCLURE FARM, Santa Ana, Cal.

Tuesday and Wednesday, Oct. 16-17, 1917

which will include

- A 28 pound cow and her three daughters.
- A full sister to a 31 pound junior four year old.
- 18 granddaughters of King of the Pontiacs.
- A granddaughter of Rag Apple Korndyke 8th.
- A granddaughter of Tilly Alcartra.
- Four heifers sired by a 29 pound grandson of King Segis.
- 12 A. R. O. cows with records up to 28.43 pounds butter.
- A granddaughter of King Segis Pontiac. Her seven nearest dams all A. R. O. cows with records averaging 23.10 pounds butter in seven days.
- A granddaughter of Hengerveld De Kol, heavy in calf to a son of King of the Pontiacs.
- A granddaughter of Sarcastic Lad heavy in calf to a grandson of King of the Pontiacs.
- Splendid cows and heifers bred to King Pontiac Netherland Segis.
- Richly bred cows and heifers in calf to a son of Colantha Sir Aaggie, and whose dam is a 28 pound daughter of Colantha Johanna Lad.

This sale includes the complete dispersal sale of the herds of Ernest Otto McClure, Santa Ana; A. Satterberg, San Jacinto; and P. H. Jarrett, Lancaster; augmented by choice consignments from McAllister & Sons, Chino; Santa Anita Rancho, Santa Anita; R. Nadeau, Saugus; and Aro Farm, Buena Park.

Every animal over six months of age tuberculin tested and has individual certificate. Write for catalog.

Sale under Management of

California Breeders Sales and Pedigree Co.

J. M. Henderson, Jr., Pres. C. L. Hughes, Sales Mgr.

Sacramento, Cal.

Auctioneers: Col. Ben A. Rhoades, Harold B. Rhoades

## Bulls in This Sale:

King Pontiac Netherland Segis, son of King of the Pontiacs and out of a good daughter of King Segis Pontiac. One of the last chances in the west to buy a son of King of the Pontiacs.

The first son of the great Colantha Johanna Lad ever offered at public sale in the west, and he is out of a granddaughter of Pontiac Korndyke.

A son of King Morco Alcartra, son of Tilly Alcartra, and out of a 17.31 pound two year old daughter of Prince Gelsche Walker.

A Son of Segis Pontiac De Kol Burke, son of Riverside Sadie De Kol Burke, out of a 634.48 yearly butter record junior two year old daughter of Korndyke Queen De Kol's Prince.

A son of King Korndyke Pontiac, out of a 22.88 pound junior three year old daughter of Colantha Sir Pontiac Aaggie, whose A. R. O. daughters include a 32 pound junior three year old.

A son of King Korndyke Pontiac out of a 19.05 pound junior three year old daughter of Prince Gelsche Walker, and her dam made over 1000 pounds butter in one year, has a daughter that made over 1000 pounds butter in one year, and she in turn has a daughter that promises to complete the first three generations of 1000 pound butter cows.

A grandson of Aaggie Cornucopia 3d's Lillith, out of a 34 pound daughter of Sir Sadie Cornucopia.

A son of King Pontiac Topsy out of an 18.22 pound junior four year old daughter of Pieterje Hengerveld's Count De Kol.

A grandson of Juliana King of Riverside out of an A. R. O. dam.

A son of King Segis Pontiac Jannek out of a daughter of King Hengerveld Segis 8th.

A son of King Segis Pontiac Jannek out of an 18 pound junior three year old daughter of a 21 pound cow.

A son of Judge Hengerveld De Kol 6th out of a granddaughter of Pontiac Hengerveld Parthenon.

Ten sons of King Pontiac Netherland Segis, out of well bred dams, many with good A. R. O. records.



desto the judge considered capacity before he considered anything else, and in this many time champion, son of Golden Interest, he found not only capacity but rugged constitution and all the other good points which go to make up the ideal dairy sire. He won senior and grand champion honors. His son, Exile of Rico Vegas, won first senior bull calf and reserve grand champion bull. His get won consistently in strong competition, and so Mr. Miller has reason to be proud of his record.

Mr. Miller also won grand champion cow on Goldie of Venadera. L. J. Dobbler won reserve grand champion cow on Signalas Little Beauty. J. A. Goodall and B. D. Hayworth won a

bunch of first premiums. Mr. Hayworth won get of sire also and was second in produce of cow. Altogether it was a fine Jersey show and worth going miles to see.

The other classes had not yet been judged when this was dispatched to the editor, but will be reported as soon as possible. Delay in developing and printing photographs of principal prize winners so they could be identified properly and mailed to the California Cultivator is to be regretted. The Cultivator is using every effort to cover the many fairs and shows, and trusts any mistakes or delays in getting the material into the office may be pardoned by the exhibitors.

## Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

### Growth in Turkey's Crop

I am losing my half-grown turkeys. A pocket forms in the crop which holds the food, causing the turkey to strain all over trying to swallow. The pocket grows from the esophagus, is tough and yellowish, in layers like paper. The birds are in good condition, have plenty of barley pasture, alfalfa, gravel and lime.—Reader, Wil-lows.

I should look to the feed for the cause of this growth in the crop. Barley as the exclusive grain diet often causes digestive troubles and may have something to do with this. I do not understand what is meant when you say lime is part of the ration. If you mean oyster or clam shell, which contains lime, well and good. If you mean slaked lime, you may have right here the cause of the whole trouble. Slaked lime is extremely irritating, to say the least, and is not suitable feed for fewls or turkeys. I should cut out both lime and barley, feed wheat or corn (or one of the sorghums if these are too expensive) for the grain feed and oyster shell instead of lime. Once a week in order to supply bone-making material give a hopper of bran mixed with about ten per cent fine bone meal. Rolled oats chopped with onions or onion tops are very wholesome for turkeys of all ages, and would be a good ration for the birds which show signs of illness. The only remedy in such cases as this is removal of the cause.—J. A. K.

### Horse Beans

Answering query as to planting horse beans in the Downey section, D. F. Reichard writes:

"Horse beans, properly called Broad Windsor beans, are successfully grown about Downey as well as other Southern California sections for a winter crop. They are planted from the middle of September or preferably before November 15, although they are planted at any time during the cooler months until the first of April. The Windsor beans are grown in Southern California mostly as a green bean for shelling, as limas are used in the green state. There is no reason, however, why they should not be grown for dry beans. The dry beans are grown in the northern part of the state very extensively. Although planted early the dry beans would not be ready to harvest until late in May or in June.

Early planted beans, that is, those planted before any heavy rains have come, will necessarily have to be planted in ground that has been previously thoroughly irrigated and worked. Drop the seed four to six

inches apart in rows two and a half to three feet apart. Unless a goodly rain falls by the time the beans are four to six inches high they should be irrigated between the rows, after which give them thorough cultivation and a good weeding. A light cultivation after each rainstorm should carry them to maturity unless there should be an exceedingly dry season. Wind-sors are harvested much the same as limas, either by machinery or by tramping or flailing. The stalks are larger and the beans hold to the pod a little harder than lima beans. The average production is ten to twelve hundred pounds per acre. The threshed dry beans sell for from four to six cents, according to the demand. They are used extensively as a filler for coffee and are become popular also as a cover crop plant.

### Jerseys and Holsteins

Please give the points of pure bred Jerseys and Holsteins. Do they have regular color? — Subscriber, Valley Springs.

To give the full scale of points of both these breeds would require several columns. If one wishes the exact information we would recommend writing the American Jersey Cattle Club, 324 West 23rd Street, New York, or the Holstein-Friesian Association, Malcolm H. Gardner, Superintendent of Advanced Registry, Delevan, Wisconsin. In a general way, we may say that the Holstein is much the larger cow, always black and white, and no two spotted alike. The Jerseys may be a very light fawn color or almost a black.

### Estimated Weight of Sorghum Grains

Will you please give cubic contents or measurement of a ton of Egyptian corn or red milo maize as gathered in the head. I believe there should be some method of measuring these, the same as hay.—Subscriber, Klink.

This is a new question which we will pass on to our subscribers. Have any investigated? The rule for measuring corn on the cob in cribs is: "Multiply the length of the crib in inches by the breadth in inches, and that again by the height in inches, and divide the product by 2478 (the number of cubic inches in a heaped bushel), and the quotient will be the number of bushels of ears. Take two thirds of the quotient for the number of bushels of shelled corn." This is only a hint and perhaps of little value in determining cubic contents of a ton of Indian corn. The measuring of hay depends so much on the variety, the length of time it has settled in stack or mow, and other factors, that the number of cubic feet to the ton varies from 400 to 500, while a ton of light straw may measure a thousand cubic feet, therefore a correct estimate requires considerable

judgment. The same would be true as to a ton of Egyptian or milo. Some heads are looser than others.

### Drying Prunes

Can you give the location of a prune drying plant in California?—Subscriber, Norwalk.

Prunes are often dried near the orchard by the owner, or sometimes in community yards, but always as near the orchard as possible. The prune drying sections are in the Santa Clara Valley and in the northern end of the Sacramento Valley.

### RACES AT RIVERSIDE FAIR

There will be races of all kinds at Riverside this year and it is certain that something is radically wrong with the individual who does not find something to please him on the racing program. There will be trotting races with the fastest horses on the Pacific Coast entered for purses aggregating over \$4000. The entry list shows that there will be a big field of starters in each event, especially in the 2:11 pace and 2:14 trot, each for a purse of \$800 on Wednesday, October 10.

Every afternoon of the week except Thursday, Indian day, there will be two or more running races. The cow pony race on Wednesday, October 10 will bring forth the best ponies from the ranges of California, Arizona and Nevada. The one mile derby on Friday is certain to be well filled.

Bicycle races are coming back and they will hold the center of the stage at the Riverside fair on each afternoon following the trotting event. There will be two races each day open to the best riders of Southern California. On Thursday, October 11, there will be a five mile invitation team race with teams entered from every city of Southern California. The Riverside county championship race on Saturday, October 13, will serve to bring out the best riders in the county.

Besides the trotting races, the running races, bicycle races and foot races on the opening day there will be daily matinee races.

## Plowing Time

Time to use a Yuba Tractor is when ground is hard and dry, and a lot of power is necessary.

That bull-dog strength gets a hold and pulls the plows deep, turning up 8 to 12 inches of soil for the air to disintegrate and the winter rains to reduce to a mulch.

Yuba Plowing is efficiency scientifically applied.

Write for the Catalog. Dept. B7

## YUBA Manufacturing Co.

433 California Street  
San Francisco, Cal.



### IRISES

August to November is the time to plant for best results next flowering season  
The DEAN IRIS GARDENS, Moneta, Cal.

When writing advertisers, mention the Cultivator.

## PAINT

### 25% to 50% Below Market

The paints we sell cheaper than other dealers are the well known brands, such as Sherwin-Williams, Acme, etc. We buy immense quantities of these paints at very low prices from bankrupt firms, therefore can sell to you at below market prices.

### Compare These Prices

Acme Floor Wax, regular 50c, now 25c lb.

Varnish Stains for floors and furniture, \$1.75 gal.

Sherwin-Williams House Paint (no white), \$2.50 gal.

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Bankrupt stock of Kalsomine, 3 1/2c lb.

Our Standard House Paint, \$2.25 gal.

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## Write to Mr. Hoover

Written for California Cultivator By Jean A. Koethen

**T**HE idea is not my own. I wish it were. I am just passing it along from the assistant editor of the American Poultry Advocate, who confesses that it is not original with him, either. But why not write to Mr. Hoover? Why should not every commercial poultryman who is having a hard time to break even, every farmer who finds there is no profit in feeding even the feed he raises himself to his fowls, every fancier who would like to breed better poultry if only

he were sure of a market for it at living prices, every sidelliner and backlotter who would be glad to hatch and rear a nice bunch of fryers or roasters if only he had any certainty of selling them for what it cost to rear them, write to Mr. Hoover and tell him his troubles? Mr. Hoover would never see the letters, to be sure, but he would hear about them, and who knows what he might be able to do to put the industry on its feet?

Last week my milkman left a printed notice to the effect that "the enormous advance in the price of everything necessary in the production and marketing of milk compels us to announce" that on and after Saturday, September 1, the retail price of milk will be seven cents per pint or twelve cents per quart. Do you know how much higher these prices are than those of five years ago? I am depending on my memory for this, and prices always vary more or less, but I am quite certain that five years ago we were getting 12 and sometimes 13 quarts for the dollar, for which we

now receive eight quarts. That is an advance of 50 per cent, isn't it?

Five years ago eggs in Los Angeles sold for 40 and 45 cents a dozen in September. This year they are bringing 50 cents, which is an increase of from 12½ to 25 per cent, according to the place where they are sold, for it is a curious fact that some stores can always get five cents a dozen more for eggs than can others. The "enormous advance" in price of feed hits the poultryman just as hard as it hits the milkman, yet the advance in selling price of eggs has been only about half that of milk.

In other lines of business the difference is even more marked. Our shoes cost us nearly twice what they did two years ago, gingham which sold for 12½ cents a year ago are from 18 to 20 cents now. Everything has gone up but eggs and poultry. For the former we receive, if we are lucky, a 25 per cent advance. The latter have been rather cheaper than usual.

What is the matter with the poultryman? Well, for one thing, he doesn't blow his own trumpet. He has nothing to say about the great value of eggs as food nor about the super-excellence of chicken meat. He doesn't advertise his wares. In the second place, poultrymen have never succeeded in organizing as the milkmen and bakers and butchers have. They just go along, each for himself, each perhaps more or less suspicious of the other fellow. In the third place

he doesn't tell his troubles. I have seen no notices left at anyone's door stating that the poultrymen must have a bigger margin between cost and selling price or go out of business, yet this is the plain, unvarnished truth. Many have gone out of business because they could only continue at a loss. Many tried, in response to the pleading of the government last spring, to increase production, only to find that they must sell their fryers and roasters and old hens for less than it cost to raise them. The poultryman has tried valiantly to do his bit, but he will not try again unless the price of feed can be lowered or the price of eggs raised so that there may be a living margin between.

That is why I say, write to Mr. Hoover. This will not take the place of organization nor of advertising, but it may perhaps clear away some misapprehension on his part. Tell him the poultryman is the most poorly paid of all producers and that he is tired of being the under dog. Tell him we are of all victims of the food speculator the most helpless, for he hits us coming and going. Tell him half the hens in the country have already gone to the butcher and some body will have to go without his egg for breakfast no matter what is done, but that encouragement now will put the poultry industry on its feet and insure eggs for next year if not for this. Tell him all we ask is a square deal.

## Put Yourself in Biddy's Place

Written for California Cultivator By Mrs. Nettie Metcalf

**S**UPPOSING you had one suit of clothes a year, under-clothing included, and that you never got a chance to change or wash them, no matter how filthy they became. Supposing those clothes were infested with vermin as well as filth. Vermin that hatched and multiplied until rest or comfort by day was out of the question. Then supposing the place you slept in was infested with millions of bed bugs so that rest (?) at night was misery, and you will get some little idea of the discomfort of our feathered pets unless we give them the care simple humane common sense demands. The misery many of these flocks endure, and to add insult to injury Biddy is blamed if she doesn't pay. Pay! It's a wonder she lives at all sometimes. And many, many times she doesn't. How quickly we run for the bathroom and a change of clothing throughout if we happen to get a dozen or so mites on us.

"Dear me," some one says, "what very unpleasant language." Yes, dear lady, it is a very unpleasant subject, but none the less necessary to be broached time and time again.

"Animals don't need baths," some one persists, "nature takes care of all that." Just so! Nature does seem to take care of the animals better, for they shed their heavy winter coats when the warm weather comes, but Biddy has to keep hers all the spring and half of the summer so it's our bounden duty to help nature in her case.

Then let our slogan be, "No guilty mite or louse shall escape," and let us, like Rider Haggard's doughty Zulu chieftain, Umslopogaas, find our heaven as he expected to find his, a place where we can kill, and kill, until every mite and louse is exterminated; then let us wait a week or ten days and kill all that have hatched out meantime.

To begin the battle, let us stock up with gallons and gallons of kerosene. Don't put it on with a machine oil can and expect results. Pour on plenty to saturate, literally saturate, every board, cracks and all, in every hen-roost in which there is a single mite. A good spray pump is a fine thing to use outside the coop as well as inside. Then take a pail of kerosene and with


a cloth thoroughly wash under a roosts and nest boxes, places where the spray does not reach, but don't be satisfied until the oil runs down between each two battens in a stream and roof, floor, walls outside and inside are literally soaked. One drop of oil in a hidden crack may harbor hundreds.

If whitewash has been used there are usually numbers of thrifty families of mites under the scales—I hate it and never use it for I find this treatment once a year about all that is necessary, only perhaps once a month a small gallon can is used around roosts, nests, etc., but if mites show up between times the big spray pump is called into use instantly.

So much for the coops. Now for Biddy: Take a few pounds of tobacco stems (which one can get at the cigar makers), according to the number of hens kept, and steep the night before you wish to use, leaving it to soak over night. In the morning add water to take the chill off, put in a little sheep-dip and give every fowl of the place a thorough bath, working the liquid well through the feathers and, finally, dipping head and all under, then let her run in the sun to dry. She won't run much at first. She will be like dead, gasping for breath, but she soon recovers, and I have never lost one yet. Always, while in the water, examine them for feathers crusted with nits or eggs, which are usually found in the fluff around the vent. Pull these out and burn them, and if many fowls have them a second washing is advisable in about ten days. An old wash boiler is an excellent bath tub if large enough, if not a tub is all right. The main thing is to have plenty of tea and have it good and strong. This is the old Pennsylvania Dutch way of keeping fowls clean. Incidentally I might mention the fact that many Irish women give the family pig and its pen a weekly scrubbing, and if anyone can make pig into pork quicker than an Irishwoman, I rise to admire.

### PASADENA SHOW

The Pasadena Poultry Association will hold its show December 11-13. Special awards and an admission fee of ten cents will be features of the year's show.



**Coulson's**  
MADE IN PETALUMA


### The Best Egg Food on the Market

The reason for this is in the great variety of its ingredients, every one of which is bought specially for the purpose, and is not some by-product which has to be gotten rid of. The concentrated portion of the feed is selected not just for the crude protein which it contains, but for its digestibility.

The result of all this is a healthful, well-balanced feed which will give results.

Send for our free book, "CHICKENS FROM SHELL TO MARKET" and full particulars of our method of feeding.

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PETALUMA, CALIF.



### DRY MASH

#### The Best Feed on the Market

Has the highest protein at the lowest price \$2.80 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or **The Globe Mills, Los Angeles**

## Science Says Buttermilk



Bulletin 182, just issued by the Department of Agriculture, states that Buttermilk is the only preventative of White Diarrhea. It has been proven that many birds apparently in perfect health have these germs in their system and that they are transmittable to their progeny. Science has discovered that the Lactic Acid Bacilli of Buttermilk kills these poison germs. Write to Berkeley for this important bulletin, free.

The Dry Buttermilk in **GLOBE A-1 BUTTERMILK MASH** contains 10,000 live Lactic Acid Bacteria to the cubic centimeter.

Globe A-1 Buttermilk Mash is a high protein feed, free from any filler.

Globe A-1 Buttermilk Mash will prevent bowel troubles, keep your flock in glowing health, produce more eggs to market, better eggs to hatch.

Costs no more than non-buttermilk mash.

Satisfaction or Money Back.

**GLOBE MILLS, Los Angeles**

Write at once for valuable feeding information and sample, free.

## Buttermilk GLOBE A-1 Dry Mash

### PETALUMA INCUBATORS & BROODERS

"STANDARD OF THE WORLD"

#### Ducks Never Cackle

Neither do all people write us who are making big hatches in different parts of the world in the

### PETALUMA INCUBATOR

but thousands have and we would like to tell you what they say. Present Models better than ever. You should know about *The Electrified Hen*. Write us. Just say "Send your big envelope of free literature. We Pay Freight."

PETALUMA INCUBATOR CO.  
248 Main Street Petaluma, Calif.



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The direct selling method from producer to consumer, and a clearing house for over 31,000 readers, weekly.  
Liner rates: Single insertion 3c per word;  
yearly contracts 2½c per word. 35c per issue minimum charge

## TREES

Here is Your Opportunity to Secure A1 citrus trees. We offer several thousand 2-year-old lemons, Eureka and Villa Franca, also Washington navel; also several hundred Valencia on sweet root. We call these good trees and we know whereof we speak. ALBERT JACKSON, Upland, Cal.

Avocado Budwood, Tree Performance Record, Leading Varieties. The Puerta at two years of age matured from 76 fruits per tree and has proved harder and highest in oil (30.72 per cent) of the thick skin varieties. J. T. Whedon, Yuba Linda, Cal.

Far Trees — Offer several thousand Bartlett's, 2 and 3 feet, heavy caliper at 9c each. French prunes. Trees of all kinds. No agents; we sell direct. Write for price list. Carlton Nursery Co., Carlton, Ore.

By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator. The cost is only 3 cents per word per issue, with a minimum of 35 cents.

For Sale—Valencia trees, extra fine yearlings, straight, thrifty, sour root, high buds, not fertilized, fine soil for balling. Will contract for spring planting. S. R. Coate, Anaheim, Cal.

For Sale—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. Randall Bros. Nursery Co., Whittier, Cal.

Citrus Trees — All kinds, any quantity. Butler's Morning Side Nursery, Laramie Park, Cal.

Citrus Nurseries, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

## WANTED

Partner Wanted in old established, local wholesale farm machinery business. War compels retirement of present partner who has gone North with regiment. Food situation creating big demand for goods. Big profits. No losses. Growing market. Protected by patents. Party must be willing to attend to either Los Angeles or San Francisco city office or the trade in country. \$7500 cash for half interest, or will accept clear ranch property. Splendid chance for right man to start off with good income in nice business. Address: Farm Implement, care Cultivator, 112 Market St., San Francisco.

Wanted — Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' work to right parties. Address J. H. Yetter, Sales Department, 822 Santa Marina Building, 112 Market St., San Francisco, Cal.

Wanted to Purchase good second hand pipe and screwed well casing. I can furnish all sizes of pipe and casings in first class condition. Write for prices. W. G. Leahy, 1002 Santa Fe Ave., Los Angeles.

Wanted—Position as head milkster and herdsman. Familiar with testing, scientific feeding and treatment of disease. Good reference. Box D, Cultivator.

Make Money Writing Stories, news items, or photoplays. Big pay. Free information. Address United Press Syndicate, Los Angeles.

We Buy Weed Seeds—Mustard, rape, anise, bitter clover, etc. Send samples. Write us, stating quantity and price. Globe Mills, Los Angeles.

One of the Most perplexing problems to farmers and ranchers is that of help. A small liner ad in California Cultivator is the quickest and easiest means of securing farm help.

Weeds Wanted—Flowers, seeds, berries, leaves, barks, roots, 2c. to \$2.50 lb. National Drug Co., Yakima, Wash.

Man—To wear fine suit, act as agent; big pay, easy work. Banner Tailoring Co., Dept. 738, Chicago.

## SEEDS AND PLANTS

Alfalfa Planters, fill your fall requirements NOW with GREEN-GOLD seed. High quality because of personal field selection. Low price because of direct dealing. Send for samples and prices. Bomberger Seed Co., Modesto, Cal.

ORDER YOUR SEEDS NOW \*\* If you are going to need any seed for next season, now is the time to render your order. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbuckle, Cal.

ALFALFA SEED OUR SPECIALTY\*\* Alfalfa Seed—Common variety, hairy and smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. E. F. Sanguinetti, Yuma, Arizona.

Rhubarb—\$1127.00 from one acre. A crop every month of the year. Write to me and I will tell you how you can do as well. J. M. Stone, Lodi, Cal., Route 4.

Vetch Seed—N-w crop clean seed, \$4.00 per 100 lbs., on car. Alsike, Red Clover. Price on application. Carlton Nursery Co., Carlton, Ore.

20,000 Yellow Calla, Elliottiana; Pink Calla, Rhesus. Spotted Leaf White Calla. William Richard Nursery, Santa Cruz, Cal.

For Sale—Some very fine Strawberry plants; 5 different kinds; Charlotte Reagan, 718 3rd Avenue, Oroville, Cal.

New Crop Alfalfa Seed now ready. Not the lowest in price, but high in quality. Leo Turner, Yuma, Arizona.

## PATENT ATTORNEYS

Patents that protect are secured through The PACIFIC COAST PATENT AGENCY, INC., Savings & Loan Building, Stockton, California; send for our little booklet on "PATENTS."

## HOGS

Registered Durocs—We offer for sale a choice service boar out of a daughter of Modesto King and by a grandson of Burk's Good E Nuff; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col.; three young boars out of a great sow of Crimmon Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. Derryfield Farm, L. O. O. F. Building, Sacramento, Cal.

Chester Whites, the Billiken Brand.—Your duty is to raise more hogs and increase the meat supply. The demand for pork exceeds the production. Get started with some of these Chesters: 3 bred sows farrowed in April, 1916, due to farrow in September, and October; 18 October gilts bred to farrow in October; 3 October boars ready for service. All first class in every respect and good enough to fit and show at the different fairs this fall. All are cholera immune and will be registered free. Write for price list and booklet. C. B. Cunningham, Box C, Mills, California.

Grape-Wild Farm Berkshires — World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

Large Yorkshires — Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

Wanted—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

Duroc-Jerseys—Our Golden Models were supreme at Riverside last year. Watch them this year with stiffer competition. Peters, Lamson & Walker, Devore, San Bernardino County.

Bernstein Sells 20 head of choicest Poland-Chinas at the Big Sale October 19 at Hanford, Kings County. W. Bernstein.

Rancho Rubio Durocs.—Nothing to sell at present. A fine bunch of gilts and a few extra good service boars for this fall. Elmer Lamb, Ceres, Cal.

Big Type Durocs. Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

Most Money in Duroc-Jerseys. Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.

Large Type Poland Chinas are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Calif.

Large Type Poland-Chinas—Very best stock. Prices reasonable. Weanlings my specialty. C. R. Hanna, Riverside, Cal.

Model Herd Berkshires bred for size and quality. Weanlings and gilts. J. L. Gish, Laws, Calif.

Carruthers' Farm Berkshire Hogs. Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

Poland-Chinas — A few good breeding boars. S. F. Williams, Orland, Cal.

## POULTRY

White Leghorn Baby Chicks—We are hatching from 2 and 3 year old hens that are proven good layers. We did not sell our last year cocks but have them to breed from and are not forced to use young immature cocks. We are hatching a limited number of R. I. Reds. Lyon Hatchery, Gardena, Cal.

Day Old Chix—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Calif.

Poultry Wanted — We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

200-290 Egg Fall Chicks, Eggs, Stock, reasonable. Rocks, Reds, Wyandottes, Anconas, Leghorns. C. Beeson, Pasadena, Cal.

"Eastman's Bred-to-Lay" Barred Plymouth Rocks. Fall chicks, eggs, cockerels. Fairmead Poultry Farm, Fairmead, Cal.

## CATTLE

Pedigreed Bull Calves, Registered \$50.00, unregistered \$25.00. Service bulls \$75 and up. Good individuals from producers. Cows with yearly records at a profit, tuberculin tested. Write or come and select. Horses. N. H. Locke Co., Lockeford, Cal.

D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.

Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

Registered Holsteins out of ARO Dams. Grandsons of Pieterje Maid Ormsby, 35.55 pounds average 5.31. Geo. Kouklas, Modesto Farms, Modesto, Cal.

Vermont Stock Farm Pure Bred Herefords. Location Plumas County. Ideal for stamina and vigor. Bulls for sale. Address H. M. Barngrover, San Jose, Cal.

Registered Holstein Bulls from high producing dams for sale at reasonable prices. Also a few choice females. McAlister Sons, Chino, Cal.

Sunshine Farm Jerseys—Bulls from officially tested dams for sale. E. E. Greenough, Merced.

Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Calif.

Registered Holstein Bulls of various ages for sale. Millbrae Dairy, Millbrae, Cal.

Registered Jerseys—both sexes for sale. J. R. Carhart, Fullerton, Calif.

Holstein Bulls from record cows. Prices right. A. M. Bibens, Modesto, Calif.

## LIVE STOCK

Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

Registered Shires—Blackhawk Stock Ranch. Importers and Breeders, Easton & Ward, Burlingame, Cal.

## MACHINERY

WHY BUY NEW? SAVE HALF Material guaranteed. It's second-hand after used few times, but not worn out.

Engine snaps: New 1½ h. p. Olds, cost \$75, for \$39; 6 Stearns, \$89; 10 h. Stearns same as new, \$145; 9 Foss, \$125; 18 Western, \$295; 34 Lambert, \$390. Many others.

NEW, USED WOOD, GALV. TANKS All sizes, fine 900 gal. galv. wagon tank, \$48; 3500 well corrugated galv. tank, \$78; 10,000 redwood, \$75; 10,000 galvanized, \$135; 16,000 corrugated galv., \$195; 5000 gal. redwood, \$48; 25,000 gal. redwood with stand, \$135; 8000 redwood and stand, \$75.

WINDMILLS, SPECIALLY PRICED 8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel.

PUMPS, CYLINDERS, PIPE 2½-in. two-runner hor. centrifugal pump, \$38; 2-in. rotary; 3 hor. cent., \$35; 5-in. two-stage B. J. hor. cent. pump, \$175; 8-in. hor. cent., \$150, pumps 200 in. water; deep well double-acting No. 2 Ames, \$145. 30 Ames double-acting deep well pump, all steel frame, high efficiency, less power required, cost \$900, our price, \$295. Large Bulldozer jacks, \$68. Small Bulldozer, \$42.50. Plunger pumps, 5x6 air compressor, \$29. 600 ft. 7-in. irrigating pipe, 35c. Pipe fittings.

RANCH MACHINERY Walking plows, harrows, cultivators, Fresnoes, wheelbarrows; ¾-in. cable, 6c; water troughs, \$4; bone grinder; feed mill; sprayer; mowers, buck rake; belt; all sizes; sundries. Down town office DEMMITT CO., UP-STAIRS, 120 No. Main. Yards, 816 Yale, Los Angeles.

For Sale—Exceptional Bargains. Gas engines, centrifugal pumps, concrete mixer, box nailing machine, friction clutch pulleys. Complete irrigation plants furnished. We also buy and sell all kinds of machinery for every purpose. Let us know what you have and what you want. We can meet your needs. Out of town machine work given special attention. Commercial Iron Works, 497 Fifth Street, San Francisco.

Gasoline Engines, the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles.

For Sale—Cheap, Oregon Apple Grader No. 326, manufactured by Oregon Fruit Cleaner Co. of The Dalles, Ore., Leffingwell, Rancho, Whittier.

For Sale—18 h. p. Peerless engine and No. 4 Byron-Jackson pump. Engine needs some repairs. Will sell cheap. A. L. Wood, Indio.

For Sale—Practically new Holt Midget Tractor. H. H. Wood, North Whittier Heights. Phone, Whittier 1624.

## MISCELLANEOUS

Famous Hairy Peruvian Alfalfa Seed—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.

Slacked Lime—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road Pasadena.

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

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## AUTOMOBILE STORAGE BATTERIES

Titian Batteries for Service, get our prices before buying or having an old battery repaired. Call or write, Olive Street Electrical Co., 910 South Olive St., Los Angeles, Cal.

## FARM LANDS FOR SALE

NO PAYMENT DOWN FARMERS ARE MAKING GOOD IN THE "PROJECT OF NO REGRETS," AT ORLAND, CAL. WATER FURNISHED BY UNCLE SAM WE SUPPLY THE LAND AND ASK NO PAYMENT UNTIL YOU CAN MAKE SAME FROM CROPS. NO BETTER SOIL FOR ALFALFA, ALMONDS, OLIVES, ORANGES, LEMONS, ETC. WRITE US FOR U. S. GOVERNMENT REPORT AND BOOKLET "ORLAND FARMS." F. D. BURR CO. 253 RUSS BLDG., 235 MONTGOMERY STREET, SAN FRANCISCO.

Lake County, California—Climate unexcelled. We have two 160 acre ranches; both have an abundance of running water, fruit, grain, and pasture land. Orchards of walnut, pear, peach, peaches, apples, berries, etc. Three room cottage, five room house, barn and out buildings. Fenced and cross fenced. Three miles to good small town, one mile to school. Price \$7,000.00 and \$7,500.00. No exchange. Terms. Address Box 71, Kelseyville, Cal.

For Sale—Choice Yucaipa Apple lands in 2-5 acre and 2-10 acre tracts. All soil and plenty gravity water. Also Redlands 21 room house, good location. Will trade all or part for Los Angeles and assume to right parties. Address Mrs. Clara Johns, Yucaipa, Cal., R. D. No. 2.

For Sale—10 Acres on State Highway; no alkali; has well on it, 8 fig trees and other trees; no better land to be had in state for the price, \$150.00 acre; near a live town; for sale by owner. R. Keyland, Box 47, East Bakersfield, Cal.

Oregon, California Government Lands. Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

Orange Land at bargain. Clay loam. Water now being piped in. Box 125, Lindsay, Cal.

## HORTICULTURAL PRINTING

Catalogues—Good Printing. Specialists in preparing nursery, seed, poultry and live stock catalogues and all kinds of commercial printing. For prices and information address WOLFER PRINTING CO., 424 Wall St., Los Angeles.

Our Printing Will Get Results for You.—It will help to sell your goods and earn you profits. Send for samples and price list. G. C. Gallagher, 441 Sacramento St., San Francisco.

## RODENT EXTERMINATORS

United States Government Formula—Poisoned barley for killing rodents. In competition with other dealers we were awarded the contract to furnish this poison to the United States Government. How much do you need? Write for prices. UNITED STATES SUPPLY COMPANY, MANUFACTURING CHEMISTS, NEW CALL BUILDING, San Francisco, Cal.

## LUMBER

Lumber—Sash—Doors — Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A \*R.W Shingles 500 per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.

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Fully as important as the selection of your farm power is the selection of your farm implements. We make a line of double disc harrows especially for tractor power as well as horse drawn. These are of especial sturdy construction, axles 1½ in. square hard steel, large heavy spools, heavy solid top plates and angle frame with cross angles, equipped with center cutout discs with bearing springs. We make reversible discs with extension frame for horsepower, also 6 and 12 foot field harrows.

Remember, it is to your interest to buy tools from established home manufacturers on account of being near the factory and because we know the peculiar conditions of local soils. Davenport's complete line will please you and give you best service. Remember we are the largest manufacturers of these tools west of the Missouri River.

Catalogue and illustrations sent on request.

## L. M. DAVENPORT CO.

Manufacturers and Dealers in Farm Implements for California Crops

110-112 N. Los Angeles St. LOS ANGELES

## SACKS

We pay 8 cents each for all good standard size sacks—others in proportion. Bring all you have and get the money. Los Angeles Sack Co.

Chris Haag, Prop. 344 Aliso St., 3 Blocks East of P. O. Los Angeles

## SPRAY FOR VEGETABLES

Spray your beans, cucumbers, or summer squash with a solution of three pounds of arsenate of lead paste to 50 gallons. This gives better results than strong applications of Black-Leaf 40 and soap, or sulphur, wet or dry, or distillate oil.

Cabbage may be protected against aphids by spraying them with five ounces of Black-Leaf 40 and two pounds of soap to 50 gallons of water.



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Despite the war we have maintained Styleplus at \$17. Buying ahead and manufacturing on an increasingly larger scale enabled us to hold the price by lowering the costs.

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Styleplus Clothes \$17 (black label) always excel at that price. Styleplus Clothes \$21 (green label) always excel at that price.

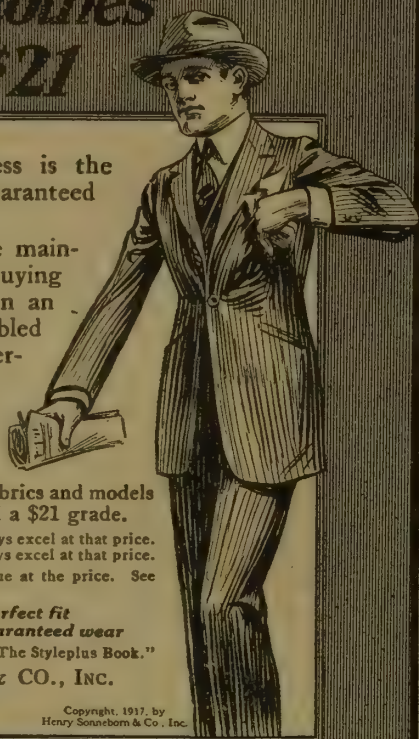
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HENRY SONNEBORN & CO., INC.

Founded 1849 Baltimore, Md.



Styleplus Clothes \$17



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The UNI-ELECTRIC lighting system will put electric light in every room in your house, will run your sewing machine, electric iron, vacuum cleaner, churn, washing machine, etc.

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Operates with a silent gasoline engine of high speed, generator and automatic governor. Uses standard globes and fixtures. Is easy to install.

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Its Easy to Get One



### Do Your Own Mending and Save Money.

Any One can Mend Shoes with our Combination Outfit

Economy Home Cobbler Outfit should be in every home. With it you can mend men's, women's and children's shoes thereby saving many dollars each year. Shoes for the average family of five, now cost approximately \$30 per year. Half soling and heelings five pairs once will cost \$6.25. With the Economy outfit you can do this repairing with \$1.00 worth of material.

The outfit consists of an iron stand for lasts, one 9 inch last for men's shoes, one 7 1/2 inch last for women's shoes and one 5 1/2 inch last for children's shoes, all reversible; shoe hammer, shoe knife, peg awl and handle, sewing awl and handle, stabbing awl, paper clinch nails, paper heel nails, reel waxed ends, a special package of hob nails for mountain boots and directions for half soling. This is a

most complete and serviceable outfit that will always give satisfaction.

**SPECIAL OFFER:**—You can obtain this Economy Home Cobbler Outfit by securing and sending only two \$1.00 subscriptions to California Cultivator, one of which must be new. Show a copy of the paper to your friends and secure two subscriptions. Send the names and \$2.00 to California Cultivator, 115-117 North Broadway, Los Angeles, and the cobbler outfit will be sent to you by parcel post prepaid.

## The Garden Beautiful IN CALIFORNIA

by Ernest Braunton

is a thorough treatise on soil preparation and cultivation and general care of flowers, plants, ornamental trees and shrubbery. Its 14 chapters with half tone and line illustrations and binding in silk cloth makes it a work that every home should possess.

\$1.00 Postpaid  
\$1.75 with Cal. Cultivator one year.

Cultivator Pub. Co., 115 No. Broadway  
Los Angeles, Cal.

## Household Department

### THE WORD

Oh, a word is a gem, or a stone, or a song,  
Or a flame, or a two-edged sword;  
Or a rose in bloom, or a sweet perfume  
Or a drop of gall is a word.

You may choose your word like a connoisseur,  
And polish it up with art,  
But the word that sways and stirs and stays  
Is the word that comes from the heart.

You may work on your word a thousand weeks,  
But it will not glow like one  
That all unsought leaps forth white hot,  
When the fountains of feeling run.

You may hammer away on the anvil of thought,  
And fashion your word with care,  
But unless you are stirred to the depths,  
That word,  
Shall die on the empty air.

For the word that comes from the brain alone,  
Alone to the brain will speed;  
But the word that sways and stirs and stays  
Oh, that is the word men heed.  
—Ella Wheeler Wilcox in August Nautilus.

### MAGIC RAIMENT

Concluded

Braxton tried to clear away the ache that had come into his throat as he thought of her distress over having to have a doctor. At the time he had laughed at her, and tried to console her as if she had been a child; but her tearful regret at being the cause of delaying the payments on the home seemed intensely pathetic to him now.

As Braxton closed and fastened the gate, he began talking slowly to himself.

"Yes, Brindle's set more store by the owner of this old wrapper than I have. I used to love the very garments she wore. Do I now? Why—why—certainly I do. I've just been letting the thought of getting ahead run away with me. And Frankie's been sacrificing herself right along, and—and—" he gulped, then with a sigh that was almost a groan, added, "I've been letting her do it."

He hurried into the kitchen, removed the wrapper and sunbonnet, and tenderly pressed his cheek against them. When he had strained the milk and put it into the cooler, he stepped lightly into the bedroom.

"I'm not asleep, dear," came wearily from the bed.

"Would you mind a light for a few minutes, Frankie? I want to see how you're coming on. I want to see if that pillman's stuff is doing you any good."

What he really wanted was to look at her face; to look at it with the ardor of the old days, before the struggle for worldly goods had divided him against himself.

"Why, no, of course not. I have only a slight fever now. I'll be up in a few days."

He placed the lamp so that her eyes would be in the shadow, and sat beside the bed. In one swift glance he fixed in his mind the two faces—the face before him, and the fresh, dimpled face of the days of his honeymoon.

He looked closer, and at the same time laid his hand on her cheek, ostensibly to see if the fever was disappearing. Yes, the dimple was gone; rather, it had lengthened into a little wrinkle—and he had not missed it. Her lips were straighter and tighter, and her cheeks were actually hollow. How tired and faded she looked! He knew now that it was not all the sudden illness; he knew that she had been looking tired for many months. He forgot, and stared so long that she winced.

"My complexion's awful, Braxton, I

know," she explained. "This hard water and dry air are awfully trying to the skin."

He managed to keep back the sob that was in his throat, and his big, rough hand closed tightly over the little, hot, toil-worn one that lay nearest him. Yes, even her hands were faded and thin.

"Frankie, dear little Frankie!" he whispered; then, with a start, fearing he would break down, he asked, "Is there anything you want me to do?"

"I should like a cup of tea, Braxton," she said. "Tea always helps my headache."

He lowered the light and went into the kitchen; while the tea brewed, he thought intently and resolutely. How many times had she been away that summer? Just twice—to the annual picnic of the people from their home state, and to church once. How many new dresses had she had that year? None. And she had worn the same hat ever since they had been in California. Just days and days of work and self-denial and repression; that was all there had been for her.

She drank the tea gratefully, and then went soundly to sleep. Braxton tiptoed out of the room, and went into the yard to meditate.

The peaceful, impressive stillness of a California night lay upon the valley. As he walked about in the clean, light night air, he devised a plan to atone for his forgetfulness. Finally he sat down on the big rock at the end of the porch, and listened to the deep, even breathing that came from the low bedroom window. He sat there till the moon came up, blended its silver with the snow-cap of Mount San Antonio, and then gradually flooded the valley.

Braxton went in, and after a good-night look at the sleeping face, threw off his clothes and fell heavily upon a cot.

"How's my sweetheart Frankie?" was his greeting when she awoke in the morning.

A faint color not caused by fever came slowly into her cheeks at that—an endearment that she had not heard for a long time.

"Oh, I'm lots better, Braxton. I slept nearly all night, and I don't believe I have much fever. Braxton! You're carrying on like a boy! I believe you like staying at home with me, even if I am sick and a trouble."

For reply, he caught up her hand and kissed it. She was nearly speechless with happiness. She could not remember when he had kissed her last. But she had not felt slighted or neglected; they had merely been too busy for such trivialities as kisses.

The doctor came out in the forenoon, left more medicine, gave directions, and said that he would not call again unless they sent for him.

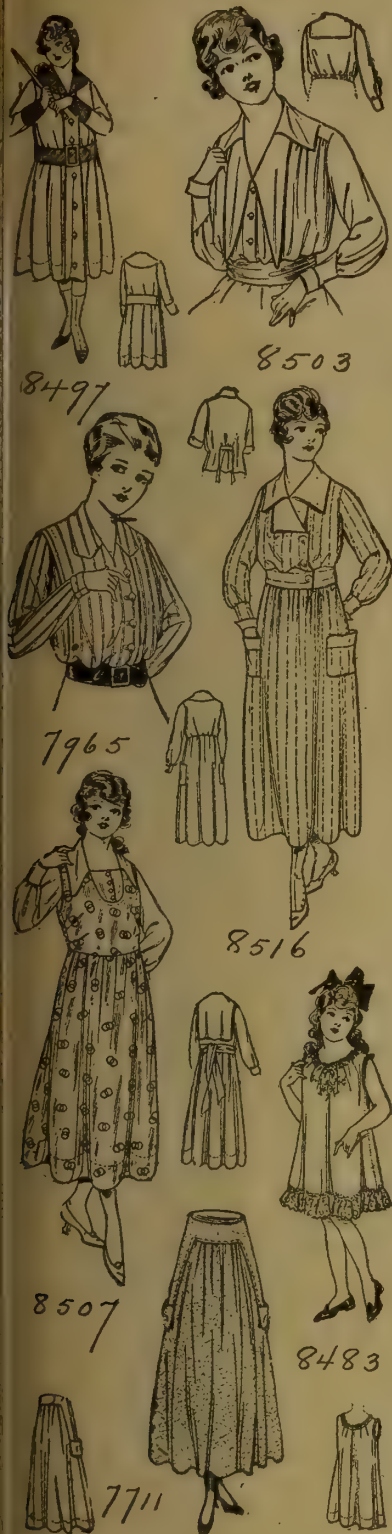
After Braxton had straightened up" about the house, and got Frankie's repeated assurance that she could safely be left alone for a short time, he saddled up, and rode over to Mack's.

"Mack," he said, "I need a month's pay in advance. My wife's been working as hard as I have since we've been out here, and when she gets up I want to take her down to Santa Monica or Redondo Beach for a week. I think she'll be able to go in a week, and as soon as I get her there I can be back on the job."

As an all-round man like Braxton was not to be met with every day, Mack was obliging.



# The Cultivator Patterns



8497—Girls' Dress. Cut in sizes 6, 8, 10, 12 and 14 years. The dress is in one piece, with box-pleat closing.

8503—Ladies' Waist. Cut in sizes 36 to 42 inches bust measure. Shoulder edges of front extend over front in yoke effect.

7965—Ladies' Waist. Cut in sizes 36 to 44 inches bust measure. Any of the pretty striped silks can be used for this waist.

8516—Ladies' Dress. Cut in sizes 34 to 42 inches bust measure. The dress has a two-gored gathered skirt.

8507—Misses' Dress. Cut in sizes 16, 18 and 20 years. The dress has a separate basque waist and a one-piece skirt.

8483—Girls' and Misses' Princess Slip. Cut in sizes 10, 12, 14, 16 years. The slip closes at the back.

7711—Ladies' Skirt. Cut in sizes 24 to 30 inches waist measure. The skirt is cut in two panels.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

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Write your name and address plainly in full, give correct number and size of each pattern you want, and send ten cents in coin or (1 or 2c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department  
California Cultivator  
Los Angeles

"All right, Randall," he said. "I'm glad to accommodate you, and I hope that the wife will soon be able to go and that she'll come back strong and sound as a dollar. Come up to the house with me now, and I'll give you a check."

"Now just see how easy that was," Braxton remarked, as he rode away. "And I've always been afraid to ask him for a cent in advance."

Braxton was a generous lover the next few days, and soon Frankie was up and about. But he almost had to threaten her in order to get her away from home.

She chose Redondo Beach, because it was so green and fresh. How good the salt air smelled after months of dry heat and the thick blanket of white, powdery dust that enveloped everything! The color was actually coming back to her cheeks before Braxton started back home.

Late that night, arrayed in the old wrapper and sunbonnet, he milked Brindle, after she had given the sleeve a caress with her tongue. Night after night for three weeks he so arrayed himself at milking-time; by then he was quite sure that he loved the old garments, faded from much washing, quite as much as Brindle loved them—and that, he was glad to believe, was loving them a great deal.

Frankie came back to the ranch like the Frankie of old. She never quite understood how it had all happened, but things were different. She continued to milk Brindle nightly; Braxton considered that was only fair to the faithful creature. But there was no more dull monotony. They often went to Los Angeles, and sometimes stayed overnight; and although Frankie would worry, and frequently declared that spending so much money in just "having a good time" was scandalous extravagance, still they seemed to get on as well as before, if not better.

Braxton never told Frankie about Brindle and the wrapper and sunbonnet. He felt that it was a secret that he must keep alone. And not until one morning the following spring was Frankie aware that he valued Brindle so highly.

"Randall, what'll you take for that milker?" a neighbor rancher asked.

"Not for sale at any price," Braxton replied.

"Huh! Must think a lot of her!"

"I do," said Braxton. "That's the smartest cow in the country."

—Youth's Companion.

## CARE OF SHOES AND STOCKINGS

Written for California Cultivator  
By A. M. H.



ALL shoes are ruined if wet often, and cheap shoes suffer most of all. To keep nice shoes in shape after they have been wet you must as quickly as you take them off rub them as dry as possible, then rub with coal oil and stuff them with soft paper, set out of the sun and at a safe distance from the fire, as heat will harden the leather, and when the shoes are perfectly dry, rub with vaseline until the leather is soft and pliable. If new shoes pinch in some particular spot, lay a cloth wet with hot water over the spot until the leather stretches and gives relief. The tops of high shoes should be turned back when taken off and the shoes placed on the window sill or in some breezy place to get the sun and air.

White kid shoes may be colored black by brushing them with any of the good prepared dyes and then giving them one or two coats of shoe polish. An excellent dressing for

black shoes is easily and cheaply made as follows: Dissolve two ounces of gum shellac and one ounce of borax in a pint of hot water and allow to boil until dissolved, then strain through a cloth. Moisten one package of black slate dye for ink with a little water and stir in the liquid while hot, then add one-fourth ounce of glycerine and mix well together. A dressing for white shoes that has given entire satisfaction is made with one quart of water, two ounces of bleached shellac and a little over one-fourth pound of borax. Dissolve the borax in the water and boil the shellac in the solution until it is entirely dissolved. Strain and add pipe clay or fine prepared chalk until a creamy liquid is obtained. Made in this way the expense is less than cost in bottles.

Nice stockings should be filled with crumpled tissue paper and hung where the air can blow through them. White stockings are made whiter and clean easier by putting them to soak in warm suds with a little borax added, and it helps to keep the color in black and colored stockings, but they should be washed, rinsed and dried as quickly as possible. To keep the clasps on the supporters from tearing the tops of the stockings, either face them around the top with some soft material or sew two pieces of stout ribbon to the hems on either side and fasten the clasps to the ribbons.

## CANDIED FRUITS

By W. V. Cruess



CANDIED fruits may be made in the household very satisfactorily if a sugar hydrometer is used. This instrument will be found necessary if the process is carried out very successfully. There are two kinds of hydrometers; the Baume hydrometer and the Balling hydrometer. The Baume hydrometer may be had for 50 cents from any chemical supply house or through any local drug store. The Balling saccharometer costs about 75 cents. The Balling saccharometer reads per cent of sugar, while the Baume hydrometer reads degrees only, one degree Baume being about 1.9 per cent on the Balling saccharometer. A glass cylinder will be found to be necessary in addition to the saccharometer. The cylinder will cost about 40 cents, or an old olive bottle or a quart milk jar can be used to hold the syrup for testing. The following methods have been found successful in tests at the University of California college of agriculture:

## Candied Figs

Use figs which are firm ripe, but not soft. Prick the skins with a toothpick or a copper needle in numerous places to permit the penetration of the syrup used later in the process.

Immerse the figs in boiling water for three to five minutes. Transfer them to a crock or agateware or aluminum vessel.

Prepare a syrup which will test 25 per cent Balling or 15 degrees Baume. This will be about one part of sugar to three of water. Heat this syrup to boiling and pour it boiling hot over the figs. Allow this to stand on the figs for 24 hours.

Remove the syrup and add sugar enough to increase the syrup to 30 per cent Balling or about 18 degrees Baume. Heat to boiling and pour it back over the figs. Every 24 hours increase the sugar 5 per cent or 6 per cent Balling or 3 or 3½ degrees Baume until the syrup reaches 68 per

cent Balling or 36 degrees Baume. Allow the figs to stand in this strong syrup for three or four days. If the syrup decreases below 68 per cent Balling or 36 degrees Baume add more sugar to keep it up to this point.

When the figs have become thoroughly saturated with this heavy syrup remove them and allow the syrup to drain off through the skin. Spread the figs on a screen or cheesecloth to dry. They should be dry in four or five days. They may then be packed in cardboard boxes or in open jars. They should not be packed in closed containers because they may mold under such conditions. A certain amount of ventilation is necessary for the candied fruits.

## Other Fruits

Peaches or pears should be peeled and cut in half. Apricots are candied whole without peeling. The apricots used should not be too large. Plums, prunes or cherries may also be candied. All of these fruits require a preliminary boiling in water to make them tender, and all fruits, if they are not peeled, should be pricked with a wooden or copper needle to permit the syrup to penetrate. If this is not done the fruit may shrivel. Cherries are usually artificially colored during the candying process by adding a small amount of aniline color to the syrup. Berries, because of their soft texture, do not lend themselves well to the candying process. Oranges and other citrus fruit peels should be boiled in water until they are tender. This may require 30 minutes or longer boiling. The candying process is then carried out as described for figs, except that it is not necessary to break the skin with a needle.

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## Legal Queries

Louis B. Stanton, attorney, 243 Wilcox Building, Los Angeles, will answer legal queries in this department.

Immediate mail replies cannot be given except where fee to Mr. Stanton is paid. When replies are wished in Cultivator address query to 115½ N. Broadway, Los Angeles.

### Hide and Brand Bill

On what date did the hide and brand bill become a law?—Subscriber, Judson.

There have been laws relative to hides and brands since 1851 which have been subject to various amendments and which were incorporated in the Political Code in 1872 and in the Penal Code as to the punitive provisions; the sections of the codes have suffered some amendments, but are still in full force and effect. In the last legislature there was passed an act to create a cattle protection board which contains other provisions as to marks, brands, and hides; this act went into effect on July 27, 1917. This is probably the act of which the question is asked.

### Miner's Rights

What must one do to protect his

mineral rights in land owned ten years?—Subscriber.

The question does not state sufficient facts to warrant an answer; if the party has actually owned the land he need do nothing further unless some one asserts some right to prospect the land and in such case it would depend upon the circumstances of the claim and also upon the character of title the owner has to his land.

### Foreclosure of Contract

If A makes contract with B to buy land, gives B payment down and note for balance, with contract to pay stated monthly installment which includes interest, the contract providing that time is of the essence of the contract and if default be made in the payments A will lose or forfeit all right to the property, including what has been paid and permanent improvements made, and if A makes default in his payments for one or two months, has he any chance of redemption? If he has how long has he and what must be the legal procedure?—Subscriber, Bonners Ferry.

In order to foreclose the contract and the equity of B in the property it is necessary for A to bring action

either to quiet title, to rescind the contract, or to enforce the agreement to pay the money evidenced thereby with the result of securing execution upon the property; several means are available to the seller of the property. The purchaser may then set up whatever defenses he may have. There are cases in which the courts have permitted the purchaser to make his payments at a time subsequent to judgment and cases in which even after deposit of the full amount remaining due the purchaser has been foreclosed of his interest. The general policy is to give the purchaser an equitable deal, however, dependent upon the circumstances of the case; there is no set statutory time or rule as in the case of mortgages.

### Grader's Contract

B, who is a responsible grader of land, writes A, who is the owner of a tract of land in a section in which the grader states he intends to grade the entire section, and proposes to grade the land of A for \$15 per acre complete, giving no plans or specifications and requesting A to send money if he wishes the work done. A replies stating he wishes work done in the same manner as that done on an adjoining tract, with which B is familiar, and sends check which is received and cashed by B. Three weeks later B writes A that after taking the opinion of experts he has found it will be worth \$20 to \$30 per acre to grade A's tract and asks for more money. Can B be compelled to do the work at the price first proposed?—Subscriber, Bonners Ferry.

B made an offer to which A gave a qualified acceptance; the acceptance of A might, dependent upon the wording of the letter, be even considered a rejection of the offer of B and an offer to have B do the work upon different terms, or, upon the other hand it might be a full acceptance and merely express a desire that the work be done in the manner proposed in his letter. If the former be the case there was no contractual relation entered into by the letter of A; if the latter be the case there was a contract. It would seem from the subsequent letter of B that no contract was made, that the minds of the parties never met in fact. The mere fact that B, under the condition of the correspondence collected and holds the check of A would hardly seem sufficient in itself to evidence an acceptance of the terms upon which A required the work done, which terms from the reply of B, which stated he had experts examine the land and it could not be graded as specified by A except at a higher price, and which reply reached A within three weeks from the date of the letter of A, was fairly prompt considering the examination. The very examination by experts and reply of B indicates that B at no time intended to do the work in the manner required by A at the price he mentioned. It is, therefore, the opinion of the writer, which would be subject to modification upon examination of the letters and facts, that no contract for grading was made by the letters; that B is simply holding the money of A as a simple bailee and must return same to A. Even if there was a contract, as it is a contract for personal services B could not be forced to do the work itself; the remedy of A would be an action for damages, the measure of which would be the difference between the amount for which B contracted to do the work and the amount which A would be required to pay for the work in the open market.

### SWINE AWARDS AT STATE FAIR

Continued from Page 335

Junior champion sow—1, Bassett on Long Model; 2, Young on Major's Lady. Champion boar—1, Hansbrough on grand champion, Major Hadley Wonder. Bassett on reserve grand champion, Model Wonder. Champion sow—Bernstein on grand champion, King's Rosebud, Bassett on reserve grand champion, Long Model.

Fat Barrows, any age—1, Beckman & Sons on one entry; 2, Beckman & Sons on one entry. Fat Barrows, pen of three, any age—Beckman & Sons on pen.

### Duroc-Jerseys

Exhibitors securing awards—J. M. DeVilbiss, Patterson; Haydn Smith, Woodland; H. P. Eakle, Woodland; W. J. Fulgham, Visalia; J. E. Thorp, Lockeford; Frederick M. Johnson, Napa; Allen Thompson, Tulare; Conejo Ranch, Newbury Park; Slocum & Son, Willows; A. A. Trueblood, Sacramento; Henry Cummins, Tulare; M. Rucker, Fair Oaks; C. L. Neilson, Fowler; V. F. Dolcini, Davis; A. J. Welch, Redwood City; E. J. Weldon, Sacramento; J. H. Minto, Patterson.

### The awards:

Boar, two years or over—1, DeVilbiss on Crimson Monarch II; 2, Smith on Uneeda Wonder; 3, Eakle on Oregon Defender; 4, Fulgham on Colonel Chief; 5, Thorp on Brookwater Fashion 2nd. Boar, senior yearling—1, Johnson on Bandholder's Thirteen; 2, Thompson on Orion's Golden Cal; 3, Conejo Ranch on Model Triumph; 4, Slocum & Son on Crimson B's 2nd; 5, Thorp on Happy Heinie. Boar, junior yearling—1, Conejo Ranch on The Councillor; 2, Trueblood on Rucker's Model G; 3, Smith on Q's Model Colonel; 4, Cummins on Tulare Defender. Boar, senior pig—1, Johnson on Johnson's Defender; 2, Conejo Ranch on Golden Model, 32nd; 3, Rucker on Kings Col. Dulex; 4, Slocum & Son on Uneeda Crimson B 3rd; 5, Thorp on Brookwater Regulator; 6, Nielson on Defender's Model. Boar, junior pig—1, Dolcini on W. B's Model 1st; 2, Johnson on Cherry Critic; 3, Dolcini on Straight Crimson; 4, Thorp on Queen's Volunteer; 5, Thorp on Searchlight of M.

Sows, two years old or over—1, Conejo Ranch on Lady Wonder; 2, Johnson on Model Defender; 3, Eakle on Belle's Good E Nuff 6th; 4, Johnson on Col's Queen Dagmar; 5, Trueblood on Col's Lady 2nd; 6, Thorp on Long Wonder's Queen. Sow, senior yearling—1, Johnson on Cherry Chief Lady; 2, Smith on H. S. Alberta 1st; 3, Smith on A. S. Alberta 2nd; 4, Welch on Crimson Bess 3rd; 5, Thompson on Merry Critic; 6th, Thompson on Angiolo's Wonder. Sows, junior yearling—1, Slocum & Son on Uneeda Bessie; 2, Conejo Ranch on Golden Bess; 3, Smith on University Queen B; 4, Johnson on Critic's Bell; 5, Conejo Ranch on Golden Mae; 6, J. H. Minto on De V's Crimson 3rd. Sow, senior pig—1, Johnson on King's Lady 3rd; 2, Thorp on C. U's Fride's Lass; 3, Smith on Uneeda Wonder; 4, Slocum & Son on Queen B; 5, Conejo Ranch on Anabelle; 6, Conejo Ranch on Jane. Sow, junior pig—1, Thorp on Volunteer's Queen; 2, Dolcini on Model Queen 1st; 3, Thorp on Delight; 4, Johnson on Miriam Critic; 5, Johnson on Peggy Critic.

Herd, over one year—1, Johnson on Bardholder's Thirteen, Model Defender, Cherry Chief Lady, Critic's Bell. 2, Conejo Ranch on The Councillor Lady Wonder, Golden Bess, Golden Mae. 3, Eakle on Uneeda Wonder, H. S. Alberta 1, H. S. Alberta 2, University Queen B; 4, Eakle on Oregon Defender, Enterprise Zella II, Belle's Good E Nuff 6th, not named. Herd, under one year—1, Johnson on Johnson's Defender, King's Lady III, Miriam Critic, Peggy Critic; 2, Thorp on Searchlight of M, Delight, Starlight of M, Twilight of M; 3, Slocum & Son on Uneeda's King Colonel 2nd, Uneeda Grand Lady, Uneeda Golden Queen 3rd, Uneeda Queen B. Herd, bred by exhibitor—1, Thorp on Searchlight of M, Delight, Starlight of M, Twilight of M; 2, Slocum & Son on Uneeda's King's Colonel 2nd, Uneeda Grand Lady, Uneeda Golden Queen 2nd, Uneeda Queen B; 3, Smith on Uneeda Wonder Model 1st, Uneeda Wonder Queen 1st, Uneeda Wonder Queen 2nd, Uneeda Wonder Queen 3rd.

Get of sire—1, get of Brookwater Fashion 2nd, Searchlight of M, Delight Starlight of M, Twilight of M; 2, Slocum & Son on get of Uneeda Wonder, Uneeda Grand Model 2nd, Uneeda Grand Model 3rd, Not named, Not named; 3, Smith on get of Uneeda Wonder, Uneeda Model 1st, Uneeda Wonder Queen 1st, Uneeda Wonder Queen 2nd, Uneeda Wonder 3rd. Produce of dam—1, Thorp on produce of Brookwater Lass 2nd, Searchlight of M, Delight, Starlight of M, Twilight of M; 2, Johnson on produce of Cherry Chief Lady, Miriam Critic, Peggy Critic, Cherry Critic, Critic; 3, Slocum & Son on produce of Grand Lady, Uneeda Grand Model 2nd, Uneeda Grand Model 3rd, Not named.

Champion boar—Champion, DeVilbiss on Crimmon Monarch II; reserve champion, Johnson on Johnson's Defender. Champion sow—Champion, Johnson on Cherry Chief Lady; reserve champion, Johnson on King's Lady III. Champion boar, bred by exhibitor—Champion, Dolcini on W. B. Model 1st. Champion sow, bred by exhibitor—Champion, Thorp on Starlight. Senior champion boar—Champion, DeVilbiss on Crimmon Monarch II; reserve champion, Conejo Ranch. The Councillor. Junior champion boar—Champion, Johnson on Johnson's Defender; reserve champion, Dolcini on V. B. Model 1st. Senior champion sow—Champion, Johnson on Cherry Chief Lady; reserve champion, Conejo Ranch on Lady Wonder. Junior champion sow—Champion, Johnson on King's Lady II; reserve champion, Thorp on Volunteer Queen.

Fat Barrows, any age—1, Slocum & Son; 2, Slocum & Son. Pen, three barrows, any age—1, Slocum & Son on one entry.

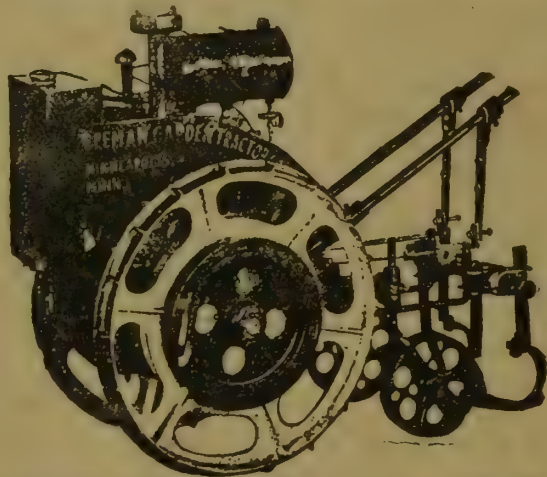
### American Special

Herd under one year bred by exhibitor—1, Slocum & Son on Uneeda King's Colonel 2nd, Uneeda Golden Queen 3rd, Uneeda Golden 4th, Uneeda Grand Lady 2, Thorp on Searchlight of M, Delight Starlight of M, Twilight of M; 3, Weldon on Mantico Orion, Mantico Queen Mantico Princess, Natomas Princess.

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Los Angeles Market

Los Angeles, Sept. 26, 1917.

BUTTER

Produce Exc. Quotations.	
Price to trade 4c higher.	
California extra creamery	45 1/2
Dairy Exch. prices past week.	
Sept. 19 20 21 22 24 25	
17 44 46 46 45 45 1/2	
Rcts. wk. ending Sept. 25, 246,200 lbs.	

CHEESE

Brokers prices:	
California fresh, lb.	25@26
Marion Longhorn	28
Tillamook Trip	29
Domestic Swiss	32

EGGS

Exchange quotations. Prices include	
cases and fillers valued at 35c.	
Fresh extras	50
Case count	47
Pullet	40
Dairy Exch. prices past wk.	
Sept. 19 20 21 22 24 25	
17 49 49 49 50 50 50	
Rcts. wk. ending Sept. 25, 463 cases.	

POULTRY

We quote to producers:	
Broilers, 1 1/4 lbs. and up, 29; small	29
fryers, 2 1/4 lbs. and up	23
Hens—Leghorns, 13@19; Heavy Cold	24
Roasters, 3 lbs. and up	23
Ducks, lb.	15@17
Squabs, doz.	2.00@3.00
Rooster, old	10
Geese	10

LIVE STOCK

We quote cwt. f.o.b. L. A.	
Corrected Wednesday morning, Sep-	
tember 26 by the Cudahy Company.	
Cattle—	
Beef steers, av. 1000 to 1100 lbs.	8.50@9.00
Heifers, good	6.50@7.00
Cows, good	5.50@6.50
Canners	4.50@5.00

HOGS—	
Av. 125 lbs.	14.00
Av. 150 lbs.	15.00
Av. 175-200 lbs.	15.50
Rough, docked 20 lbs.; piggy sows, 40	
lbs., stage, 40 per cent.	
Prime wethers	9.50@10.00
Ewes	9.00@9.50
Lambs	13.50
Yearlings	10.00@10.50

POTATOES

Wholesale selling price:	
Cwt.	3.10@3.35
Sweet, lug	1.00@1.15

ONIONS

Wholesale selling price:	
Brown, cwt., 2.25; white	2.25
Garlic	8

VEGETABLES

Wholesale prices:	
Artichokes, doz	1.00
Beans—Wax	6@6 1/4
Limas, lb.	6@6 1/4
Ky. Wonder	6@6 1/4
Beets, sk.	1.00
Cabbage, lb.	1.2
Carrots, doz	40
Cauliflower, doz.	1.35
Celery, doz.	85
Corn, lug	70@75
Cucumbers, lug	70@75
Egg Plant, lb.	3@3 1/4
Horseradish, rt. lb.	15
Lettuce, doz.	35
Leeks	30
Mint	40
Onions, green, doz.	25
Okra, lb.	10@12
Peas, lb., Telephone	8 1/2@9
Peppers, Chili, lb., 3 1/4@4; Bell	3@3 1/4
Parasips, doz.	40
Parley, doz.	20
Radishes, doz.	20
Rhubarb—Strawberry	1.10
Romaine, doz.	50
Spinach, doz.	25
Squash, Summer, cr.	70@75
Crookneck	70@75
Hubbard, lb.	2
Tomatoes, lug	50@65
Turnips, doz.	30

FRUITS

Wholesale prices:	
Skinners Seedling	1.50@1.75
Bellflowers	1.10@1.15
Avocados, doz.	7.00@8.50
Bananas, lb.	5
Cantaloupes—Standard	1.40
Tip Top	65@1.85
Ponies	1.10
Pineapples	1.75
Persian	2.00
Casabas, lb.	1 1/4
Figs, bx.	1.25@1.50
Grapes—Black	1.10
Malagas, lug	1.10@1.15
Muscats, lug	1.10@1.25
Tokays	1.50@1.65
Nectarines, lug	1.25
Pineapples, lb.	1.10
Peaches, lug	90@1.25
Pears, Bartlett, lug	1.50
Plums, lug	75@1.25
Quinces, lug	75
Watermelon, lb.	1 1/4@1 1/2

CITRUS

Lemons, 4.25@5.75; juice	2.25
Grapefruit	3.00@3.50
Limes, basket	1.00
Valencias	3.25@3.35

HONEY

Wholesale prices:	
Extr. White, lb.	11 1/2@12 1/2
W. W. lb.	12@14
Comb. case, W.	3.75
W. W. case	4.25@4.50

NUTS

Almond Growers' Exch. announces	
prices on 1917 nuts.	
Nonp.	21 1/4
I. X. L.	19 1/4
N. P. W.	18 1/4
Drakes	16
Peanuts, raw	12
Pine Nuts	20
Pecans	19

NICE

Wholesale quotations:	
Cal.	6.25

Broken ..... 4.75@5.60

BEANS

Wholesale Prices:	
Lady Washington	13.50
Limas	13.50@14.00
Pinks	10.00
Manchurian Reds	10.50
Baby Mex.	9.00
Garbanzos	9.00@10.00
Small White	13.50
Blackeyes	8.00
Tenary	7.00
Lentils	18.00

HAY

The hay market exceptionally firm. Southern California writes:

Quotations by Nicholas-Loomis Com-	
pany. Wholesale prices to grower f.o.b.	
L. A. carlots.	
Tame Oat	20.00@22.00
Volunteer Oat	14.00@16.00
Wheat	16.00@19.00
Barley	18.00@21.00
Alfalfa	17.00@20.00
"The Association is now asking \$23.50	
for No. 1 cow hay f. o. b. cars Los An-	
geles and Southern California points.	
The later cuttings are short and we are	
experiencing a shortage in our crops.	
Hay is selling very readily and all buy-	
ers are offering high prices. We have	
heard nothing under \$20 per ton being	
offered the growers for alfalfa. That	
price offered is of course net to the	
grower. We find that little hay is stored	
for this winter's use and that there will	
undoubtedly be a shortage before	
spring.	
Straw	7.00

GRAIN AND FEEDSTUFFS

Wholesale cwt. f.o.b. L. A.	
Alfalfa Meal	1.75
Alfalfa Molasses	1.80
Barley, Rolled	2.80
Barley, Recleaned, Whole	2.85
Barley, Hulled	3.40
Beet Pulp	1.80
Bran, Heavy	2.45
Cocoanut Meal	2.50
Cottonseed Meal	3.30
Corn, Yellow	4.45
Corn, White	4.45
Corn, Cracked	4.50
Corn, Feed Meal	4.55
Corn, Egyptian	4.00
Middlings	3.05
Milo	4.00
Oat Chop	1.90
Oats, White	2.85
Oats, Rolled White	2.90
Oats, Hulled	4.75
Oats, Rolled Chicken Groats	4.85
Oleace Meal	3.40
Wheat, No. 1	4.00@4.05
Wheat, Cracked, No. 1	4.40
Rye	4.00
Blood Meal	5.10@5.20
Bone, Green	2.85@2.95
Bone, Dry	3.05@3.15
Charcoal, 50-lb. sk.	2.70@2.80
Clam Shell	70@80
Grit, Granite	65@75
Oyster Shell	1.25@1.35
Sunflower Seed	4.10@4.20
Soya Bean Meal	3.40@3.50
Scratch Feed	3.70@3.80
Gritless	3.90@4.00
Rice Bran, ton	40.00
Middlings, ton	45.00
Rice Polish, ton	49.00

San Francisco Markets

San Francisco, Sept. 25, 1917.

BUTTER

Dairy Exchange quotations, lb.:	
Fresh extras	44
Prime firsts	43
Dairy Exch. quotations past wk.	
Sept. 19 20 21 22 24	
17 45 1/2 45 1/2 46 45 1/2 45 1/2 44	

CHEESE

Dairy Exchange quotations:	
Cal. Flats, 18@22 1/2 Y. Am.	22@25
Ore. Young Am.	24 1/4
Jack Cheese, full cream	22@23

EGGS

Dairy Exchange quotations:	
Extras	47 1/2
Firsts	46 1/2
Selected Pullets	43 1/2
Firsts	42 1/2
Dairy Exch. quotations past wk.	
Sept. 18 19 20 21 22 24	
17 49 1/2 49 1/2 47 1/2 48 47 47 1/2	

POULTRY

We quote from producers, lb.:	
Hens, large, 25@27; Leghorns	20@22
Small colored	22@23
Broilers	30@32
Roasters	29@32
Squabs, doz.	2.00@3.50
Ducks	12@16
Geese	18@19
Belgian Hares, live, 13@16; dr.	17@19
Turkeys	20@30

LIVE STOCK

Prices gross weight:	
Cattle: The following prices are for	
grass fed stock. Hay fed bring 1/4 to 1/2	
more.	
Steers, lb. 6@9; cows and heifers,	
4@7 1/4; calves, 7@9 1/2.	
Sheep: Wethers, 10 1/2@11; ewes, 8 1/2@	
9 1/4; lambs, lb., 10 1/2@11.	
Hogs: Hard grain-fed, weighing 100 to	
150 lbs. 14c; 150 to 300 lbs. averaging 175	
or less, 15 1/2c; averaging 180 or over,	
15 1/2c; 300 to 400 lbs., 14 1/2c.	

Wholesale selling prices at wharf:	
Cwt.	1.90@2.25
Salinas Burbanks, cwt.	3.00@3.10
Sweets, lb.,	2 1/4@3

ONIONS

Wholesale selling price on wharf:	
Australian Brown	160@165
Yellow	160@165
Garlic, lb., new	4@5

VEGETABLES

Wholesale selling price:	
Avocados, doz.	4.00@5.00
Beans, string, lb.	2@4
Fy. Garden, 3@4; Lima	6@8

Brussels Sprouts, lb.	3@4
Celery, doz.	40@50
Corn, Green, sk.	1.50@2.25
Cucumbers, lug	65@90
Pickling lug	40@1.00
Egg Plant, lug	50@75
Okra, box	65@75
Onions, Pickling	5
Peas, lb.	5@7
Peppers, Bell, lug, 60@75; Chili	60@85
Squash—Marrowfat, sk.	60@75
Cream, lug	40@50
Hubbard, sk.	60@75
Pumpkins, sk.	40@50

FRESH FRUIT

Berries—Strawberries, \$5@7 per chest	
to the trade; raspberries, \$7@8 per chest;	
blackberries, \$7@8; huckleberries, per lb.	
12 1/2c@15c.	
Peaches—Per small box, 40@60c;	
small lug, 40@60c; large lug, 75@90c;	
Santa Clara peaches, per small lug, 60@	
80c; large lug, 75c@1.15; mountain free-	
stone peaches, per box, yellow, 50@65c;	
strawberry freestone, 75@90c; strawberry	
cling, per lug, \$1@1.25.	
Plums and Prunes—German and Santa	
Cruz, Grand Duke, per crate, 1.25@1.50.	
Figs—Black, per double layer box, 75	
@90; single layer, 40@60.	
Pears—Bartlett, per box: No. 1, second	
picking, per lug, 1.00@1.25; Lake County	
Bartletts, per lug, 2.00@2.25; Oregon, per	
box 1.00@1.50.	
Grapes—Malaga, per crate, 50@65; per	
small lug, 60@75; Thompson seedless, per	
small lug, 75@1.00; crates, 75@1.00; big	
lug, 1.50@2.00; Muscat, per box, 50@75;	
small lug, 75@1.00; per crate, 75@1.00;	
per big lug, 1.00@1.25; black, per crate,	
40@60; per lug, 75@1.00; Tokay, per lug,	
75@1.00; Isabella, per crate, 75@1.00;	
fancy, 1.25@1.35 per lug.	
Apples—Per box: Bellflower, 90@1.10;	
Spitzenberg, 4-tier, 1.75@1.85; 4 1/2-tier,	
1.25@1.50; Pearmain, 1.00@1.15; Smith	
cider, 4-tier, 1.25@1.50; 4 1/2-tier, 1.00@	
1.15; Jonathans, 4-tier, 1.75@2.00.	
Pomegranates—Per small box, 75@90;	
large box, 1.75@2.00.	
Cantaloupes—Delta, per lug, 50@75;	
Turlock, per crate, standard, 75@1.00;	
ponies, 40@60; casabas, per doz, 85@	
1.50; per crate (6), 67@75; Persian, per	
crate, 1.00@1.25; Honey Dew, per crate,	
75@1.00.	
Watermelons—Per dozen, as to size,	
1.50@3.50.	
Citrus Fruits—Per box: Lemons, fancy,	
6.00@6.50; choice, 5.00@5.50; standard,	
3.00@4.00; lemonettes, 3.00@4.00; grape-	
fruit, fancy, 2.75@3.25; choice, 2.00@2.50	
flat; Mexican limes, 4.50@5.50. Oranges	
—Per box: New Valencias, fancy, 3.00@	
3.25; choice, 2.00@2.85; lower grades, 75@	
2.00.	
Bannas, lb.	5
Pineapples, doz.	2.50@3.50

DRIED FRUITS

Manager Niswander of the California	
Peach Growers advises that a limited	
quantity of peeled peaches, either in as-	
sortments or carload lots, will be sold.	
Raisins—The California Associated	
Raisin Company announced on August 22	
new 1917 crop prices effective at once:	
Muscats, Package Seeded, ca. of 48 lbs,	
\$4@4.20; ca. 36 lbs Sun-Maid and Fy.	
\$3.15, Ch. \$3.00; ca. of 45 lbs, Fy. \$3.25,	
Ch. \$3.10. Bulk Seeded, 25 lb. bx. Baker's	
Sun-Maid \$1.75, Fy. \$1.90, Ch. \$1.75. Loose	
Muscats, 50 lb. ca. 1 cr. Recleaned and	
Floted, \$4.15, 2 cr. \$3.40, 3 cr. \$3.65, 4	
cr. \$3.90. Layers and Clusters, 20 lb. bx.	
3 cr. London Layer \$1.60, 4 cr. \$1.85, 6	
cr. Imperial Cluster \$2.70.	
Thompson's Seedless, Package, ca. of	
47 lbs, Sun-Maid Seedless \$4.65, ca. of	
35-12s Recleaned, \$2.80, other brands, ca.	
of 48 lbs, \$4.75, ca. of 50 lbs, \$4.00. Bulk	
Recleaned Baker's, 50 lb. ca. \$4.90.	
Sultanas, Package, 48 lbs \$4.75, 50 lbs	
\$4.00. Bulk Recleaned, 50 lb. ca. \$4.50.	
Bleached Thompson Seedless, Northern,	
50 lb. ca. Ex. Fy. \$5.37-1/2, Fy. \$5.12-1/2,	
Ch. \$4.87-1/2, Soda Dipped, \$4.75; San Joa-	
quin Ex. Fy. \$5.50; Fy. \$5.25, Ch. \$5.00.	
Regular California dried fruit contract,	
Pacific coast rail shipping points prices	
on all but bleached and dipped raisins,	
guaranteed against our decline (sales to	
United States government excepted) to	
January 1, 1918.	
All Muscates, October-November, sell-	
er's option; also November or December,	
buyer's option.	
Thompsons and Sultanas, September-	
October, seller's option; also November or	
December, buyer's option.	
No rebate allowed on export sales.	
Prices subject to change without notice.	
DRIED FRUITS—Apricots, per lb.,	
bulk basis: Standard, 14 1/2c; choice, 15c;	
extra choice, 15 1/2c; fancy, 16 1/2c; extra	
fancy 17 1/2c; fancy Moorpark, 17 1/2c; ex-	
tra fancy Moorpark, 18 1/2c; prunes, 60s	
to 90s, 6 1/2c basis; 50s to 60s, 1/2c prem-	
ium; 40s to 50s, 1 1/2c premium.	
APPLES—In 50-pound boxes, per lb.:	
Fancy, 13 1/2c; extra choice, 12 1/2c; choice,	
12c.	
PEARS—Bulk basis, per lb.:	
Fancy, 11 1/2c; extra choice, 9 1/2c; choice, 8c;	
standard, 6c.	

NUTS

Almonds—Cal. Almond Growers' Exch.,	
gross prices: Nonpareils, 21 1/2c; I. X. L.,	
19 1/2c; Ne Plus, 18 1/2c; Drakes, 16c; hard	
shell, 11 1/2c.	

HONEY

Comb. W. W., lb.	13@15
Lt. A., 11@12; A.	9@10
Extr. W., lb., 13; Lt. A.	11
Beeswax, lb.	38

BEANS

Jobbers' prices, cwt. recleaned:	
Limas	12.00@12.75
Bavous	8.50@9.00
Small Whites	12.00@12.75
Mexican Red	8.50@9.25

Large White	12.00@12.50
Pinks	9.25@9.40
Black Eyes	7.50@7.75
Cranberry	10.00@10.50

HOPS



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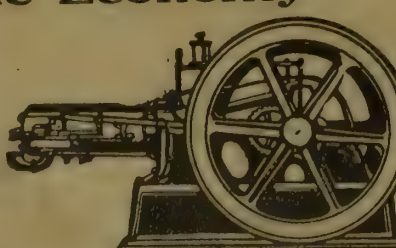
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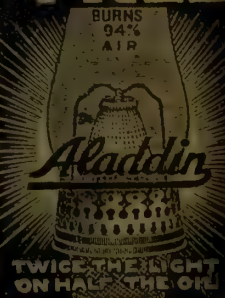
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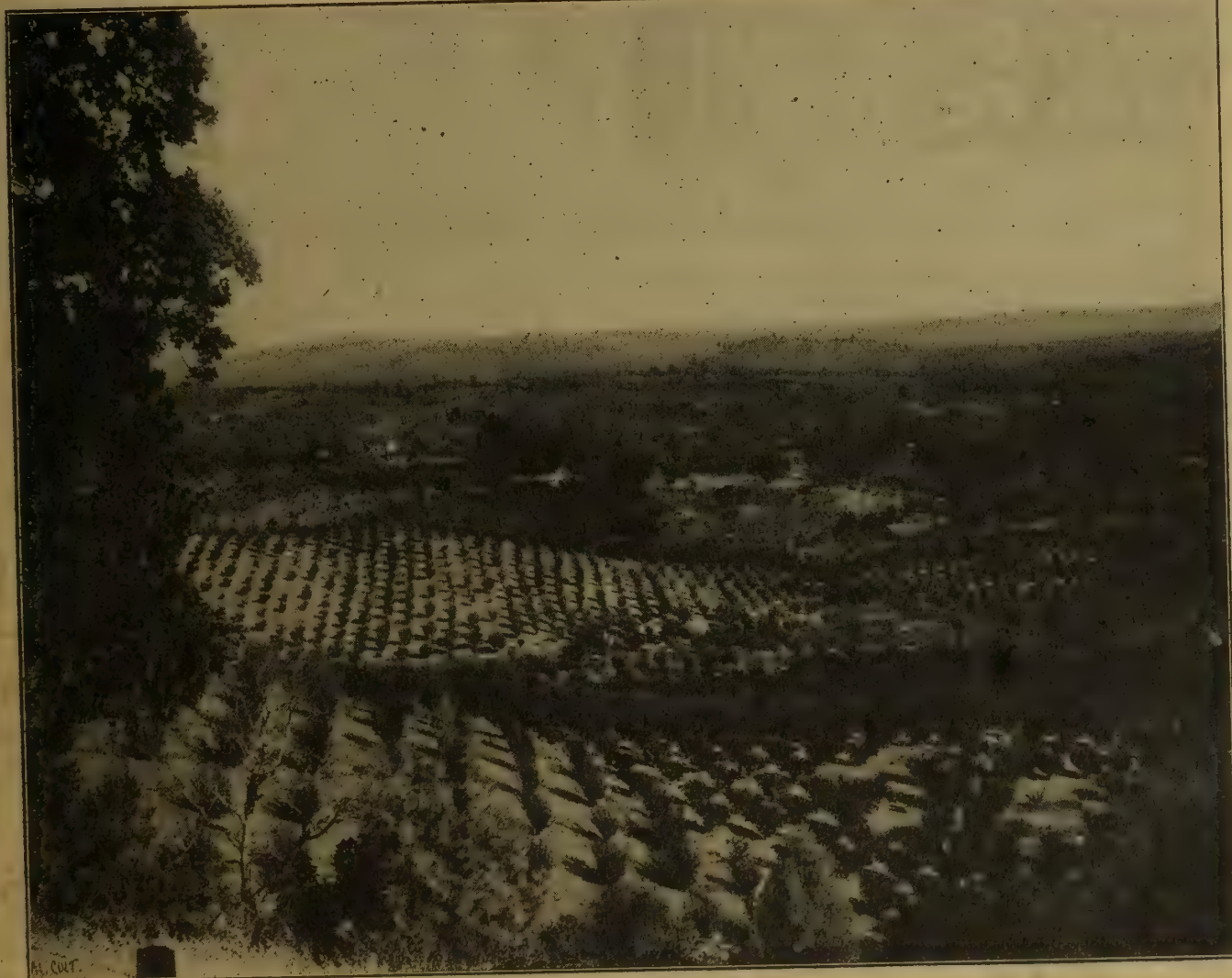
**THE LIVESTOCK** *Combined* **CALIFORNIA**  
*and DAIRY JOURNAL* *with* **CULTIVATOR**

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

October 6, 1917

SAN FRANCISCO



Orchards in Placer County



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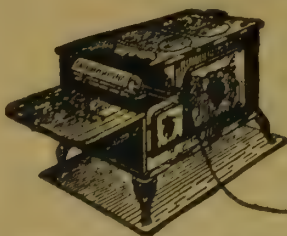
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The California Cultivator issues from 24 to 48 pages weekly and only costs One Dollar Yearly

5 years  
or  
25?



Farm tools and machinery left out in the open have an average life of 5 years. With proper protection they will last 25.

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*Resists rot and fire*

Redwood contains a *natural* preservative which gives it wonderful living power in contact with the ground, or when exposed to the elements. Redwood does not have to depend on artificial preservatives for its durability.

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### MORE CROPS

will be raised in America this year than ever before. Make every acre you own or rent, produce to the limit. Fertilizer your land—the increase in yield and price of crops will more than pay all the fertilizer expense—it will enable you to farm with profit. Don't spend your time working worn out land. Make it pay—Fertilize with Hauser's Organic Fertilizer.

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# California Cultivator

Vol. XLIX No. 14

LOS ANGELES: October 6, 1917

One Dollar Yearly

## Placer, County of Diverse Fruits

Incidentally Old Placer Yet Produces Some Gold—the Metal Direct from Her Gravel—More Gold From Her Soil and Climate and Water Through Her Fruits, Her Nursery Trees and Other Products. A Look-in at the Silva-Bergtholdt Nurseries. By A. Layman

**H**AVE you ever seen the scene shown on the cover of this Cultivator? Nearly every one in California has. You remember when you rounded "The Horn" up in the Sierra Nevada on

ly deciduous fruits there are all kinds of these and Placer specializes in this diversity. Mixed cars she advertises and sends to all markets of the United States, that is, to all of the smaller markets which are unable to take,

are delivered at the packing houses and made up to suit the trade of the various markets.

But where do all the trees come from that have planted all these hillsides and valleys? The answer to this question leads to one of the largest nurseries of California, which has its packing sheds and delivery yards at Newcastle. It is that of the Silva-Bergtholdt Company, which began operations in this county back in the other century. Rather, Mr. Silva—one of the pioneers of California—grew in a small way nursery trees and plants, and later his son became associated with him under the firm name of C. N. Silva & Son. Mr. Silva, Sr., retired about 1900, when Mr. Bergtholdt became half owner of the nursery and later its manager. In 1903 Mr. Silva, Jr., retired and J. F. Dudley secured his interest. The firm or incorporate name has been maintained and Mr. Bergtholdt has continued as manager of the nursery and fruit packing interests which became a feature of the business of the concern, and Mr. Dudley has been manager of the orchards, of which the firm controls a large number.

This feature of the business made

of the town. Winding down the hill from them is a narrow street more like an alley-way, along which the post office and a few other business houses have been erected.

The nurseries are located in different sections of the foothills, the larger one nearly midway between Newcastle and Lincoln over on the Valley line running up the Northern



It Came Around the Horn

The lumber from which this house was constructed came around the Horn in the early '50s. The house was erected in Placer County, where it now stands on the Silva-Bergtholdt ranch.

our first trip to California, coming over the Southern Pacific through nowsheds and tunnels and almost perpetual snows down into poppy covered slopes, hills white and fragrant with blossoming fruit trees, wealth making green fields, occasionally a scarred and upturned gulch, reminder of the argonaut—of the days of gold? Well, that's the same picture you see on our cover. That's California.

More specifically it's in Placer County, for I stood when I took that photo up on Boulder Ridge, while at my feet lay those beautiful orchards; in the far distance, at the extreme right, the town of Loomis; a bit to the left of the scene back against the hills, Penryn, and at the extreme left just behind the tree which obtrudes in the foreground, Newcastle. A bit farther, in imagination, one may see Placerville and the old mill where Marshall found his first nugget that stirred the world and made California a wonder word.

If one enters California over the Santa Fe or Salt Lake at the southern end of the state and drops into Southern California orange groves the experience in climbing from the desert over the San Bernardino range, often snow clad up at Summit—is much the same. The approach to the state from the extreme north around old Shasta again is most wonderful. A truly great state, with many gateways through its mountains and a Golden Gate swinging to the West.

But these Placer County orchards. Compared with other sections of the state Placer County is different. She believes in diversity. Most of her hillsides are covered with deciduous orchards which are irrigated with waters flowing through miners' ditches constructed in the "days of '40" and the "spring of '50."

But while the products are so large-

say, a car of Bartlett pears or of cling or freestone peaches or of cherries; for with the diverse conditions



A Block of Nursery Stock

Plums, peaches, pears and other deciduous trees in the foreground, olives farther on, and a citrus orchard in the distance.

of her hill and valley orchards she is able with plums, with table grapes, with apples, apricots, peaches, pears and other fruits to market a high quality of fruiting in quantities to fit the most exacting market.

Some of these orchards have rented for a period of many years at a flat \$50 per acre per year. Some have felt that this rental proposition has been an evil in that it has brought in many aliens whose only interest is in the coming 12 months, but there are still many beautiful homes in these orchards, and it is not uncommon to see the owner and lessee of the land still living in his own home, and possibly he and his family working in fruit season for a Japanese or Chinese contractor who has leased the place for the year or a period of years.

The fruits are usually packed in the orchard under a plan of inspection by county or association employed inspectors. These packed fruits

necessary a large packing house which has added to the length of packing house row. In this peculiar mountain town the packing houses along the sidings are really the center



The Silva-Bergtholdt Company

The larger man at reader's left is J. F. Dudley, the taller one J. E. Bergtholdt.

Sacramento Valley and to Portland. This nursery has some 320 acres, much of which is planted to varieties of deciduous nursery trees and to olives. The plan has been to raise but one crop of nursery stock. The same soil the following year has been reset to orchard trees, and some of the finest orchards of Placer County were formerly nursery plots for this company.

Henry Reinecke has direct charge of the nursery work. He is a native son, born in Placer County, entirely satisfied with it as offering him the best of the earth, and scarcely ever out of the county.

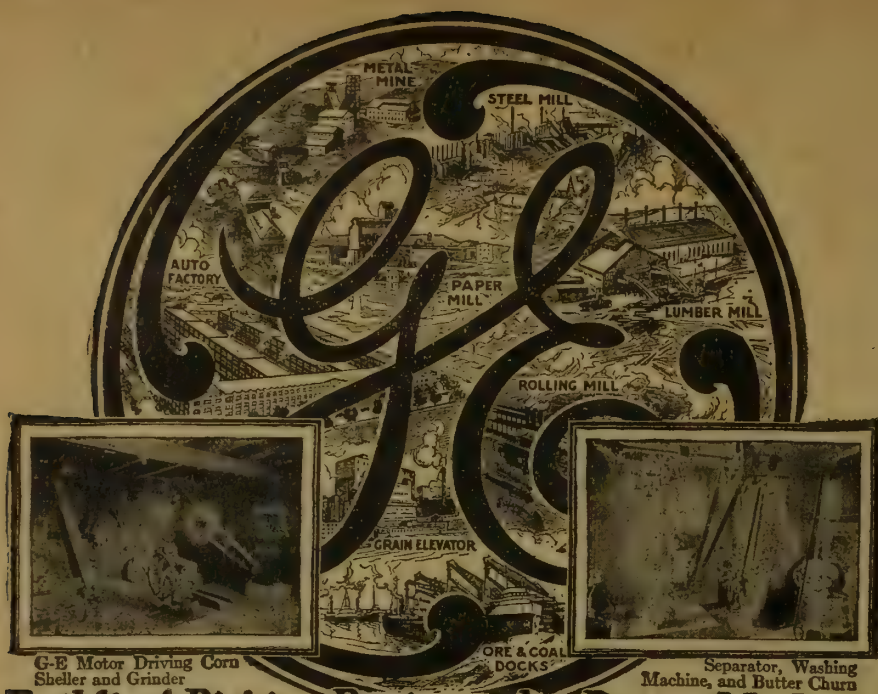
Besides the one 320-acre nursery referred to there are three others at other points. The nurseries produce around 1,000,000 deciduous trees every year, some years as low as 800,000, other years going to as high as 1,200,000.



State Highway at Newcastle

The highway at this point passes under the railway tracks on which the camera stood when the above was taken. The larger building in the foreground is that of the Silva-Bergtholdt Company. In the far distance, orchard-covered foothills of the Sierra Nevadas.





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## Concerning Fertilizers

Written for California Cultivator By G. W. Waterbury



We don't need fertilizers just now but we are going to in the years ahead of us even more than in the years which have passed. First in importance comes the vegetable garden, where composted manure must occupy considerable space in the first foot of soil. The citrus trees take next rank, followed by the apple and other deciduous fruits.

Southern California, while for years past a big consumer of fertilizers, is but a small district in a large country now calling loudly for added fertility to cover the land. And the larger and thrifter the crops the more must be the replacement.

The truck gardeners in the Eastern states are carrying off every pound of manure available from the cities. In the South great quantities of commercial fertilizers are brought in besides what is produced from cotton seed. Off the South American coast the guano beds have been depleted and the latest find, the bat caves of Western Mexico, likewise now have little to offer the Mexican exporters.

The Pacific coast, which should have by natural rights the most available supplies of all sections of our country, is bound, unless governmental steps are soon taken, to need fertilizers the most of all. This is caused by our government allowing withdrawals of practically all of the fish scrap for Japanese exportation.

The heavy buying by Japan of fish scrap some time ago, marked the beginning of advanced prices of fertilizers on the Pacific coast. This and the converting of horse power into machine power in the cities, together with the utilization of commercial fertilizers manufactured in the Eastern states in those sections where produced, has caused a scarcity on the Pacific coast which is only beginning to be felt.

To be candid the situation ahead is so serious that only governmental intervention will prevent a soaring in prices that will not make the issuing of fertilizer tickets a necessity. We had not thought of rationing our trees, but it is surely coming according to the present outlook for plant food.

Let us look back to ante-bellum days for future guidance. Nitrogen then was selling at from \$3.50 to \$4.00 per unit; phosphoric acid at from 85 cents to \$1.00 and potash around \$1.00. What are the prices now at a time of the year when there is little going into the ground?

Mr. Barnes of the Fruit Growers Supply Company handles more fertilizer annually than any other man on the Pacific coast. His figures, for what he can obtain, are subject to change without notice, like steel, copper, lead, etc., and this week are as follows:

Blood, f. o. b. Los Angeles, \$7.25 per unit and with a guaranteed analysis of 13 per cent would sell at \$94.25. Sulfate of ammonia can be had delivered in small lots at \$115, nitrate of soda, ex ship at San Pedro \$84, while unpretentious bone meal, once selling at \$24 will now cost \$46.

Tankage, not as pretentious as blood, is quoted at \$6 a unit for nitrogen and \$2 for phosphoric acid, compared to \$3 and \$0.85 some time ago. Fish scrap, when it can be had, is

also quoted at \$6 and \$2. Garbanzo tankage with nitrogen quoted \$3.75 became so popular last winter that the Los Angeles manufacturer sold every ton twice. This form of tankage depends upon the amount of available refuse turned over to the cities and the recent economy practiced in the kitchen have severely diminished the output of this form of fertilizer.

Some years ago there was plenty of fertilizer, but much variation in price and in the years before guaranteed analysis was enforced by the many private fertilizing companies did a land office business quoting whatever price they deemed expedient and practicing great economy with the amount of nitrogen placed in the mixture.

One largely advertised concern some years ago did not manufacture but received bids from different fertilizer producers for a certain formula which it sold to its customers one time at \$56 per ton. The Fruit Growers Supply Company purchased this same formula at \$42 per ton from the packing house concern and sold it at a saving of \$14 per ton.

Sardy, of Chicago, was one of the first to advocate selling on a guaranteed basis in California, which with guaranteed analysis gives an accurate comparison of values for a given price. He used to say that such a system would put the dishonest seller out of business, and it did, although lately most of the large packing houses have withdrawn their products from the Pacific coast because of high freight rates from distant factories and because of increased consumption nearer home.

Another expense to the private distributors was the accumulation of bad debts, and so it became a general practice to add about \$4 to each ton sold to make up this deficit. This was probably legitimate unless a safer way could be found for making cash collections, when this expense could well be eliminated when sold to those of good credit.

In practically all of the soils in which citrus trees are grown in California nitrogen is the one needed source of plant food to be applied early and often. Potash apparently brings no results and phosphorus on partial returns for the money invested.

New foliage and sappy fruit work is what California citrus trees are ever in need of and only nitrogen and water will help in the production. Had all navel trees put out a good strong growth of new fruit wood last summer, had they been well pruned and fertilized for some years past the navel crop would now not be less than 75 per cent normal. The writer knows of some such trees being propped the first week in September where such conditions existed.

Our future fertilizers must be derived from the air, from refuse from the ocean and from our cities, or from the Chilean saltpeter beds, which will be available for some 20 or 30 years yet, and from the handling of coal when sulfate of ammonia is released.

Calcium nitrate is produced from the air by the aid of water power, which California in the higher Sierras is well supplied. In the process current of air is subjected to a powerful electric current, yielding nitro-



which is treated with lime to calcium nitrate, a very valuable combination for our citrus soils.

order to secure our own fish from the big canneries along Washington and Alaska coasts it now be necessary to refuse export of a product now badly needed here. This should be done by our government at once.

the war in Europe has caused a cessation of food production which America is called upon to fill. Intensified production always for added fertilization; it is impossible without. Then the question where will this fertilization come at reasonable rates?

the outlook is not pleasant for the Pacific coast. In the Eastern states, stated before, the packing house are now selling fertilizers in

the eastern and Mississippi valley states that formerly came to the Pacific coast. Immense numbers of dray and delivery horses formerly used in our cities have disappeared and the gasoline power truck now takes their place; the guano beds have been worked out, only the fish scrap and garbage tankage remain. The latter is not large enough to supply the increasing demand and the former, the valuable refuse from the salmon, halibut and others of the finny tribe, is now going to Japan. We have no especial grievance with Japan but here is a product needed at home, needed in order to help feed us and we are apparently willing to allow this valuable fertilizer to be carried 6000 miles from our shores to be used in building up other soils than our own.

## Citrus Canker and Its Eradication

By A. S. Hoyt, Field Deputy, State Commission of Horticulture

STATE Commissioner of Horticulture G. H. Hecke, in the desire to obtain a practical knowledge of citrus canker and the method of eradication followed in Florida detailed the matter to make an investigation of the disease in that state with a careful study of the campaign now being conducted there for the eradication of this destructive disease of citrus. This campaign is the result of the joint action of the United States department of agriculture co-operating with the state plant board of Florida. Five weeks were spent in Florida on this investigation and owing to the courteous cooperation of the Florida state plant commissioner it was possible to see the disease under many different conditions and to make a thorough study in the field of the methods of inspection and eradication. The information obtained by means of this investigation will be of great benefit to the citrus industry, enabling, as it will, the state commissioner of horticulture to strengthen the quarantine maintained against this disease throughout the state and to increase the efficiency of inspection of the groves and nurseries in order to detect at the earliest possible moment any outbreak of citrus canker should it become introduced into California.

The first case of citrus canker in Florida was discovered in a citrus nursery in September, 1912. It was next found in a nursery in another section of the state in July, 1913, and by the spring of 1914 the disease had appeared in some of the citrus groves. When first found it was a new and consequently totally unknown disease. Lacking funds to carry on the extended investigation necessary to determine the nature of the remedy for this new and malignant disease and without adequate horticultural laws and the organization to prosecute a vigorous campaign, the fruit growers of Florida organized, furnishing the funds from their own pockets, and without knowing what it was they fought or whence it came or its distribution within the state, started courageously to check citrus canker, or control it, or eradicate it, anything to save their groves. In the face of such difficulties the progress made by these first volunteer canker fighters is truly marvelous and should be written into the history of Florida, a record of which they will be proud.

By the time an adequate law had

been passed and funds appropriated citrus canker had obtained a firm foothold in Florida and many active centers of infection had become established scattered widely over the state. When the Florida plant act was approved in April, 1915, citrus canker had been found in ten counties. Working under the proper legal authority and with a vastly larger and stronger organization the work of inspecting the groves and nurseries of the state was greatly expedited so that by January, 1916, infection had been found in ten additional counties.

Citrus canker was introduced into Florida and disseminated from one locality to another within the state by means of shipments of citrus nursery stock from infected nurseries. It may, however, be carried from tree to tree or from grove to grove within the same locality by any one of the many agencies which customarily pass from tree to tree or from grove to grove. Insects, birds, chickens, implements, horses, the persons or clothing of laborers, all these and many others are possible mechanical carriers of the bacteria when coming into contact with an uninfected tree after leaving an infected one. It is possible for this disease, when thus carried to a tree which has not previously shown infection, to remain dormant for many months until the condition most favorable for its development occurs. This favorable condition may be climatic or it may be reached when the tree is making a vigorous new growth or it may be a combination of these and other factors. At any rate the fact remains that the canker organism has the faculty of remaining dormant, in which condition it cannot be discovered by any amount of inspection, and yet is ready to break out actively at any time.

When the serious nature of citrus canker came to be realized by the fruit growers of Florida great consternation prevailed. The prices of citrus groves declined and a feeling of despondency invaded the citrus industry. With the remarkable results obtained by the eradication campaign however confidence was gradually restored. Citrus canker is not yet eradicated from all the groves of Florida but the progress made has been so marked as to justify this feeling of confidence. From May 1, 1914 to August 31, 1917, a total of 456 individual properties was found infected. Of that number 333 have been subsequently pronounced no longer danger centers. In the months of May, June,

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The Pomona canneries closed their peach packing season October 1, having handled a record breaking crop.

July and August, 1914, 1856 infected grove trees were found as against 196 for the corresponding period in 1917. The experience which Florida has had with citrus canker has been severe and costly, but as a direct re-

sult of that experience have come good horticultural legislation, a splendid central organization for their enforcement, an efficient quarantine service and a fine system of nursery inspection.

## The Walnut Crop



N ITS circular Number 2 of the 1917 season under date of September 21, the Walnut growers' Association says:

It is more difficult this season to make an accurate prediction of the walnut tonnage than ever before, as many unusual conditions have recently developed. The walnuts, which had almost completed their growth for size when the heat damage was encountered in June, seem to have made no further development in size since that time and as a consequence the average run will not be as large as last season and owing to the fact that the association is using a grader for the soft shells with openings slightly over an inch, the percentage of No. 2s will be heavier this year than since 1912. It is estimated that the crop will out-turn around 20 per cent No. 2s, as against four per cent last year.

There are appearing in the first pickings a great many nuts with very thin shells which will be used for cracking purposes. This is also a result of the June hot weather and will also reduce the tonnage of first grades. Discounting the above and several other unusual conditions it is predicted that California will out-turn 27,000,000 pounds of first class walnuts, about eight per cent less than last year's crop. These figures, however, are more subject to revision than they have been in previous years when the estimates were more easily made.

Practically all of the nuts that were seriously damaged by the June hot spell have prematurely dropped, and barring the possibility of severe early rains the cracking quality will be fully equal to, if not better, than last year. First pickings show a larger than usual percentage of light colored and well filled meats, and present indications are that the average deliveries will crack well above 90 per cent good.

The crop is maturing just about two weeks later than last year. Most packing houses will open during the first half of October. However, it looks as if the crop will mature quite evenly and we expect to be able to deliver practically everything in time for distribution for the Thanksgiving trade unless labor conditions become more serious or freight movement becomes unusually slow.

### Increased Cost of Production

A very careful investigation has developed that the cost of producing walnuts had increased this year three cents a pound over last year's figures. This is due principally to the doubling in the cost of common labor and of hay and grain necessary for feeding work stock, increased cost of water for irrigation, and in fact, of every item entering in the producing of the crop.

### Foreign Conditions

Our latest advices from salaried agents in both France and Italy indicate that the Italian crop is about 1500 tons short of normal. However, the Italian nuts are coming off fairly early and some arrivals may be expected to reach America in time for distribu-

tion for the Thanksgiving trade in the farthest Eastern states. Prices for the best grades of Italian new crop walnuts are ruling about 17½ cents, New York.

The French crop is reported to be considerably later than normal. Cable received under date of September 21 from our agent at Grenoble advises a "calamity" has just happened which has damaged the growing crops a minimum of 40 per cent. This probably refers to either very hot weather, cyclones or heavy rains. Cable reports blackened and diseased nuts falling everywhere, labor very scarce and arrivals improbable for the holiday trade.

The sizes of French walnuts are reported to be under normal but up to the date of receiving the above mentioned cable the cracking qualities of

all varieties of French nuts was reported fully up to the average.

There will apparently be some difficulty in securing transportation of tide water on all varieties of French nuts, the French government only allowing commercial shipments to move on certain days. Also little steamer space, with the exception of the very small boats, is now available as belligerent governments have taken over most of the larger vessels for military uses. Nuts coming in the smaller and older boats may be subject to considerable quality damage in transit. Also most of these boats make a slow passage so that very scanty arrivals of French nuts may be anticipated before the turn of the year. We estimate that there are not over 2000 tons of old crop foreign walnuts in jobbers' or importers' hands at the present time, that over 1500 tons of new crop foreign nuts can arrive prior to January. Adding these figures to the California production we have 34,000,000 pounds of unshelled walnuts available for consumption up to January 1, against a normal consumption of the same period of 48,000,000 pounds. It therefore seems apparent that the market will be short of walnuts during the holiday period.

## Nursery Registration

The 1917 legislature added an amendment to the state horticultural law making it compulsory for all nurserymen to register with the State Commissioner of Horticulture and pay a fee of \$1.00 annually. This is in line with the general standardization movement being carried on throughout all lines by the agricultural and horticultural commissions. The object is to keep the commission in closer touch with the nursery trade, as it is already charged with the inspection of all nursery shipments, both intra-state and inter-state. The law as finally passed reads as follows:

"Any nurseryman, agent, jobber, person, firm or organization operating in the state of California, who

ships, sells or handles nursery stock, trees, plants, shrubs or vines which are for planting or propagation purposes within the borders of this state shall register with the state commissioner of horticulture and shall pay the same one dollar for such registration for a period of one year. The state commissioner of horticulture shall issue to each applicant a special license number, and all shipments of such licensee shall have his license number affixed to the package of nursery stock, trees, plants, shrubs or vines for planting or propagation purposes; provided, however, that any agent or agents acting as salesmen for a nurseryman, jobber, person, firm or organization shall not be granted a license number but shall be required to use the license number signed by the nurseryman, jobber, person, firm or organization by which such agent or agents are employed.

## South San Joaquin Community Fair

Written for California Cultivator

By G. D. Murphy



THE third annual community fair of the South San Joaquin irrigation district is being held in Escalon this year, Friday and Saturday, September 28-29, the other two fairs having been held in Manteca and Ripon in 1915 and 1916.

The holding of what is known as community fairs is a new thing in California, although it is understood that in various eastern states these fairs have been conducted for a good many years. It is believed that the first fair of this kind to be held in this state was the one in Manteca in 1915.

The idea of holding these fairs was originated by Mrs. D. O. Castle, who was then the president of the South San Joaquin Federation of Parent-Teachers Clubs, and they were to embrace all the school districts in the South San Joaquin irrigation district which had been completed only the year previous to this date. Her idea was to make them purely educational in nature, and to a large extent this idea has been carried out. The object was primarily to stimulate an interest in the schools along the line of agriculture, domestic science, home economics, etc., which would result in bringing the people in closer touch

with each other and cultivating a community spirit that would work to the advantage of the whole district.

The success of the first fair held at Manteca was very gratifying in the attendance and size of the fair reached much greater proportions than had been planned for. The fair held at Ripon the following year was even more successful. By this time these fairs had become known practically all over California and numbered among the visitors were prominent people from all sections of the state.

Escalon, where the fair is being held this year, is a thriving little city in the midst of a rich and prosperous agricultural section. It is situated on the Santa Fe and Tidewater railroad 22 miles southeast of Stockton.

### THE "NIGGER IN THE WOODPILE"

The United States government has found it necessary to issue from Washington the following:

There is no truth in a widely circulated statement that the government expects to take food supplies from any family. Both the food administration and the department of agriculture join in a statement to counteract what seems to be a deliberate propaganda to the effect that the government



ment intends to take from every nly all canned goods put up in ex- ss of 100 quarts.

This is only one of the variations to a rumor which has been widely cir- culated. Another statement is that a government has been urging the nning, drying, and preserving of its and vegetables so that they ll be in a convenient form for the vernment to handle and transport en it takes them away from the ople. Further elaboration is that ese goods are to be taken away om the American homes and ship- d to England.

In one instance a motorist stopped a farmhouse to fill the radiator of a automobile. In the course of con- sation he casually inquired wheth- the farmer's family was canning the surplus fruits and vegetables order to help conserve the food pply. He was ipformed that the rmer was not doing this because the vernment intended to take all the nned goods away except a small rt of it actually needed by the mily itself.

The authorities state emphatically at no such course has ever been ntemplated by the government. On e contrary, both the department of riculture and the food administra- on are strongly urging housewives can and preserve, especially at this ne, all surplus fruits and vegetables order that the households them- lves may have a cheap and plenti- l supply of food.

#### OCTOBER SCHEDULE GLENN COUNTY FARM BUREAU

October 3-6, Glenn County Fair; October 6, directors meeting 10 a. m.; October 9, Codora night meeting; Oc- tober 12, Larkin night meeting; Oc- tober 16, Orland night meeting; Oc- tober 19, Jacinto night meeting; Oc- tober 22, Elk Creek night meeting; tober 26, Plaza night meeting.—W. Heileman.

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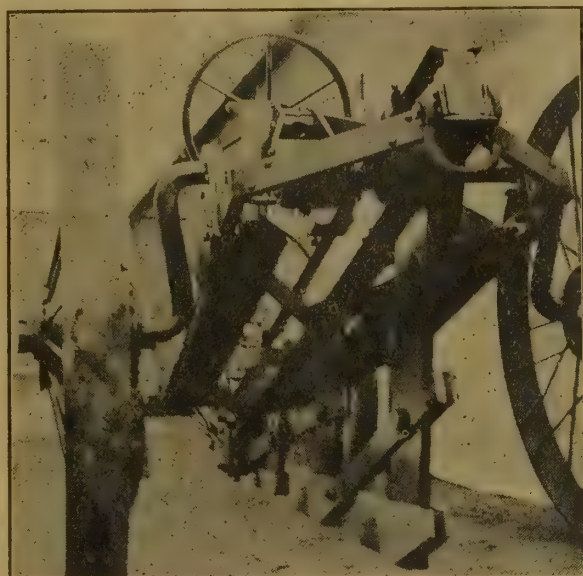
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## Liberty Subsoil Plow



ILLUSTRATIONS here with expresses more than any words we can say but just a bit to give a little pep to the story: This is the great- est plow ever made. It is a subsoiler which requires three of the largest

is built for subsoiling in certain sec- tions of the San Joaquin and Sacra- mento Valleys and has been forced through sandstone hardpan several inches thick, breaking it up to a dis- tance of six feet either way from the plow. There are three of the plows,

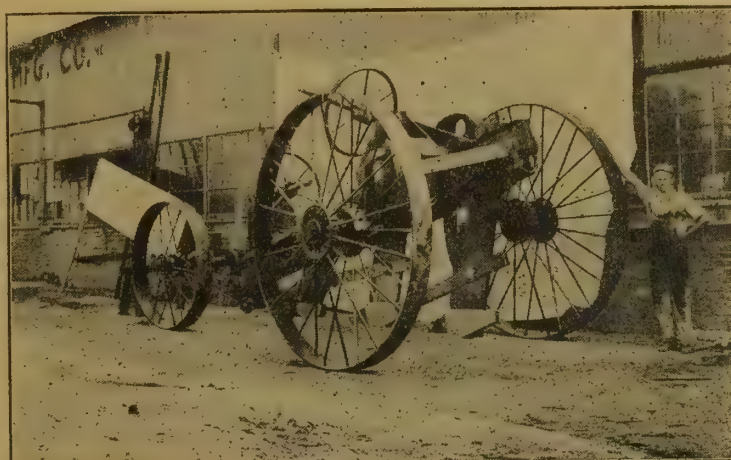


#### LIBERTY SUBSOIL PLOW

Close up view show- ing working parts of the plow out of the ground. These parts are on a level but as it is dropped into the ground the rear ones go much deeper. The steel point had been removed when this photo was taken.

tractors in use to handle. It is pos- sible that where conditions are not too strenuous two "75s" and one "60" might handle it but ordinarily it is a task worthy of the three largest. It is constructed of highest grade steel,

the first cutting to a depth of 16 in- ches, the next to a depth of 32 in- ches, and the last one, or the first which appears in the illustration tak- en from the rear, cuts to a depth of 48 inches. The wheels are eight feet



The World's Biggest  
View of the plow with man standing to give comparative size.

the axle is four-inch solid steel, the standards holding the steel points are 1 1/4 by 14 inches, also of highest grade steel. The wheels are eight feet in diameter. It is supplied with an auto- matic lift which pulls the three great plows out of the hardest hardpan. It

in diameter and the length over all nearly 24 feet. As we said, it is the largest in the world and it was made in California. The Killefer Manufac- turing Company has just shipped it from its Los Angeles shops to the Liberty Farms Corporation in the San Joaquin Valley.

## Nurserymen's Annual



ALIFORNIA Association of Nurserymen will meet in convention at San José Oc- tober 10-13. As Santa Clara County considers itself the cradle of the nursery industry in Cali- fornia and at present the center of the largest seed growing business West of the Mississippi, exceptionally large attendance should be given at this seventh annual of the associa- tion which had its birth in that valley. Mrs. John Vallance and Max J. Crow are at the head of the reception committee and Almon Wheeler is handling the local finances of the con- vention.

An exhibit is being prepared by lo- cal exhibitors of whose committee E. H. Elmer is chairman. The opening session is Wednesday evening when President Leonard Coates will call the convention to order. City Manager Reed will give an address of welcome

to which Prof. Wickson will respond, and Secretary Brooks of the San Jose chamber of commerce will deliver an address on "Cooperation." Music will be furnished by San Jose talent.

Thursday morning's session will be given up to appointment of commit- tees, payment of dues and reports of standing committees.

#### Thursday Afternoon

Prof. Wickson will deliver an ad- dress on California Nurserymen of the II and III Decades. He will be follow- ed by Prof. Elmore Chase, From the Nursery Row to the Orchard Row; Robert K. Vickery, Some Ideas on Fumigation of Nursery Stock; Max J. Crow, How to Make Labor Con- tent; Charles E. Jackson, Shall the C. A. of N. meet at Same Time and Place as the Annual Fruit Growers' Convention?

Continued on Page 363

## SAFE SEED

Isn't it worth a good deal to you to KNOW BEFORE YOU PLANT that your seed is free of all noxious weeds; that it contains no dodger, Johnson grass, star thistle or other foul seeds which will cause you serious trouble and losses in the future?

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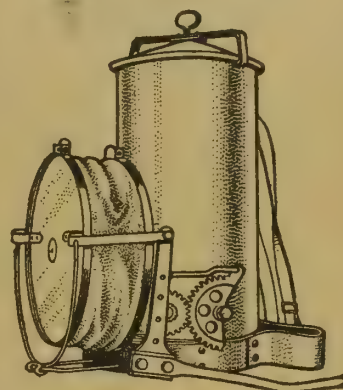
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## Ornamental Planting Calendar for October in Northern California

Written for California Cultivator By A. R. Gould



ALTHOUGH our working hours in the garden will be much shorter we have to make the best of every second as there is much to do in order to have a fine floral display each year, and we must arrange for a long season commencing with the spring display which is quite as important as the summer and fall displays as many beautiful subjects are at our service including the Alpine flowers, primulas, arabis, aubretia, etc., bulbs of every description, wallflowers, violas, stocks and pansies. There is surely no lack of variety and many charming schemes of color can be worked out by the artistic gardener which will bring admiration from friends and joy to the owner.

### Bulbs

Owing to war conditions and the fact that most of our bulbs are imported from Europe, it was an open question as to whether we should secure many to plant this year from our local bulb dealers, but recent reports from Eastern and California dealers are to the effect that the bulb ship is on its way, if not already in port, with the first load, and other shipments are expected daily, so that we are assured of a good supply, and we can therefore consider the best varieties to plant.

Freesias are grown largely in our own state and thrive here admirably. The Eastern market is largely supplied from this source. They make beautiful cut flowers, are very fragrant and flower here early. The variety known as Purity is the best improved type. Plant these one and a half inches deep in fairly rich soil and two inches apart in large groups or in rows if required for garden borders. They may be planted in pots now and grown for house decoration. Place five bulbs in a five inch plot and water well, keep in a dark place for a few weeks until the bulbs have started into growth, later place them in the window to continue active growth. They will require a few small stakes to support them as they show the flower buds.

French Roman hyacinths are very fragrant and make useful pot plants or a fine show in the garden. Plant these three inches apart and two inches deep in the garden. Four bulbs can be grown in a flower pot five inches in diameter. Use same method of culture as advised for freesias.

Snowdrops, those pretty dwarf white flowers which are the earliest to open, should find a place in every garden and where one has some corner where they could be planted, say among ferns, and left to become naturalized, nothing adds more charm to a garden. They may be treated in much the same way as freesias. There are both single and double types.

Scilla campanulata, the bluebell, is another charming subject for the wild garden or fern corner and will readily become naturalized. Plant these as advised for Roman hyacinths.

Crocus provide us with an early show and may be secured in white, yellow, purple and blue. Give these a trial and plant as advised for freesias.

Anemones are among the best spring flowers we have and should be planted three inches apart in beds or borders without delay.

Narcissus, which also includes the well known daffodils, should soon be planted in fairly rich soil about three inches deep and six to eight inches apart. Golden Spur, Emperor, Glory

of Leyden and Victoria are some of the very best daffodils. Among poets narcissus plant Poeticus, Burbidgei. If you also require grace in your garden in spring plant Jonquil campenelle and Jonquil rugulosus, the large flowering type. Of the large flowering hyacinths plant Gertrude, Albertine, Grand Mar, Lady Derby, Rio des Belges and low Hammer. Plant these as advised for narcissus and they will require liberal treatment in the way of manure.

The early tulips should be planted as soon as possible. Always endeavor to plant these in solid beds one variety to a bed if a bright color scheme is desired. Plant two inches deep, rich soil four inches apart. They may also be grown in five or six inch pots, placing four to five bulbs in the pot and the same cultural directions adopted as advised for freesias.

Forget-me-nots, arabis alpina, aubretia and double daisies all make good subjects to plant as a carpet for bulb beds. These should be planted out this month and will then provide a good spring display.

While named varieties are invaluable the best to buy many reliable bulb dealers furnish mixtures which will provide a wide range of color and generally prove quite satisfactory.

### Winter Flowering Subjects

Wallflowers and stocks should be planted out at once if bloom is required this winter.

### Seed Collecting and Sowing

The seeds of many more perennials will now be ready to collect and should be sown without delay. Collect seeds of hollyhock, geum, glove (digitalis), delphinium, gaillardia. Among the annuals tagetes, marigold, larkspur, ranunculus, asters, zinnias, sunflowers and stock of which seed can be collected and sown in early spring.

### Lawns

Last month we dealt briefly with methods of preparation for lawn making and it is more than important that the foundation of a lawn be given careful consideration. Soil conditions must be right and weed roots should have been eradicated entirely. After the surface has been well graded and thoroughly prepared the next point to consider is the best grass mixture. Straight grass seed to sow. Generally speaking the particular location of the plot with the nature of the soil conditions will govern one in the selection of the seed. If the soil is sandy Australian or Pacific rye is the correct grass to sow. For a mixture made up of a good loam a mixture of Kentucky blue grass, Pacific rye, white clover will make an excellent lawn for an open situation. Kentucky blue grass has been largely used alone for lawns, and there are now very good lawns existing today in the Bay district and in the large country homes on the peninsula, but as trouble comes in the winter when frosts hit this grass severely and the wet season as a good lawn should turn brown and is an eyesore, it takes many months to really recover. There are other excellent grasses, among the fescues we may yet find all round grass which is hardy and will supersede the Kentucky blue. We are now experimenting with this and later may have some interesting reports to make. For shady plots reliable seedmen put up a mixture of selected grasses which have proved to answer the purpose. If your lawn is to get hard wear sow the Golden Gate Park mixture.

Now as to the best time to sow seed it will be a good plan to wait until the first rains, but if possible wet the plot down beforehand, this will allow the weed seeds to germinate in about three weeks. The lawn should then be weeded and you will have less trouble from weeds coming up in the new lawn.

## IRISES

August to November is the time to plant for results next flowering season.  
The DEAN IRIS GARDENS, Moneta, Cal.



As to mulching, during the rains it is not altogether necessary to cover seed with a heavy dressing of manure. Furthermore, if farmyard manure is used it is generally full of

weed seed. If any mulch is used use clean straw, and when dressing old established lawns, if you would avoid weeds use an artificial manure. It will take about one pound of seed to sow 200 square feet of lawn.

## October in the Vegetable Garden Southern California

Written for California Cultivator By D. F. Reichard

**T**HIS is generally a hard month in the garden in Southern California. The long dry summer has seemed to have taken all the moisture out of the soil, and when water is applied it seems to dry out without doing much good to the plants. When irrigating in the garden at this time wet as large an area as possible—the moisture will not be fused as much as where small areas are irrigated. If it is inconvenient to rake or plow up the wet ground at once rake or cultivate over the whole surface, making a mulch to hold the moisture for a few days until the soaking up of the patch can be properly attended to. Be sure to keep the stuff growing in your fall and winter garden in good growth by frequent irrigations and cultivations. One glorious thing about fall gardening is that weeds are not very active. During this month plant Crosby's Egyptian beet; Half Long carrots; Cowball or Purple Top turnips, radishes, Giant Amsterdam or Prickly Perch spinach, salsify and New York or Wonderful lettuce for early spring use. If the weather continues mild for some time some of these vegetables will be ready for winter use. Plant all of these in rows so they can be conveniently irrigated and cultivated. Cabbage and cauliflower seed could be sown now for winter plantings. Set out young plants started during August now for early harvest.

## Northern California

Written for California Cultivator By A. R. Gould

**T**HIS is really a very busy month in the vegetable garden as we must have our plots prepared for the coming season's early crops. Deep trenching and manuring will be necessary throughout the garden and every detail in the way of soil preparation must be studied if you wish for the best results.

If your soil has become worn out it will require a good dressing with farmyard manure or a good artificial fertilizer. Bonemeal or sulphate of ammonia are both excellent. The former is rather slow acting but is always safe, and the latter contains considerable nitrogen in a soluble form and becomes available for plant growth shortly after its application to the soil. This manure is invaluable especially where there is a scarcity of farmyard manure. Lime may be applied in the form known as slacked lime and is essential to all acid or sour soils.

It will be found very helpful as a fertilizer. It is sometimes applied in the form of quicklime to clayey soils and those containing humus. It quickly acts on vegetable matter. Lime applied to adobe soils would be of value and should be applied at the rate of one hundredweight to the acre. Lime is not used as much as it might be in California. Wood ashes and soot if well buried in the soil are also to be recommended. Wood ashes contain from five to 15 per cent of potash and produce excellent effect on all green crops. All refuse should be burnt—on the ground where possible—and the residue put back where it belongs.

### Tomatoes

Most of the fruits which have started to turn, and in fact well developed green ones, should be picked and put away in some dry place to ripen. In this way many fine fruits will be saved from rotting on the ground and a slight frost may mean the end of this crop. It will be advisable to select the best fruits of those true to type for seed for sowing next year.

### Cucumbers

Most of the fruits of these will also

Sow seed of Early Queen onion or put in onion sets for any variety for early onions. It is advisable to sow the seed of onions in beds and transplant them to the prepared spot when they are one-eighth to one-quarter of an inch in diameter. It is too early to plant seed of globe varieties.

In favored locations early varieties of Peas—Laxtonian is the best—will mature by Christmas. The semi-dwarf and tall varieties of peas will grow but would not set pods until in the spring unless we have a very mild winter, therefore they are not recommended at this time.

Although some authorities recommend sowing egg plant, peppers and tomatoes at this time, I consider the latter part of November quite early enough except for hot house culture.

The planting of any squashes or melons at this time is out of the question; the nights are too long and cold. If one is on a side hill that is frostless Canadian Wonder or Ventura Wonder Bush beans might mature. On other locations do not venture. Corn is even more tender than beans.

On ground that is not to be used until early spring it is well to be arranging for a supply of manure to cover it for turning under after the first good soaking rainstorm.

Harvest the sweet potatoes before frost comes. The tops are fine cow feed. Clean up all old rubbish and vines and burn them—an excellent method for mimmidizing pests.

be ready to collect and they may be used for pickling.

### Carrots

Make a sowing of Danvers Half Long and French Forcing for winter use.

### Lettuce

Make a sowing of California Cream Butter at once and a hardy winter variety known as Hardy Hammersmith.

### Radish

Winter varieties of this crop should now be sown. The best are Chinese White Winter and Chinese Rose Winter and Long Black Spanish. Sow in deep rich soil and thin these to six inches apart.

### Onions

See that the seed bed is well prepared for this important crop as toward the end of November the general crop may be sown providing the rains are not too heavy and the location very wet. Certain early varieties such as California Early Red, Extra Early Pearl, Red Bermuda and White Bermuda may be sown now. See that the seed beds are made level with a fine surface soil and left fairly firm.

### Peas

For the sowing of this crop much will depend upon the early rains, however it will be important to have the land ready and where possible a well sheltered location should be chosen. It should be noted that the earliest peas bring the most money in the market and generally escape attacks from aphids or green fly. The varieties usually grown for the early crops are Alaska, Little Marvel, Premium Gem, Dwarf Types and First and Best, earliest of the tall varieties.

### Herbs

These are often called for and useful as flavoring agents, hence it would be advisable to sow seeds in a warm border of the following: Sage, thyme and sweet marjoram. Root divisions may often be secured of mint which is very popular.

# Fruit Trees

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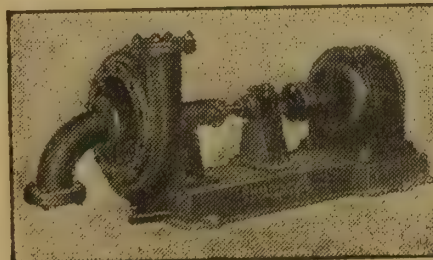


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Saturday, Oct. 6, 1917

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days from date of the transaction, and  
the subscriber must have mentioned the  
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## THIS WEEK'S COVER

The cover illustration and the  
wonderfully rich country it shows  
speak for themselves, and in addition  
the article on the third page of this  
issue speaks for them, so we need say  
no more.

## GEORGE H. WATERS

George H. Waters, for years at  
the head of one of California's most  
successful fruit canning and drying  
concerns at Pomona, has passed. He  
died last week at his Pomona home.Mr. Waters became interested in  
California fruit business nearly 30  
years ago and was actively identified  
with it until a short time before his  
death.

## SUBSTITUTES

We all have little patience  
with the merchant who is always able  
to supply "just as good as" the arti-  
cle for which we inquire. Few have  
the hardihood these days to attempt  
to substitute, but in the matter of  
feeds for live stock present day prices  
impel substitution, at least in some  
cases. This is the time of the year  
when a bit of work with pencil and  
paper and the studying of conditions  
on our own ranches may give a pointer  
as to what may be grown through the  
winter months or during the spring  
time which will take the place of the  
high priced concentrates. Many  
an orchardist has been able to keep  
up his running expenses this year by  
the returns from intercrops.

## SECOND LIBERTY LOAN

It seems to be definite that the  
second liberty bond issue will bearfour per cent interest. The first lib-  
erty bonds have not yet been distribut-  
ed. The pledge of the treasury depart-  
ment that the certificates for the first  
liberty bonds may be exchanged for  
others should they bear higher rate of  
interest will be honored. It has been  
rumored, however, that there will be  
a charge for converting these bonds.  
This the secretary of the treasury  
says is erroneous. There has been a  
ruling in effect that the interchange  
of bonds of different denominations  
and of registered and coupon bonds  
will require a small fee. However, it  
is urged that for the present sub-  
scribers retain their full paid interim  
certificates which entitle the holders  
to all rights of bond holders as to  
principal, interest, conversion and in  
every respect.

## NEXT YEAR'S FAIRS

There has never been such inter-  
est in conventions, fairs and dem-  
onstrations as shown this year. The  
attendance at the state fair was a  
record breaker. Annual meetings and  
conventions held in Sacramento at  
the time of the fair showed most in-  
tense interest. The demonstration by  
the Implement and Tractor Dealers'  
Association of Southern California  
was many fold greater and more suc-  
cessful than that of last year.Now comes an official of a fair as-  
sociation to the Cultivator office and  
asks suggestions as to next year's  
fair. It must be bigger and better  
than ever. Already are plans being  
made, for the signs of the times point  
toward greater need another year  
than this year. Hence greater pro-  
duction will be demanded. We be-  
lieve that these early plans will re-  
sult in much better fairs, surpassing  
this year's as this year's have their  
predecessors.

## NURSERY NEEDS

California beats the world in  
fruit production. No section has  
such variety, such quality; no sec-  
tion has the climate that will permit  
such perfect curing of fruit in the  
sunshine; no state has such advanc-  
ed legislation to encourage and pro-  
tect this great industry. But as ad-  
vanced as is this legislation, it, like  
all other laws, sometimes works in-  
justice. How its weak spots may be  
strengthened and how the injustices  
may be wiped out have called forth  
many a discussion at conventions of  
fruit growers and of nurserymen. This  
is the season when both of these in-  
terests meet in convention and we  
doubt not it will give occasion for  
congratulation that the last session of  
the legislature made such changes in  
the laws that less objection can be  
made to them than in any preceding  
year.Next week the California Associa-  
tion of Nurserymen will meet at San  
Jose. This convention will, we be-  
lieve, devote less time to legislation  
than has any former convention, at  
least a look over the program shows  
little having to do with that topic.  
State Horticultural Commissioner  
Hecke touches upon State Laws of  
Today, and this may give opportunity  
for more discussion.This organization of nurserymen,  
by the way, is one of the strongest  
and one of the most important to the  
future of the fruit industry. The ex-  
ecutive committee, composed of  
Messrs. Meriwether, Wilson and Gill,  
is making appeal for greatly increas-  
ed membership.Join up boys and make it unani-  
mous.

## GOLD BRICKS AND THINGS

At the meeting called by the  
Los Angeles council of defense for  
the purpose of launching a movement  
for organizing a farm bureau the  
question of eligibility to membership  
was raised by one who is a success-  
ful farmer. He made the point that  
only those engaged in raising field  
crops or livestock should be admitted.  
The city farmer owning land and  
farming through a superintendent,  
and the orchardist he considered not  
eligible. We grant that in some co-  
operative organizations effort has  
sometimes been made to secure too  
general a membership, and this has  
finally resulted in the commission  
men, or at least interested members,  
securing control, and instead of be-  
ing managed cooperatively it has  
merged into an organization directed  
by selfish interests. This has caused  
farmers to look with suspicion on  
those who may wish to associate with  
them purely as a matter of public in-  
terest and for the general welfare.  
But as one speaker at the Los Angeles  
meeting said; "As to the fruit grower  
being a farmer there is nothing to  
discuss." The farm adviser or the  
farm bureau movement is purely for  
the benefit of the producers whether  
they grow annual crops or orchard  
trees which require years to bring to  
maturity.Again, while the cultivator may not  
be necessary to the success of all  
crops, it is a vital necessity with  
many; also it may be true that the  
California Cultivator is not necessary  
to the success of the farmers of Cali-  
fornia, but it is so vitally interested  
in agriculture and its prosperity de-  
pends so absolutely upon the prosper-  
ity of the farmers of California that  
it feels it is one of the farming class.  
May it not well be associated with  
those whose interests are one with  
its interests?At any rate the California Cultivator  
is now a member of a live and  
working farm center and we expect  
it to be a factor in the upbuilding of  
the present movement for greater and  
better production in California.

## COMMUNITY SPECIALIZING

The Cultivator has often refer-  
red to the wisdom of a community  
centering upon the product for which  
it is best adapted and for which the  
greater part of its producers have a  
preference. As an example, let us  
refer to Kings County, this state. Its  
live wire producers have largely cen-  
tered upon the Poland-China hog as  
fitted to their conditions, and to the  
upbuilding of this breed almost the  
entire live stock interests of the  
county have bent their best energies.  
Now when one wants to buy a Poland-  
China he thinks at once of Kings  
County, and so the reputation of the  
county is becoming greater and its  
ability to supply the best of the  
breed is also becoming greater—  
which increases its reputation, and so  
on. On this point we have a letter  
from R. K. Walker, secretary of the  
Southern California Duroc-Jersey As-  
sociation. He writes more particular-  
ly of the coming Riverside fair, mak-  
ing appeal for the complete coopera-  
tion of all livestock breeders. He  
says:"In our own breed there had never  
been any animals shown at the River-  
side fair up to 1916, although there  
were probably more red hogs in the  
southern part of the state than any  
other breed. The Southern California  
Duroc-Jersey Association was organ-ized before the 1916 Riverside fa-  
and as a result we had more Duroc  
at that show than were shown by any  
other breed. During this year almost  
every member of the association has  
bought from one to a carload of  
registered Durocs from the East, and  
this year we expect to put on the  
best show ever. We believe that if  
all the breeders in this section con-  
centrating on one breed we can get  
better results and make some real de-  
velopment, where if we are all raising  
different breeds we are more or less  
working against each other. Every  
breeder is benefited by bringing in  
an extra fine animal of his breed to  
any other breeder in his community.  
Cooperation is certainly not confined  
to the fruit business as our results  
show."

## Agricultural News Notes

Dairymen in Northeastern Ohio are  
reported to be throwing away milk be-  
cause of a disagreement with buyers  
regarding prices.The campaign for the second Lib-  
erty Loan began October 1 and will  
last for four weeks. The new issue  
amounts to \$3,000,000,000.At the coming citrus seminar at the  
University of Florida, October 9-11  
there will be discussion of protection  
of orchards from frost by various  
heating systems.Construction work at Camp Lewis,  
Washington, is being rushed in re-  
sponse to a change of plans calling  
for the stationing of a large number  
of extra troops there.The bean crop of Michigan is re-  
ported to have suffered a 20 to 25 per  
cent damage from the recent cold  
weather. The potato crop also suff-  
ered but not to so serious an extent.The United States department of  
agriculture will try the experiment of  
transplanting the large leaved Pa-  
help to the Atlantic Ocean in the  
hope of raising a supply of potatoes  
nearer the Eastern fields.From Texas comes announcement  
that delicious table syrup is being  
made from mesquite beans. The sug-  
gar of the beans is said to be easily  
and economically converted into molasses  
by boiling the juice.The South this year will harvest  
peanuts from more than 2,000,000  
acres, an estimated crop of 70,000,000  
bushels, and the oil mills which in  
1915 made practically no peanut oil  
are now having hard work to supply  
the demand.Florida's campaign to eradicate the  
sweet potato root weevil is being ad-  
vised by the United States department  
of agriculture which has set aside  
\$10,000 for preliminary survey of in-  
fested territory and demonstration  
control methods.The potato crop of New Brunswick  
has been seriously affected by blight  
in the field. It is stated that 60 per  
cent of the growing plants have been  
killed by this blight. Owing to the  
large increase in acreage, however,  
there will be practically the same out-  
put as last year.Artillery horses on the firing line in  
France suffer from "nerves." It has  
been found necessary to send large  
numbers of the horses back of the  
lines to recuperate. There is no trou-  
ble with mules. The Kansas City  
Star says, "The humble American  
mule has inscribed his name on the  
scarlet pages of Verdun and the Somme  
and British tanks and French  
'75s' salute him."



# Agricultural News Notes of the Pacific Coast

## Northern California

Yuba County has had a big wheat d.

ean threshers are at work in te County on blackeyes and tep-

supervisors of Glenn County have aside a sum of money to purchase irrel poison to be furnished free to ners.

he Ukiah Times is authority for statement that hop growers are using offers of 40 cents. Some wers are predicting a 50 cent price.

he Chico district of Butte County mates that it will have the big- t prune crop in its history but a y short crop of peaches and al- ads.

he Union farm bureau center of a County, at its recent annual eting, elected Ham Johnson direc- George Peters vice director and a Holmes secretary.

fter closing up accounts for a r's work the Orland Cow Testing ociation found it was able to make refund of ten cents per cow on all rs that went through the year's ting.

ruit growers of the Suisun and aville Valleys have filed with the rd of supervisors a petition ask- for the appointment of a horti- tural commissioner for Solano nty.

Experimental plantings of cotton Esparto in Yolo County have been successful that it is probable ger plantings will be made next and some growers hope that cot- may be used as an alternate with

The Napa County Livestock Asso- tion has donated \$100 to be award- in special premiums at the Napa nty fair to be held at Napa Sep- ber 22-26. These prizes are in ad- on to those offered by the manage- nt.

President Stephens of the Pacific e Growers' Association predicts a e crop for the coming season th between \$8,000,000 and \$10,- 0,000. He says that 62 per cent of e growers of the state are in the as- ciation.

A visitor to the rice camps north- et of Davis, Yolo County, says the rvesters are finding much difficul- in securing horses and are forced bring them in from sections as far ay as Los Angeles. It is also hard secure enough labor.

The prune crop in the district about eridian, Sutter County, has been cut wn seriously by the work of the d spider. Many trees have been en- ly shorn of their leaves and pre- nt a very odd appearance with noth- g but fruit on the branches.

At the California land show to be ld in San Francisco in October one y is to be egg day. The Petaluma mber of Commerce will be in arge and promises "to distribute a rload of one-day-old eggs free to ery visitor at the exposition."

Butte County's women's committee the council of defense has begun a mpaign to register every woman d girl over 16 in the county to de- termine their fitness for work which ey may be called upon to do in re- lacing the services of men. Over 150 fferent lines of work will be listed.

## Central California

Friday, September 28, was Clovis day at the Fresno district fair.

The bean harvest of the Porterville section of Tulare County is estimated at something over 10,000 bags.

Merced reports the peach cutting season about over, with prices around seven and seven and a half cents a pound.

Oakdale, Stanislaus County, is ship- ping out a big almond crop. This sec- tion has a full 100 per cent crop this season.

The San Joaquin Valley exposition train is now touring Missouri and arousing great interest in all towns where it stops.

Apple growers of the Watsonville section are having much difficulty in securing cars. All sorts are being used, from cattle to meat cars.

Merced County will hold its first annual farm picnic on October 6 at Courthouse Park. Dr. Elwood Mead, head of the land colonization move- ment, will be present and address the members.

The farmers at Selma, Fresno County, are asking that some meas- ures be adopted which will do away with the long hours of waiting at the packing houses before delivery can be made of fruit.

The Dinuba Sentinel reports that practically the entire raisin crop has been picked and that the labor situa- tion has been much less serious than was anticipated. Drying weather never was better.

Orders have been issued to quarter- masters in charge of all supply de- pots of the United States army au- thorizing substitution of Thompson seedless raisins on all requisitions where currants are specified.

Horticultural Commissioner Collins of Tulare County reports very satis- factory results from the poisoning campaign of squirrel week. The cam- paign is still going on in the expecta- tion of making a thorough job of it.

At the annual meeting of the Tulare County Citrus Fruit Exchange last week at Porterville the following of- ficers were elected: H. C. Carr, presi- dent, Hobart Webster, vice-president and W. E. Sprott, secretary-treasurer.

Horticultural Commissioner Ruth- erford of Stanislaus County, in his an- nual report states that Stanislaus' al- falfa crop this year amounted to 472,- 000 tons; 44,000 tons of cantaloupes were harvested and 25,000 tons of watermelons.

Eighty-five per cent of the 1917 rais- in crop is now on the trays. The la- bor situation, which at the beginning of the season seemed so serious, has been settled satisfactorily by the as- sociation, less than one per cent of the growers, it is stated, paying as high as four cents per tray where the early demands were for from five to ten cents.

The San Joaquin Valley Milk Pro- ducers' Association has been organiz- ed with the following officers: Presi- dent, F. W. Hansen; vice-presidents, Al McNeil and E. J. B. Burgess; sec- retary, J. A. Schlotthauer, treasurer, H. E. Vogel. The temporary head- quarters are in the chamber of com- merce building at Fresno. The or- ganization will cooperate with the As- sociated Dairymen of California.

## Southern California

The Coachella Valley is making preparations for her fair and date fes- tival to be held November 1-3.

Onion growers of the Coachella Val- ley held a meeting at Coachella last week to organize a valley onion mar- keting association.

Farmers generally are making plea for extension of the school vacation season in order that pupils may aid in the harvest of various crops.

The Riverside Chamber of Com- merce at a recent meeting adopted resolutions asking for state aid in the construction of the Coachella Valley highway.

Ranchers on lowlands of Orange County who have heretofore raised sugar beets are considering turning their land to the raising of lima beans, grain and corn.

At the annual meeting of the West Ontario Citrus Association it was re- ported that growers received this year \$142,759.94, an increase of \$38,- 807.48 over last year.

A plot to blow up Sharp's Heading, in Lower California, one of the main structures in Imperial Valley's irri- gation system, was frustrated by the arrest of three suspects.

The death of 200 sheep on the Mal-ibu Ranch, at first attributed to poi- son, upon investigation by the deputy state veterinarian and county live stock inspector proved to be caused by anthrax.

Representatives from Imperial County have received promise from Governor Stephens that he will trans- mit to Washington their protest against the drafting of men needed in harvesting the crops.

The Imperial County farm bureau, to aid men who have been called to war, has organized a selling bureau for the purpose of handling without cost to these men, animals or imple- ments which they have to dispose of.

The Dougine Land Reclamation Company, organized for the purpose of manufacturing hydro-electric pow- er plants for the reclamation of mesa lands of California and Arizona, will establish a \$150,000 factory at Redon- do Beach.

The San Bernardino County farm bureau will make an attractive ex- hibit at the Riverside County Fair, at which a first cash prize of \$150 will be offered for the community or dis- trict having best exhibit of agricul- tural products.

The improvement association of Lucerne Valley, San Bernardino County, held its annual celebration and exhibit of products at the school house last week. Lunch was served at noon and dinner in the evening, followed by an interesting program.

The Riverside County farm bureau will hold a silo raising at which a specialist from the university will be present and show method of construc- tion and superintend its erection. This is the same type of silo constructed at Sacramento during the state fair.

The acreage of beans near Palm- dale and in other sections of the An- telope Valley, which last year con- sisted of two acres, was this year raised to 2000. Ninety per cent of the crop has already been sold. Many Teparies were raised in this section.

## The Coast

Douglas County, Washington, will have a \$7,000,000 wheat crop.

At the recent interstate fair at Spo- kane receipts show 76,000 admissions.

Northwestern wheat growers have received a basic price of \$2.05 in bulk at Coast points.

There was an especially good exhibi- tion of poultry at the state fair at North Yakima, Washington.

The Wenatchee Growers' Associa- tion, Washington, has just made a sale of 25,000 boxes of apples.

Navajo County, Arizona, will ship 25 carloads of beans. Last year the county had only three carloads.

Many breed associations are laying plans for live stock sales at Lewiston during the Northwest Live Stock Show.

The big movement of Colorado po- tatoes started the last week in Sep- tember. About 400 carloads are going out weekly.

At the recent Washington state fair 800 sheep were sold and the profits from two amounting to \$925 were turned over to the Red Cross.

A fruit drying plant with a capacity of 20 tons a day has been installed at the state prison at Walla Walla, Wash., where cull fruit of the valley will be handled.

Most of the peach crop from the Wenatchee section of Washington is being shipped to Montana and Can- ada. That district will send out about 147 carloads this season.

An effort is being made to consoli- date the Land Products Show and Growers' Food Show this year at Portland. The dates for the Land Products Show are November 3-24.

The state agricultural college at Pullman, Washington, opened on Oc- tober 1. This is much later than usual, owing to the desire to keep the stu- dents in the harvest field as late as possible.

The Washington Farmer reports that "there will be 25,000 more stock on the ranges of the Oregon-Washing- ton grazing district next year than this."

Milk producers of the Frazier Val- ley of Oregon have formed an associ- ation controlling 90 per cent of the milk produced in the valley. There are 800 farmers in its membership. The producers receive 27 cents per gallon.

Announcement has been made that the International Live Stock Show to be held at Portland this winter will have no display of stock other than fat cattle, all breeding animals being excluded for lack of housing facilities. The stock men are protesting.

Wheat growers of Washington Oregon and northern Idaho, assem- bled at Portland September 7, decided unanimously to carry their fight for a north Pacific coast terminal as a base in the establishment of a 1917 wheat price direct to President Wil- son.

Mrs. Edith C. Salisbury, who has been in charge of the home economics work of the university extension, has taken up work with the food commis- sion in Washington and will be suc- ceeded in the Arizona work by Mrs. Lockwood, who has been in charge of similar work at the Kansas agricul- tural college.



**GUARANTY—**

An agreement by which one undertakes to make sure and certain the existence, continuance, or the like, of something.—Webster.

In applying the strict letter, as well as the spirit, of Webster's definition of GUARANTY to registered Holstein cattle, the Holstein breeders have advanced to a point in this sale beyond any point of progress previously established.

Eighty head of individual attractions will be offered, both females and males, selected from among the top animals in high class herds by a Committee of three. In its selections the Committee will cause some very substantial sacrifices to be made by breeders in the carrying out of its instructions to produce eighty head of cattle in

this sale every single one of which will meet with the approval of the buyer who wants breeding animals of the highest desirability in every respect.

Beyond and after the actual sale will extend the most liberal health guaranty yet put into selling practice.

Committee of Selection: Frank L. Morris, Woodland, Cal.; James W. McAlister, Chino, Cal.; C. L. Hughes, Sacramento, Cal.

The management desires to avoid as far as possible any disappointments to those who wish catalogs, and owing to the unusual demand will appreciate early filing of requests.

**Management of****California Breeders' Sales and Pedigree Co.**

J. M. Henderson, Jr., Pres. C. L. Hughes, Sale Mgr.  
SACRAMENTO, CAL.

**Jerseys for Net Profits**

You're in the dairy business for profit—the *net* profit that your herd has made you at the end of the year will determine the size of your tank account. Jerseys yield the largest returns from every ounce of feed—proved by tests at two great expositions. Jersey milk averages 5.3% butter fat, 9.1%

solids not fat—highest of all breeds. Buy a Jersey bull. Write the breeders advertised below for prices, pedigrees, etc.

The American Jersey Cattle Club, 356 West 23rd Street, New York City

**Young Jersey Bull**

of excellent breeding at a fair price. Write for particulars to

**W. G. GURNETT**  
ORLAND, CAL.

Member Orland Jersey Cattle Club.

**Jersey Bull FOR SALE**

A fine straight one, bred right, priced right

**S. F. WILLIAMS**  
ORLAND, CAL.

Member Orland Jersey Cattle Club.

**ANCHORAGE FARM****Jerseys**

ORLAND, CAL.

Member Orland Jersey Cattle Club.

**Venadera Herd****REGISTERED JERSEYS**

Young bulls from proven dams in Register of Merit

**GUY H. MILLER**  
MODESTO, CAL.

ALL MY RECORDS are made under ordinary dairy conditions. The farmer's cow is

**The Jersey**

YOUNG BULLS FOR SALE  
**C. D. HAYWORTH**  
MODESTO, CAL.

**Young Jersey Bulls****FOR SALE**

One at the head of your herd will pay big dividends on his cost. Write to

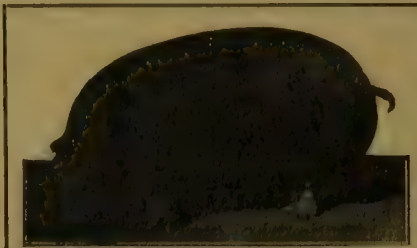
**W. J. HACKETT**  
MODESTO, CAL.

**Poland Chinas, Medium Type**

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain. 12 firsts, Junior Champion and Reserve Grand Champion Boar. Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

**M. Bassett**

Hanford, Kings County, Cal.

**The Kings County Fair**

Written for California Cultivator



HE wisdom of setting the proper dates for our various county fairs in California will be realized by the associations if they experience a few more years like 1917. With some of the associations taking certain dates without regard for other fairs, all are bound to suffer more or less. We do not know who was at fault this year, but the Kings County fair falling at it did on same dates as Stanislaus did neither any good. Possibly it hurt Hanford more because she would have secured her usual amount of live stock exhibits at least and possibly more. Hanford will always have a first class swine show because she is in the heart of a great hog producing district, but if the dates could be arranged properly by Modesto, Fresno, Hanford and Bakersfield each show would have a splendid live stock exhibit. The cattle barns at Hanford this year were noticeably bare because a lot of the showmen stopped over in Modesto following Sacramento, and many of them plan to go to Fresno the following week.

However the attendance at Hanford this year far surpassed that of last year, the weather was fine, and considering the fact that this is one of the county fairs which receive no support from state appropriations but is financed by the business men and breeders of the community the show was a creditable one.

**The Cattle**

Holsteins and Jerseys were out in force, but no beef cattle were entered. A. B. Comfort won senior and grand champion Holstein bull on Julianna De Kol King Segis. He also won junior champion bull and was well up in the money in the other classes. The Clarks were much in evidence in the Holstein section. Fred Ross captured junior and grand champion female on Rossmead Westport Cornucopia, a granddaughter of Fidessa Bloom, the former state record cow for seven day butter production. He showed a nice string of cattle and had them in fine shape.

**The Jerseys**

Three herds of Jerseys competed for the prize money and divided it evenly. C. I. Starr, a young breeder,

won senior champion bull on Financial King Of L. and, first aged herd R. L. Waltz won first on two year old cow, while Church and Hubbs won grand champion bull and cow. For the first time in years N. H. Locke was not present at the Hanford fair in fact the entire circuit missed him this fall, but conditions on the Locke ranch were such that it was impossible for him to take out a show herd.

**The Swine**

Poland-Chinas of course, claimed the lion's share of the prize money offered, and why shouldn't they? Kings County has been a leader in Poland-Chinas for many years and the annual show at Hanford is a wonder.

Wm. Bernstein, fresh from his conquest at the state fair, got the coveted purple ribbons on both boar and sow at Hanford. Kings Rosebuds and Rosebuds Chief, two outstanding individuals, turned the trick for Mr. Bernstein. The Bassett herd won a long string of blue ribbons and was quite up to its usual high standard. It is almost impossible to beat Mr. Bassett's great young boar Surprise in his class. Old Chief Victor, victor many times in the California show ring was not entered.

The big feature in the Duroc-Jersey division was the winning of the grand champion boar by Henry Cummings who showed this year for the first time. His boar is a Defender bred animal and was a contender for first money at Sacramento. R. C. Sturgeon brought out a Critic B young sow which won grand champion easily. If this young matron had been taken to the state fair she would have been a sensation as she is of championship caliber.

Charles Kimble brought out a few Rambouillets just to fill in although he had no competition.

Most of the Hanford exhibitors hurried home after the fair and did not ship to Fresno because they were urgently needed on the farm. We trust that by next year the war will be over and that the California association of district and county fairs will get together and agree on a schedule which will run the shows from Sacramento to Los Angeles without any conflicting dates or back hauls. Until they do this some of them are going to be the losers so far as live stock exhibits are concerned.

**Report of the San Joaquin County Cow Testing Association**

The following produced 45 pounds or more of butter fat during the last testing period of 30 days. We give name of owner, name or number of cow, breed, pounds milk, test, pounds butterfat.

Oak Grove Dairy, Blucher, G. H. 1639, 4.2, 68.9. J. DeCarli, 237, G. H. 1416, 3.9, 57.5. Gottshall & Magruder, Hengervelt, H. 1545, 3.7, 57.2. F. M. Thorp, Peiterji Nellie, G. H. 1170, 4.8, 56.2. County Farm, 125, G. H. 1329, 4.0, 53.2. Bruml & Thorp, Miss B., J. 995, 5.2, 51.4. Oak Grove Dairy, Lady, G. H. 1818, 3.8, 50.0. County Farm, 72, G. H. 1512, 3.3, 49.9. N. H. Locke Co., 205, J., 654, 7.5, 49.0. Bruml & Thorp, Lady M., J., 1159, 4.2, 48.7. Mrs. E. C. Clowes, 53, G. H. 1352, 3.4, 48.6. Mrs. E. C. Clowes, 35, G. H. 1316, 3.6, 47.3. O. Fowler, Jane, G. H. 819, 5.7, 46.7. Mrs. E. C. Clowes, 63,

G. H. 899, 5.2, 46.7. Mrs. E. C. Clowes, 91, G. H. 1006, 4.6, 46.4. N. H. Locke Co., 133, J., 741, 6.2, 45.9. F. J. Kell, 728, H., 1380, 3.3, 45.5. N. H. Locke Co., 108, J., 1102, 4.1, 45.3. Mrs. E. C. Clowes, 1520, G. H. 1333, 3.4, 45.0.

The following herds show the highest average milk production per cow during the 30 days. We give name of owner, number of cows, total average pounds milk.

F. J. Kell, 30, 792. County Farm, 37, 783. F. M. Thorp, 9, 758. R. W. Fisher, 18, 684. J. V. Brown, 7, 671.

The following herds produced the largest average amount of butter fat during the 30 days. We give name of owner, number of cows, test, pounds butterfat:

F. M. Thorp, 9, 4.1, 31.5. F. J. Kell, 30, 3.1, 28.4. County Farm, 37, 3.0, 27.6. Bruml & Thorp, 16, 4.7, 27.0. N. H. Locke Co., 73, 5.3, 23.7.



## Field Notes from the Live Stock Men

Karl Gotschall and A. R. Magruder, young Holstein breeders of San Joaquin County, spent two days at the Modesto fair while the judging was going on. Business affairs and labor shortage on the ranch prevented them exhibiting this year.

Wm. Bond, Alameda County Shorthorn breeder, was seen around the beef cattle barns during the entire week of the state fair. Mr. Bond has a fine herd of cattle which he has been breeding for almost a generation, but has not yet been convinced of the advantage of exhibiting.

Chas. Kimble, Kings County banker and sheep breeder, is running 6,500 Rambouillet ewes in the Tulare Lake district. Like all of our other California breeders he has been sold out of surplus breeding stock for months. Mr. Kimble sells sheep all over the United States and the quality of his fine wool sheep is of the best.

Professor O. E. Reed of the Kansas agricultural college, judged the dairy classes at Modesto and gave universal satisfaction. Mr. Reed had to catch a late train Wednesday of fair week in order to arrive at the Missouri state fair in time to judge dairy cattle.

Mrs. H. V. Bridgford has been an enthusiastic Holstein exhibitor all the way down the circuit from Sacramento. Mr. Bridgford of course, is the real exhibitor, but Mrs. Bridgford is a constant ringside visitor. She is very fond of Holsteins and an exceptionally good judge.

L. D. Smith, Alameda County Guernsey breeder, showed his string at both Sacramento and Modesto. This was Mr. Smith's first year at the fairs and he says it will not be his last. He supplies a select trade with a guaranteed brand of Guernsey milk and is building up a fine herd of registered stock.

George Kounias, Modesto business man and breeder of Holstein Friesian cattle for a comparatively short time, finally achieved his ambition to own a grand champion when his entry at Modesto, King Korndyke Hengerveld Ormsby, was presented with the purple ribbon. Mr. Kounias has another young bull on his place which is bred along the highest producing lines in the herd book. His name is Toyon King Korndyke Soldene, a six months old son of Finderne Soldene Fayne, (33.28 lbs. butter in seven days). His dam's sire, King Hengerveld, 29 A. R. O. daughters, including a 37 pound three year old, and who also made a world's 365 day butter record of 1395.06 pounds at three years old. Finderne Holingen Fayne is a half brother to Segis Fayne Johanna, world's seven day butter champion, 50.68 pounds. On his sire's side his grandsire is a full brother to Mabel Segis Korndyke, the first 40 pound heifer of the breed, and present world's champion junior four year old for 30 days.

A. J. Welch, Guernsey breeder of San Mateo County, left for New York after the close of the state fair where he will look after his business affairs but will no doubt find time to visit some of the famous Guernsey herds in that vicinity. The Hidden Valley Guernsey herd were consistent winners at Sacramento and their owner is one of the leading spirits in Guernsey affairs in California. He has only been identified with the breed here for a short time.

Shorthorn breeders are looking forward eagerly to the proposed combination sale to be held during the coming land show in San Francisco. The advantage of holding select sales of guaranteed stock has been a long time coming to the beef interests of California but is welcome now that it has arrived. Many of the breeders will be making a sacrifice of females they ought to retain just to get the sale business started.

Messrs Pickering and Painter, chairman and manager of the live stock department of the Land Show spent several days at the state fair lining up exhibitors. Mr. Pickering is a live wire who could go out and get any number of exhibits had he the space available this year to accommodate them.

George Watterson, Inyo County Hereford breeder, was an interested visitor at the state fair. He and Governor Packard of Arizona talked White Face cattle for hours at a time. Mr. Watterson has a line bred Repeater bull at the head of his fine herd of 100 or more females.

Ronald Hill, manager of the Tehachapi Cattle Company, took in the Sacramento show, accompanied by his wife. Mr. Hill is an expert cow man who has been doing big things in the production of "baby beef" down in Kern County. He uses nothing but the best bulls obtainable for range duty and he likes Herefords best of all the beef breeds.

D. O. Brant, of the Elliott Brant Company, Los Angeles County, attended the annual banquet of the Guernsey Cattle Club of which he has been secretary ever since its organization. Mr. Brant but recently returned from a two months trip East where he purchased 70 head of purebred Guernseys to add to his herd.


E. A. Noyes and Son, Sutter County Hereford breeders, motored down to Sacramento to see the cattle show. The Noyes' are just getting into the pure bred Hereford business, but have made a splendid start with a few choice head. They will in all probability exhibit next year.

Selling off 75 head of finished hogs to the packers, which realized more than \$3000, M. Bassett, the Hanford Poland-China breeder, made the statement the other day that after he had figured the cost of producing these hogs he found that they made him more profit than any variety of his fancy fruits, and fruit prices are not low this year either. The cheapest gain was put on these hogs by the use of barley stubble and alfalfa pasture. They were heavily grained the last 40 days of the feeding period, ranged in age from seven months to ten months, and averaged more than 235 pounds each when they went to market.

Owen Duffy of the Napa State Farm has just sold two yearling heifers at \$600 each, and two four months old calves at \$350 each. All of these were among the Napa State Farm exhibits at Sacramento during the state fair.

### HUSH!

It was in a churchyard. The morning sun shone brightly and the dew was still on the grass. "Ah, this is the kind of weather that makes things spring up," remarked a passerby casually to an old gentleman seated on a bench. "Hush!" replied the old gentleman, "I have three wives buried here."



**\$1.00 A LB. BUTTER**  
will pay for a new  
**DE LAVAL**  
**CREAM SEPARATOR**  
Every Three Months

**C**OMPETENT AUTHORITIES predict that butter will go to \$1.00 a pound before the winter is over.

Even at present butter prices no cream producer can afford to be without a separator or to continue the use of an inferior or half-worn-out machine another week.

It is not only our solemn duty to eliminate every waste of food products, time and labor, but the individual dollars-and-cents interest of every cow owner is too great to delay so important a consideration.


A De Laval Separator bought now will more than save its cost by spring. It can be bought for cash, or if preferred, on such liberal terms that it will easily pay for itself in its actual savings over any other separator or creaming system.

Why not see the nearest De Laval agent at once! See a new 1917 De Laval machine for yourself. Try it to prove every claim for it. If you don't know a De Laval agent write direct to one of the addresses below.

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LARGEST DAIRY SUPPLY HOUSE ON THE PACIFIC COAST.  
Alpha Gasoline and Distillate Engines, Ideal Green Feed Silos,  
Acme Ensilage Cutters and Blowers, Irrigation Equipment, Centrifugal and Deep Well Pumps and Alpha Spraying Outfits.  
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50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER



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**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by Imported Stallion Ibn Mahrus, head of our Arabian stud. Dams are the choicest thoroughbred mares on Santa Anita Rancho.

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**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted Prince Gelsche Walker, and bulls from one World Record sow and two California State Record Cows. Write for details.

Correspondence Invited

**Anita M. Baldwin**

W. H. TAYLOR, Superintendent
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GIVES GREATEST VALUE FOR LEAST MONEY.  
IT MAKES THEM FAT.

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<b>10</b> 2 Year Old <b>BULLS</b>	<b>SHORTHORNS</b>  <b>H. L. &amp; E. H. Murphy</b> Perkins - - - California	<b>8</b>  <b>BULL</b>  <b>CALVES</b>
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### Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count Glory 426982, grand champion at the California State Fair, 1916. Berkshire herd won Premier Exhibitor's banner at P. P. I. E.

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San Francisco      Mayfield, Cal.

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## State Dairy Cow Competition

Prof. F. W. Woll Writes of the Performance of the Herds Which Are Members of Cow Testing Associations and Which are Competing for the California Cultivator Prizes Aggregating \$300 in Cash.

**T**HE state dairy cow competition which is being conducted by the college of agriculture of the University of California has brought forward many remarkable records of both pure bred and grade cows, which have not been exceeded in any similar competition in this country or abroad. At the time of the closing of entries, May 1, this year, 410 cows owned by 45 breeders and dairymen had been entered in competition for prizes to be awarded for monthly or 10-months records; in addition eleven herds with an aggregate number of 384 cows were entered in competition for the prizes offered by the California Cultivator for the highest average production of butterfat for one year by herds belonging to a cow testing association.

The names of the owners of the herds competing for these prizes and the average number of cows entered in each follow: A. Ambort, Holtville, 30 cows; Floyd Beebe, Woodland, 14; Coppini & Coppini, Ferndale, 60; J. W. Coppini, Ferndale, 22; Curtis Darnell, Brawley, 10; Leonard Hess, Tudor, 22; John Hanson, Loleta, 30; Iver Iversen, Arcata, 37; F. J. Kell, Stockton, 18; Walter Terkelson, Ferndale, 55; G. E. Trigg, Ferndale, 36. Total, 384.

The three prizes of \$100 each, offered by the Cultivator, will be awarded for herds from (a) 10 to 25 cows, (b) 26 to 50 cows, and (c) over 50 cows, all heifers and cows in milk

during six months or more being included in the average for the herd. Association records for twelve consecutive months during the period from November 1, 1916 to February 28, 1918, will be considered in the award of these prizes. Owners, therefore, have the privilege of selecting the record period for their herds within the dates given, and since they cannot tell until the close of the period, during which twelve months their herd had the highest average production of butterfat, the exact figures will not be known until that time. We have, however, secured the data for the production of the competing herds during the past six months and give these in the following table. The figures include the records of production for all cows in milk during the respective months. If it should turn out later on that some of the cows were not in milk for at least six months during the record period, they will be excluded from the average; the figures given are therefore, subject to revision. It is very likely, however that they will stand without material changes.

The average monthly production of these herds is very creditable indeed, and especially in the case of the Humboldt County herds is exceptionally high, showing the effect of the nine years of cow testing association work in that section. Both the data presented in the table and the records for individual grade cows and groups of such cows as published in the

Average Production of Butterfat Per Cow Per Month, in Pounds

Owner	April		May		June		July		Aug.	
	No. Cows	Av. Fat	No. Cows	Av. Fat	No. Cows	Av. Fat	No. Cows	Av. Fat	No. Cows	Av. Fat
Aux Ambort	30	38.97	30	32.64	30	33.45	13	43.48	18	40.07
Floyd Beebe	12	47.97	14	42.70	16	40.94	59	43.81	60	41.52
Coppini & Coppini	57	41.80	56	43.59	59	44.05	59	43.81	60	41.52
J. W. Coppini	10	37.72	10	39.82	10	36.50	10	36.50	10	36.50
Curtis Darnell	11	44.33	11	44.33	11	44.33	11	44.33	11	44.33
John Hanson	66	35.50	73	40.54	75	41.03	90	42.14	95	37.70
L. Hess	11	44.33	11	44.33	11	44.33	11	44.33	11	44.33
Iver Iversen	32	50.23	33	54.24	37	50.98	37	50.98	37	49.50
F. J. Kell	16	44.08	18	40.77	29	29.63	29	29.63	29	29.63
W. Terkelson	45	47.58	48	53.78	52	50.37	53	49.77	53	47.36
G. E. Trigg	34	55.00	33	64.57	33	56.34	34	59.23	35	44.48

monthly summaries of the competition are, in fact, the most striking illustration of the value of cow testing associations to a dairy community. Very few pure bred herds, and perhaps none, containing as many cows as in these herds, can make a better showing. A production of over 90 pounds of butterfat for the month by a grade cow and over 75 pounds as the average for five grades, are records that any dairyman may well be proud of, and whole herds have averaged better than 50 pounds for the month, as shown by the table.

Such results can only be reached by taking advantage of systematic

testing of cows for milk production and by gradually improving the production of the herd through the use of good pure bred dairy bulls, by disposing of low producing cows and heifers, and by feeding and handling the cows kept in such a manner as to obtain a maximum production from them.

The Cultivator deserves great credit for encouraging cow testing association work in this state through the award of the prizes mentioned; no more important work can be done for the advancement of California dairying than to aid in increasing these associations in scope and usefulness to our dairy farmers.



Major Hadley Wonder 242397

This Poland-China is said to be Model Major's greatest son who won the senior and grand championship at Sacramento State Fair. Bred by H. I. Marsh and owned by J. H. Hansbrough.

## Protecting Fur-Bearing Animals

**T**HE fur-bearing animals of the Pacific Coast are estimated to bring a return of \$1,000,000 each year, according to report of the state fish and game commission. This is interest at 5 per cent on \$20,000,000. It is decidedly worth while to protect this invested capital and to increase it if possible. It is on this account that at the last session of the California legislature a law was passed protecting California's share of this vast amount during the time of the year that the furs are of no value and establishing other restrictions that will aid in conserving the fur industry.

The law defines the fur-bearing animals as brown and black bear, ring-tailed cat, coon, pine marten, fisher, wolverine, mink, river otter, gray, cross, silver and red foxes and establishes an open season during the months of November, December, Jan-

uary and February. During this time it is lawful to take them only by means of guns and traps, but when destroying property they may be killed at any time. Trapping for profit can only be carried on under authority of a trapping license. The cost is \$1 for citizens and \$2 for aliens. There is no charge for a license for those under the age of 18. All trappers over the age of 18 must make an annual report of the number of furs taken. Through this report very reliable data will be obtained that will be of assistance in properly taking care of our fur industry. One of the most pleasing provisions of the new act is the protection which is given the black and brown bear. There has been an urgent demand in all the mountain sections of the state where bear are still found for protection for this valuable animal, but up to this time it has been impossible to do so.

## Tuberculous Skim Milk and Buttermilk

While there are no available statistics upon the subject we believe the amount of loss to California livestock men because of the feeding of raw skim milk and buttermilk from creameries, if it were known would be appalling. From Prof. Gordon H. True we have information that at a San Francisco packing house the percentage of condemnation of hogs for

tuberculosis in a recent killing ran as high as seven per cent in one entire week. Another week the percentage ran well up towards nine per cent. Prof True advises:

"This high percentage of tuberculosis in hogs would seem to be due to the feeding of raw skim milk from tuberculous cows. At a time like this when pork products are so high and milk products so valuable it seems



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We Will Deliver to Any Railroad Station in California

**30 TUBULAR STEEL STALLS**  
Complete With  
**30 TUBULAR STEEL STANCHIONS**  
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**WE CARRY COMPLETE LINE LOUDEN HAY TOOLS**  
**A Complete Louden Litter Carrier Equipment**  
For a 30 COW MILKING BARN of Average 35x50 ft. Size will be  
Furnished and Delivered to Any Railroad Station  
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Such an Outfit Will Save You Its Cost in One Year  
You Can Install a FEED CARRIER OUTFIT in Connection  
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## ABORTION IN CATTLE



**PREVENTED AND CURED PERMANENTLY**  
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**STERILOID**

**STOP LOSING CALVES**

**TREATMENT:** If STERILOID is used at the first sign of abortion the cow will go her full time and if your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for FREE BOOK. It explains the causes and symptoms of Abortion and tells how to cure Abortion, and make your cows regular healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID.

**GUARANTEE:** We will refund money in every case when STERILOID FAILS to make good.  
Price \$1.00. Mail postpaid, in plain wrapper.  
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Reference, Colonial Bank



be utmost folly for dairymen to take the chance of feeding raw skim milk from questionable herds to their hogs. "I would suggest the propriety of our urging through the columns of our paper that a special effort be made to secure the practice of pasteurizing or boiling milk that is fed to hogs. The freedom of California hogs from tuberculosis would automatically raise the price of hogs for all sellers."

We know there are ranches where his loss is a serious factor. Clean up.

#### SOME STORY

The yellow press is the cause of no little trouble and much injury to many a community. The Cultivator referred in its issue of September 22 "3000 sheep dying because of poison." This poison was put out in the squirrel campaign which was general all over the state and an "enterprising" reporter, flinging the truth to the winds, stated "3000 sheep were killed from eating poisoned grain." We reprinted the item supposing it truthful. The Terra Bella News of August 24 refers to investigation by an agent of the department of agriculture and adds: "Arriving here he found that only 16 sheep had died out of the 3000 driven in and he was much relieved."

#### SKIMMING RICH CREAM SAVES FEED

In skimming 100 pounds of 35 per cent cream, 15 more pounds of skim milk is kept on the farm than when the same amount of 20 per cent cream is taken. This saving can be accomplished by a turn of the cream screw, and at present feed prices is well worth the effort required. More skim milk on the farms also means more calves raised to furnish meat and milk for all. Milk producers are paid for the butterfat in cream; not for the water and other constituents. This makes it advisable to skim a rich cream, so that as much valuable skim milk as possible may be saved for feeding purposes.

#### WAR SILOS

Prof G. H. True, at the Swine Breeders' banquet at Sacramento, said: "What is best in peace is best in war"—referring to the production and consumption of meat as against grain farming without livestock, and the eating of grains instead of meat.

The same is true of silos. They are a war necessity for the production of additional meat and milk, and hundreds of farmers who are building and filling silos this fall are unconscious patriots.

In the Sacramento Valley these silos will be filled with a wide variety of feed, including all of the non-saccharine sorghums and Indian corn. The acreage of feterita and milo is comparatively large. Every kind of corn is proving satisfactory as a silage crop.

#### DIRTY CREAM CANS WASTE FOOD

Dirty cream cans are food wasters. Butterfat that sticks to their sides doesn't help to feed the allied armies or the women and children at home. Besides the fat actually lost in dirty cans, there is a greater loss through the manufacture of the inferior product that is the result of poor cream. Save fat by cleansing the cream can carefully. It pays, and our soldiers and Allies need the fat.

#### SALE OF JERSEYS

Chris Myhre manager of the Orland Cheese and Butter Company of Orland, Glenn County, announces the auction sale on October 8, of his entire herd of pure bred Jersey cattle. The auction sale will be conducted by Leachman and Linbarger.

# ACME FEED CUTTER

## and SILO FILLER

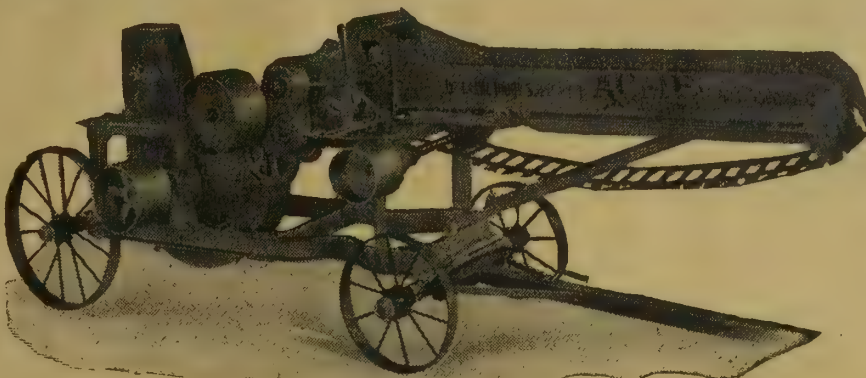
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Place Your Order Now While Stock is Complete

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#### THE LIGHT RUNNING ACME

An Acme will cut anything that will make silage and elevate it to the highest silo. That is not all. When not in use as a silo filler you can use it anytime to cut dry feed. Cutting up dry feed is helping to reduce feed costs from 10 per cent to 20 per cent on hundreds of

farms in California. If you want to make alfalfa meal the Acme Feed Cutter can be equipped for this purpose. An excellent grade of meal can be produced at a cost of about half of that for baling.

#### THE ACME IS THE ONLY ALL-STEEL FRAME CYLINDER CUTTER MANUFACTURED

This frame is securely riveted throughout. There are no bolts to jar loose. The frame can't warp nor the bearings get out of alignment as is the case with the old style wooden frame cutters. Vibration and wear are reduced to the minimum in the Light Running Acme.

The Blower is Center Hung between the side members of the frame giving strength and rigidity to the entire construction.

The Triple Frame construction allows three bearings for the main shafts eliminating vibration from that source.

You don't have to buy a truck for an Acme Cutter. They all come mounted on a steel wheel truck complete with pole.

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We Can Install an Ideal Green Feed Silo on Your Ranch on Short Notice

# 125 OPPORTUNITIES 125

At Public Auction, McClure Farm, Santa Ana, Cal., October 16-17, 1917

## 103 Registered Holstein Females

A 28 pound cow and her three daughters.  
A full sister to a 31 pound four year old.  
Eighteen granddaughters of King of the Pontiacs.  
A granddaughter of Rag Apple Korndyke 8th.  
A granddaughter of Tilly Alcartra.  
Four helpers sired by a 29 pound grandson of King Segls.  
Twelve A. R. O. cows with records up to over 28 pounds.  
A granddaughter of Hengerveld De Kol.  
A granddaughter of Sarcastic Lad.  
A splendidly bred granddaughter of King Segls Pontiac.  
Splendid cows and helpers bred to King Pontiac Netherland Segls.  
Richly bred cows and helpers bred to a son of Colantha Sir Aaggie out of a 28 pound daughter of Colantha Johanna Lad.  
Altogether as choice a lot of females as ever went into a sale in California.

## 22 Registered Holstein Bulls

King Pontiac Netherland Segls, a proven son of King of the Pontiacs and out of a good record daughter of King Segls Pontiac. Here is a real herd header, one of the last sons of King of the Pontiacs that will be available in California.

A son of a great 34 pound cow, the highest record bull yet sold at auction in the state.

A son of Colantha Johanna Lad, the first son of this sire offered at auction in California, and he is out of a granddaughter of Pontiac Korndyke.

Two sons of King Segls Pontiac Jannek, the great young sire owned by James J. Jeffries.

A son of King Pontiac Topsy, out of an 18.22 pound four year old daughter of Pietertje Hengerveld's Count De Kol.

Fourteen grandsons of King of the Pontiacs out of good dams, many with A. R. O. records.

In this sale Ernest Otto McClure, Santa Ana; A. Satterberg, San Jacinto, and P. H. Jarrett, Lancaster, will disperse their entire herds; McAlister & Sons, Chino; Santa Anita Rancho, Santa Anita; R. Nadeau, Saugus, and Aro Herd, Buena Park, will make consignments of choice cattle.

Extra good foundation females are present in large numbers in this sale, substantially bred and of very desirable type. And the bull offering is of a wide range, from the high class header for a registered herd to the well bred head of a grade herd. Of special attractiveness to dairymen is the group of young bulls, many of them grandsons of King of the Pontiacs.

Every animal in this sale has been tuberculin tested and has individual tuberculin test certificate. Catalog now ready, write for a copy.

Sale under Management of

## California Breeders' Sales and Pedigree Company

J. M. Henderson, Jr., Pres. C. L. Hughes, Sale Mgr.  
Sacramento, Cal.

Auctioneers:

Col. Ben A. Rhoades, Harold B. Rhoades

Clerk of Sale, H. A. Olsen

Orange County Trust and Savings Bank



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**A RELIABLE PROTECTION  
FOR CATTLE  
AGAINST BLACKLEG.**

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NO STRING TO ROT.

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**DR. B. J. KENDALL COMPANY,**  
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**HOLSTEIN-FRIESIAN  
CATTLE**

Registered young bulls from best families. Some of serviceable age.

**REGISTERED BERKSHIRE PIGS**

Masterpiece, Longfellow and Robin Hood Strains. Fine individuals of both sexes—we pay registration fee. Careful attention given to mail orders.

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Whittier, Calif.

**FARMERS' NOT A POISON  
POWERFUL DISINFECTANT**


FLUSH COWS AFTER CALVING. Most valuable for bringing after-birth and also for treating barren cows and controlling abortion. B-K kills the infecting germs, heals the uterus, removes the slime and acid—no odor—no straining. More effective than Iycol, Lugol's solution, carbolic acid and creosote—much safer. Send for our Bulletin 52 "Contagious Abortion" and testimony from leading breeders. Special Trial Offer. General Laboratories—Madison, Wis. 3112 So. Dixon Ave.

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Expert Live Stock Auctioneers  
Pure Bred Stock Sales a Specialty  
Sales conducted in all parts of California and Adjoining States. 25 Years' Experience.

**BEN A. RHOADES, Auctioneer**  
1801-3-5 So. Main St., Los Angeles, Cal.

**Registered Jersey Sale at Modesto**

On Tuesday, September 25, the California Breeders, Sales and Pedigree Co. conducted a consignment sale of pure bred registered Jerseys on the fair grounds at Modesto. Forty animals, mostly females, were sold, all to buyers of the San Joaquin valley. There were eight consignors to the sale; Guy H. Miller, Jno A. Orr, W. J. Hackett, C. W. Hackett, O. J. Ames, M. W. Brady, Fred B. Wulff, and the Riverina Farms. The sale was conducted by C. L. Hughes, manager of the sales corporation. Col. Ben A. Rhoades of Los Angeles assisted by Col. Cy. N. Clark of Modesto

acted as auctioneers. Some especially fine animals changed hands, going to the following list of buyers: J. E. Brashear, Mrs. W. H. Blankenburg, M. W. Brady, A. A. Johnson, J. A. Henry, David Hardie, D. M. Hackett, N. C. Lollich, L. P. Scheld, T. Sestino, E. Schneider, W. Wilson, C. L. Woodbridge, all of Modesto. O. J. Ames, Jr., J. Rockafellow, of Oakdale; E. W. Doane, Merced; L. R. Loper, J. H. Snider of Chowchilla; P. Rutherford, Turlock; E. E. Porterfield, Ceres; F. Kakinson, Keyes.—C. A. Briggs.

The Northwest Live Stock Show is to be held at Lewiston, Idaho, November 8-15.



Willowmoor Vesta IV

**ANOTHER AYRSHIRE CHAMPION**

Willowmoor Vesta IV (34150) has just finished her junior four-year-old advanced registry test for a year, qualifying with a record of 17755 pounds of milk and 753.18 pounds of fat, which entitles her to the junior four-year-old Ayrshire world championship in her class.

She was bred by J. W. Clise, Redmond, Wash., owned and tested by E. B. McFarland, San Mateo. She is

from Mr. Clise's famous Robin Hood strain. This record is all the more wonderful because she was on her fair circuit at the time of starting her advanced registry test, being entered in a five-day butter contest at Sacramento, making 10.69 pounds of butter fat. In a breed contest she scored the highest of any breed, 93 points. She weighed while on test 1280 pounds.—C. M. Winslow, Secretary-Treasurer Ayrshire Breeders Association.

**Encouraging the Layers**

Written for California Cultivator By Jean A. Koethen

**W**AR TIME tribulations of poultrymen will not have been in vain if they bring about a realization of the fact that many hens never are and never can be profitable layers and that many hens which might be profitable layers are spoiled by mistakes in management. The ovary of every hen contains hundreds of oocytes called oocytes. Many of these will develop into eggs. Many never will. Probably no hen has sufficient productive power to develop all the oocytes in her ovary, but the number she does develop depends largely on the encouragement she receives at the hands of the man or woman who cares for her. From 180 to 280 eggs a year is about all a hen can produce under the most favorable circumstances. Untoward conditions will cut her production in two. There was a time when just "keeping hens" seemed a guarantee of reasonable profit. Now we are beginning to understand that only the hen that does her best from the day she lays her first egg is worth keeping, and it is up to her keeper to make her do her best. Proper encouragement of the layer

begins before she is out of the shell. We might, indeed, go back to her grandmother as the ultimate beginning, but any discussion of breeding here will lead us too far afield. Granting that the pullet has been properly bred, that her mother was a high producer and her sire the son of a high producer, her usefulness will still depend largely upon the time of her hatching. The most profitable layers are those which begin in October or November, not only because they furnish eggs when eggs are bringing the highest prices but because they will have more months to lay before molting. Very many amateur poultry keepers delay their spring hatching for various reasons—hens don't go broody, perhaps, weather is cold or wet, more often the real reason is that they just don't get around to it—and then wonder why the

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**DRY MASH****The Best Feed on the Market**

Has the highest protein at the lowest price \$2.80 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form; before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or **The Globe Mills, Los Angeles**

**Mr. Poultryman: TRI-STATE MOLT MASH**

will help your hens through the molt and make it possible for you to stay in the business.  
SOLD by our agent in each town or inquire of GLOBE MILLS, LOS ANGELES, Southern Wholesale Distributors, or TRI-STATE POULTRYMEN'S COOPERATIVE ASS'N., Headquarters, Fresno, California.



pullets do not lay. Bald facts are distasteful to a good many poultry keepers, but let us keep this one clearly in mind, that the average Mediterranean requires six months of growth before she reaches laying maturity and the average hen of the heavy breeds, from seven to eight months. There are exceptions, many of them, but we are speaking of averages. California poultrymen begin hatching in January, and some of them finish all their hatching before the first of April. On one big Leghorn plant I visited last spring all the hatching was finished in February. These February birds are very likely to molt in the fall but even then they are more profitable than late hatched pullets.

As soon as sex can be distinguished in the young birds, pullets should be separated from cockerels and given more room. On most farms the chicks can be given free range from the start, and this is a great advantage, for the pullet must develop muscle or she cannot become a productive layer. On the large poultry farms, where free range is out of the question, its place is taken by deep scratching litter in which the birds must dig for every grain they get. Even on farms where several thousand birds are raised in a season, a small run planted to barley can be given the chicks, and they find endless occupation as well as exercise in running about in the growing green. To raise chicks in bare yards is to invite disaster, not only because of the diseases which attack chicks raised in filth and idleness, but because the essential muscular development of the pullets is almost impossible under such conditions.

Green range during pullethood is of great importance, but is not more important than a sufficient ration of the right ingredients. Our preconceived notions of what a developing mash for pullets must be have been jarred somewhat by the high prices of feed, and we find it possible to get along without some things we thought we must have. Greens, meat, grain, these are the essentials. It doesn't matter so much what grain or what

meat or what green feed. My pullets this summer have had a mash of two parts oat chop, one part bran, one part alfalfa meal and a little less than one part fish meal. I should have preferred ground oats to oat chop and regret the omission of middlings, but the pullets have seemed to thrive and are beginning to sing as energetic pullets should. Their green feed all summer has been kale, and I cannot sufficiently congratulate myself on the good patch of it I planted last spring. It has given all my birds all the green feed they would eat and has helped to keep the hens laying far into the molt. Kale is not the best of green feeds. Alfalfa and clover are better because they contain more protein, but kale contains a considerable amount of mineral salts and is the most economical green that can be raised.

In addition to the green feed and the dry mash there must be a daily feeding of whole grain. A mixture of grains is best for the purpose, but one grain at a time, if the grain is changed from time to time, answers quite well. Expense must be considered, and the grain that can be had most cheaply can often be supplemented by other things. While I was feeding barley alone, as I did for a while, I gave the pullets frequent meals of boiled rice. Rice is not a cheap feed, but I happened to have a quantity of broken rice on hand, and the chickens, young and old, are fond of it. Whole barley is a dangerous feed when used to the exclusion of other grain. The hulls and beards pack the crop and impair digestion, often causing serious illness and even death. If the barley is soaked over night in cold water the hulls will be considerably softened. If they are soaked 24 hours and then sprouted the little hull that remains is of no consequence. Sometimes the barley may be steamed to soften the hulls. This is done by covering with cold water and leaving on the stove till it reaches the boiling point. If this is done at night and the barley allowed to stand till morning it will then be ready for feeding. Oats may be steamed in the same way.

## A Good Hatch

"I would like to tell you about a clutch of pullet's eggs I set this spring. I put 14 eggs under a Buff Orpington pullet, all my hens being April, 1916 birds. The eggs were due out on March 13. On that day there was no sign of any even cracked, so I just left her on the nest to see what would happen as I had always understood that pullet eggs were not fertile. On the morning of the 15th the hen walked out with 14 chicks all strong and healthy. I did not lose one and they are all alive now except those young roosters that I have killed to eat. Is not this rather exceptional or was it just good luck?—H. Beatrice Smyth.

A very exceptional hatch, and greatly to the credit not only of the pullets that laid the eggs, but of the

hen that hatched them. Very few Buff Orpingtons can get a brood of chicks out of the shell without some casualties. Their intentions are good but they are heavy and clumsy. I should keep that hen till she died of old age. There is no such thing as luck about hatching. Not only was your hen a good sitter but there was some reason for the unusual fertility of the eggs. Was it the vigor of the male bird, the care which the pullets had received or the ration which had been fed to all? These are questions you can perhaps answer for yourself as you compare the antecedents of these chicks with those of previous broods.—J. A. K.

# Straight Answers to Timely Questions

## What is Pratt's Poultry Regulator?

A positive tonic and conditioner for poultry of all kinds and ages. A health-builder and health-preserver. Not a food.

## What does it contain?

Roots, herbs, spices, mineral substances, etc. Each ingredient performs a certain duty. The combination spells "health insurance."

## What does it do?

Pratt's Poultry Regulator makes and keeps poultry healthy, vigorous and productive. It sharpens the appetite, improves digestion and circulation, hastens growth and increases egg-production. It saves feed by preventing waste due to poor digestion. It prevents disease by keeping the birds in condition to resist the common ailments.

## Has it been fully tested?

Yes! In general use for nearly fifty years. The original poultry conditioner. Imitated, but unequalled.

## Does it give general satisfaction?

Positively! Satisfaction guaranteed or money refunded. Test it at our risk. Increased egg-production will prove that "Pratt's makes hens lay."

## How is it best used?

Daily, in small quantities. For adults, a tablespoonful daily for 10 birds. Younger stock in proportion. Mix with dry or moist mash.

## What does it cost?

Nothing, because it pays big profits. One cent a month per hen is the investment required.

## Where can I get it?

From 60,000 Pratt dealers. There is one near you. Direct from the manufacturer, prepaid, if your dealer can't supply you.

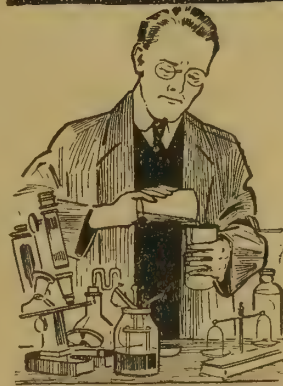
## How can I learn more about it?

Ask the Pratt Food Co., Philadelphia, for valuable FREE BOOKS on poultry keeping. Write today!

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Bulletin 162, just issued by the Department of Agriculture, states that Buttermilk is the only preventative of White Diarrhoea. It has been proven that many birds apparently in perfect health have these germs in their system and that they are transmittable to their progeny. Science has discovered that the Lactic Acid Bacilli of Buttermilk kills these poison germs. Write to Berkeley for this important bulletin, free.

The Dry Buttermilk in GLOBE A-1 BUTTERMILK MASH contains 10,000 live Lactic Acid Bacteria to the cubic centimeter.

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**Mr. Reader, are you to be one of them?**

Twenty bred gilts due to farrow during October and November 50 "Billiken" pigs, both sexes, farrowed in March, April and May.

Write today for prices and booklet that tells all about the Chester Breed.

Every animal Cholera Immune; Registered.

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MILLS - CALIFORNIA

**STOCKMEN: Stop at the****GATES HOTEL**

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Will sell bulls that give satisfaction to the buyer and at reasonable prices.

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Fresno - California

**Questions and Answers**

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

**Feeding Poisoned Rabbits**

In your September 15 issue I note an inquiry from a subscriber at Nipomo relative to feeding strychnine-poisoned jackrabbits to chickens, dogs and hogs. I quote the following lines from the "American Journal of Clinical Medicine," October 1908, page 1369: "Poultry and Poison," which states that "poultry may be impregnated by administering nux vomica in the food to a degree that birds of prey eating it will die while the fowls suffer no prejudice, and their meat eaten at the table causes no inconvenience to human beings. This recalls an experience while serving with the army in the Indian country. I was a 'pejouta wichascha (persona grata) to many of the Yankton Sioux, and some of them prepared a very handsome wolf skin for me, I furnishing the strychnine with which to poison the animals. The Indians told me that the 12 carcasses from which the skins were taken had furnished the material for a big feast, and as the feet were yet attached to the skins prior to tanning I procured one of these and made a test for strychnine, obtaining a positive reaction, showing that the whole carcass was impregnated, but no harm came to any of the Indians who had participated in the feast. Indeed I learned afterwards that although large amounts of strychnine were being used and it was generally all consumed by the wolves, that the flesh of the poisoned animals was always eaten."—H. Lowry, Santa Paula.

**Early Peas.**

Please give information regarding best variety of early peas to plant method of culture, and whether October or November would be the best time to plant. Wish to plant the peas early in order to follow with potatoes and a later summer crop of corn. The land is on the eastern side of San Francisco Bay.—Subscriber, Los Gatos.

Regarding the best variety of early peas to plant, we would recommend either "Little Marvel" or "Alaska". The latter is a fine standard type and should the winter prove extremely wet and cold, this pea will stand the test. It is very popular amongst the canners. "Little Marvel" is of more recent introduction, but is gaining in popularity rapidly and is the most prolific of all the early varieties; each pod being well filled. Both are dwarf types.

Select the most sheltered situation you have for planting, as they will then be well protected from severe frosts, furthermore you stand a better chance of getting an extra early crop which really pays, and the chances of attacks from aphids are not so great.

The ground should be well plowed and disked. This work must be attended to as soon as practicable. If the selected site has been heavily cropped previously and not treated with manure, it would be advisable to apply a covering of farmyard manure and plow this well in, fairly deep.

For field culture the seed should be sown in rows two to three feet apart, three inches deep. It will take from 80 to 125 pounds to the acre. When

the peas are two inches high, providing the ground is not too wet, the cultivator should be run through the rows and kept in use as opportunity offers.

We think the question of time to plant depends upon the weather conditions. If we get early rains, then the middle of October would be a good time to plant, but if conditions are such that the ground will be dry immediately after planting, we would advise waiting, however, careful observation will prove a good guide and if conditions indicate substantial early rains in October, we would advise planting sometime next month.—A. R. G.

A similar question as to early peas for Southern California is answered by D. F. Reichard.

In favored locations early varieties of peas may be planted in October to make crop during late December and January. The best variety is the Laxtonian, a dwarf growing early pea with a good sized dark green pod. Notts Excelsior and the American Wonder peas also have their merits. After thoroughly soaking the ground to be planted, plow and work it down fine with a harrow. Plant the seed two inches deep in the moist soil, either with a drill or by making a furrow, using about one pound of seed to 300 feet of row. Have the rows 24 to 30 inches apart. If rains do not come shortly after the young peas are up, they should be irrigated, after which they should be cultivated.

**Pimiento Peppers.**

Am trying an experiment of growing pimiento peppers in lath house, starting the plants in cold frame and as they grow raising the glass up. They are fine healthy plants and have begun to flower, but I do not know whether they will mature. Am told that this part of the country is too dry for the pimiento to make flesh enough. I am using a heavy top dressing of well rotted manure which is kept well soaked with water, and I keep a pan of water beside the plants all the time hoping to create moisture around them.—Subscriber, Hemet.

Pimiento peppers are grown with complete success throughout Southern California during the warmer months and can be grown under glass by keeping a night temperature of 45 degrees to 55 degrees while the day temperature should run 15 degrees higher. Keep the plants in good growing condition, but don't keep your soil so wet that it will sour and soon kill your plants.—D. F. R.

**Borers.**

Please advise best method of preventing borers from getting into fruit trees.—Subscriber, Galt.

A heavy whitewash with plenty of salt to harden and make it stick answers well. This has no effect on borers already in the tree. They should be removed before the whitewashing by the use of a wire or should be cut out with a knife. Then cover with whitewash, which may be made still more effective by mixing in a quantity of tallow with the slaking lime. The formula given in our special spray number is as follows: Quicklime 30 pounds, Tallow 4 pounds, salt 5 pounds, water enough to make the mixture flow freely.

Another remedy is the application of two coats of hard asphaltum. This is often used in the spring after digging out the borers.

**Replanting Walnuts**

Have about 30 five-year-old walnut trees planted on loose dry land. The trees are only about two inches in diameter. I wish to transplant to land that is richer, with sub-irrigation. Please give best time and method of transplanting.—Subscriber, San Luis Obispo.

The trees could be transplanted by taking up the largest possible amount of roots with the body and cutting back the branches severely, leaving only three or five stubs not more than a foot long. This work should be done in January and the planting should be followed with water enough to firmly settle the earth around the roots. However, we think better results will be obtained by getting thrifty young trees from a nursery and planting in the desired places. Do not make the mistake of planting too closely. Walnut trees should be 60 feet apart on good land.—J. B. N.

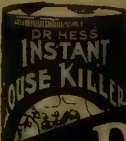
**LIVE WIRE INSTRUCTION**

The manual training teacher of the high school at Lancaster, Antelope Valley, is doing some practical educational work in suggesting to the farmers of the valley that implement repairs be brought to the school where the actual work of repairing may give to pupils opportunity for experience and at the same time make cheaper repairs for the farmers. The training teacher, B. C. Hubbard, has written ranchers:

"You no doubt have a number of tools, wagons, double-trees and what not that need repairs. Say you need a new wagon tongue, mower tongue or repairs for the hay rack. We have a number of boys who will some day be ranchers and ought to know how to make the repairs on the farm in a neat and workmanlike manner. They need experience.

"Now what we propose is that you furnish the material and tell us what you want, and we will have it done as soon as possible without charge, other than for materials or metal work that we will have to buy elsewhere.

"Or, if you are going to build a chicken house, hog house, or any small farm building, we would be glad to make plans for you, and draw up a bill of material for it."

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Instant Louse Killer  
Kills Lice****Use Freely  
For Poultry and  
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**For Poultry**—Seize the hen and dust Instant Louse Killer into the feathers. Sprinkle it in the nests, on the roosts and floors. For convenience sprinkle Instant Louse Killer in the dust bath occasionally—your hens will do the rest. This means louse prevention.

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Avocado Budwood, Tree Performance Record, Leading Varieties. The Fuerte at two years of age matured from 2 to 76 fruits per tree and has proved harder and highest in oil (30.72 per cent) of the thick skin varieties. J. T. Whedon, Yorba Linda, Cal.

Pear Trees — Offer several thousand Bartlett's, 2 and 3 feet, heavy caliper at 9c each. French prunes. Trees of all kinds. No agents; we sell direct. Write for price list. Carlton Nursery Co., Carlton, Ore.

By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator. The cost is only 3 cents per word per issue, with a minimum of 35 cents.

For Sale—Valencia trees, extra fine yearlings, straight, thrifty, sour root, high buds, not fertilized, fine soil for balling. Will contract for spring planting. S. R. Coate, Anaheim, Cal.

For Sale—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. Randall Bros. Nursery Co., Whittier, Cal.

Olive Trees — Mission, Manzanillo, Ascolano. Propagated by me from trees of known bearing qualities. Guaranteed. L. T. Schwacofer, Hemet, Cal.

Citrus Trees — All kinds, any quantity. Butler's Morning Side Nursery, La-Manda Park, Cal.

Citrus Nurseries, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

WANTED

Wanted — Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' work to right parties. Address J. H. Yetter, Sales Department, 822 Santa Marina Building, 112 Market St., San Francisco, Cal.

Wanted to Purchase good second hand pipe and screwed well casing. I can furnish all sizes of pipe and casings in first class condition. Write for prices. W. G. Leahy, 1002 Santafe Ave., Los Angeles.

Wanted—Single dairyman for entire care of small herd. With best references. Capable and experienced in every department of milk production. Call 3028 W. 8th St., Los Angeles.

Wanted — Practical farmer with tractor or some money as partner to put in wheat. Address Farmer, 332 South Bunker Hill, Los Angeles.

We Buy Weed Seeds—Mustard, rape, anise, bitter clover, etc. Send samples. Write us, stating quantity and price. Globe Mills, Los Angeles.

One of the Most perplexing problems to farmers and ranchers is that of help. A small liner ad in California Cultivator is the quickest and easiest means of securing farm help.

Weeds Wanted—Flowers, seeds, berries, leaves, barks, roots, 2c. to \$2.50 lb. National Drug Co., Yakima, Wash.

Man—To wear fine suit, act as agent; big pay, easy work. Banner Tailoring Co., Dept. 738, Chicago.

SEEDS AND PLANTS

Alfalfa Planters, fill your fall requirements NOW with GREEN-GOLD seed. High quality because of personal field selection. Low price because of direct dealing. Send for samples and prices. Bomberger Seed Co., Modesto, Cal.

\*\* ORDER YOUR SEEDS NOW \*\* If you are going to need any seed for next season now is the time to render your order. It may be impossible for you to buy what you need later. V. A. Peterson, Alfalfa Seed Co., Arbuckle, Cal.

\*ALFALFA SEED OUR SPECIALTY\* Alfalfa Seed—Common variety, hairy and smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. E. F. Sanguinetti, Yuma, Arizona.

Rhubarb—\$1127.00 from one acre. A crop every month of the year. Write to me and I will tell you how you can do as well. J. M. Stone, Lodi, Cal., Route 4.

Vetch Seed—New crop clean seed, \$4.00 per 100 lbs., on car. Alsike, Red Clover. Price on application. Carlton Nursery Co., Carlton, Ore.

20,000 Yellow Calla, Elliottiana; Pink Calla, Rheumani Spotted Leaf White Calla, William Richard Nursery, Santa Cruz, Cal.

For Sale 50,000 Choice Banner Strawberry Plants—Hugh C. Newton, Castella, Cal.

New Crop Alfalfa Seed now ready. Not the lowest in price, but high in quality. Leo Turner, Yuma, Arizona.

MISCELLANEOUS

Famous Hairy Peruvian Alfalfa Seed—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.

Slacked Lime—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road Pasadena.

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

HOGS

Registered Durocs—We offer for sale a choice service boar out of a daughter of Modesto King and by a grandson of Burk's Good E. Nuff; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col.; three young boars out of a great sow of Crimson Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. Derryfield Farm, I. O. O. F. Building, Sacramento, Cal.

Chester Whites, the Billiken Brand—The big winners at the California State Fair; Billiken was Grand Champion boar; a son was Reserve Grand Champion and a daughter was Grand Champion sow. Do you want some of this strain? Twenty gilts bred to farrow during October and November. Fifty Billiken pigs, both sexes—March and April farrow. Every animal is cholera immune. Write for prices and booklet on Chester Whites. C. E. Cunningham, Mills, Sacramento County, California.

Grape-Wild Farm Berkshires — World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

Large Yorkshires — Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

Wanted—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

Duroc-Jerseys — Golden Models — Show stock that win. Peters, Lamson & Walker, Devore, San Bernardino County, Cal.

Bernstein Sells 20 head of choicest Poland-Chinas at the Big Sale October 19 at Hanford, Kings County, W. Bernstein.

Rancho Rubio Durocs.—Nothing to sell at present. A fine bunch of gilts and a few extra good service boars for this fall. Elmer Lamb, Ceres, Cal.

Big Type Durocs. Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

Most Money in Duroc-Jerseys. Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.

Large Type Poland Chinas are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Calif.

Large Type Poland-Chinas—Very best stock. Prices reasonable. Weanlings my specialty. C. R. Hanna, Riverside, Cal.

Model Herd Berkshires bred for size and quality. Weanlings and gilts. J. L. Gish, Laws, Calif.

Carruthers' Farm Berkshire Hogs. Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

Poland-Chinas — A few good breeding boars. S. F. Williams, Orland, Cal.

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Blue Andalusian Cockerels, Blue Orpington cockerels and Ancona cockerels. Large vigorous birds, for the shows or breeding pens. Write for prices. J. R. Huddleston, 342 Edgeware Road, Los Angeles.

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Poultry Wanted — We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

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New Zealand Red Rabbits—Improve your stock with a good healthy buck. Prices reasonable. Armstrong's Rabbit Yards, Petaluma, Cal.

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Pedigreed Bull Calves, Registered \$50.00, unregistered \$25.00. Service bulls \$75 and up. Good individuals from producers. Cows with yearly records at a profit, tuberculin tested. Write or come and select. Horses. N. H. Locke Co., Lockeford, Cal.

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D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.

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Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

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WINDMILLS, SPECIALLY PRICED 8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel.

PUMPS, CYLINDERS, PIPE 2½-in. two-runner hor. centrifugal pump, \$38; 2-in. rotary: 3 hor. cent., \$35; 5-in. two-stage B. J. hor. cent. pump, \$175; 8-in. hor. cent., \$150, pumps 200 in. water; deep well double-acting No. 2 Ames, \$145. Large Bulldozer Jacks, \$68. Small Bulldozer, \$42.50. Plunger pumps, 5x6 air compressor, \$29. 600 ft. 7-in. irrigating pipe, 35c. Pipe fittings.

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For Sale—Exceptional Bargains. Gas engines, centrifugal pumps, concrete mixer, box nailing machine, friction clutch pulleys. Complete irrigation plants furnished. We also buy and sell all kinds of machinery for every purpose. Let us know what you have and what you want. We can meet your needs. Out of town machine work given special attention. Commercial Iron Works, 497 Fifth Street, San Francisco.

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Our Printing Will Get Results for You.—It will help to sell your goods and earn you profits. Send for samples and price list. G. C. Gallagher, 441 Sacramento St., San Francisco.

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Lumber—Sash—Doors — Plumbing Supplies—Building Materials of all kinds, new and second hand. \*A \*R \*W Shingles 50c per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.

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Patents that protect are secured through The PACIFIC COAST PATENT AGENCY, INC., Savings & Loan Building, Stockton, California; send for our "little booklet on 'PATENTS'"

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Our Geese and Turkeys Win Again—Grand Champion Sweepstake Special, for best pair of birds in show. For size, vigor and quick maturity, our stock are best. East or West. Stock and eggs in season, also Colly pups. Correspondence solicited. John G. Mee, St. Helena, Cal.

FARM LANDS FOR SALE

Choice Apple Orchard in Yucaipa Valley for sale.—One of the finest tracts in the famous Yucaipa Apple District. This choice property consisting of 90 acres can be sold as a whole or in tracts to suit. It is in the very best of condition—nothing better in the valley. This season's crop, now being picked, is grading 90 per cent "Fancy." The price is \$700 per acre. Easy terms can be arranged. This is an opportunity to secure a first-class orchard "Where the Big Red Apple Grows" in the Yucaipa Valley. The varieties are Rome Beauty, King David, Delicious and Winesap. This property must be seen to be appreciated. Dike & Logie, Sales Agents, Redlands, Cal.

NO PAYMENT DOWN FARMERS ARE MAKING GOOD IN THE "PROJECT OF NO REGRETS," AT ORLAND, CAL. WATER FURNISHED BY UNCLE SAM WE SUPPLY THE LAND AND ASK NO PAYMENT UNTIL YOU CAN MAKE SAME FROM CROPS. NO BETTER SOIL FOR ALFALFA, ALMONDS, OLIVES, ORANGES, LEMONS, ETC. WRITE US FOR U. S. GOVERNMENT REPORT AND BOOKLET "ORLAND FARMS." F. D. BURR CO. 253 RUSS BLDG., 235 MONTGOMERY STREET, SAN FRANCISCO.

Lake County, California—Climate unexcelled. We have two 160 acre ranches; both have an abundance of running water, fruit, grain, wood and pasture land. Orchards of walnut, prunes, pears, peaches, apples, berries, etc. Three room cottage, five room house, barns and out buildings. Fenced and cross fenced. Three miles to good small town, one mile to school. Price \$7,000.00 and \$7,500.00. No exchange. Terms. Address Box 71, Kelseyville, Cal.

YUCAIPA VALLEY. "Where the Big Red Apple Grows" We are offering some of the finest unimproved apple land in California at \$285 per acre. Pure mountain water is piped under pressure to the highest point on each tract. Rich deep soil adapted to apple culture. Altitude 2400 to 3000 feet. climatic conditions unsurpassed. Terms easy. Dike & Logie, Sales Agents, Redlands, Cal.

For Sale—Choice Yucaipa Apple lands in 2-5 acre and 2-10 acre tracts. A1 soil and plenty gravity water. Also Redlands 21 room house, good location. Will trade all or part for Los Angeles and assume to right parties. Address Mrs. Clara Johns, Yucaipa, Cal., R. D. No. 2.

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Oregon, California Government Lands. Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

For Sale—Forty acres soft land, 25 dairy cows with heifers, 2¼ miles from Brawley. Owner, B. Kehoe, Box 927, Brawley.

NURSERYMEN'S ANNUAL

Continued from Page 351

Thursday Evening

George F. Wakefield, Planting and Care of Lawns; John Vallance, The Vegetable Garden as a Home Beautifier; D. W. Coolidge, Some Desirable New and Rare Plants; M. A. Benjamin, Tree Surgery, illustrated with lantern slides.

Friday Morning

Wm. T. Kirkman, Standardization of Commercial Nursery Products; State Commissioner G. H. Hecke, State Laws of Today; Earl L. Morris, Methods of Prevention of Tree and Plant Diseases.

Friday Afternoon

Trip to Alum Rock Park, with luncheon.

Dedication of Hilgard Hall

On Saturday morning the nurserymen will go to Berkeley where on the campus of the college of agriculture they will assist in the dedication exercises of Hilgard Hall. Participation in the dedication of this magnificent building, named in honor of the first dean of the college of agriculture, will be an honor to the members of the association. After the dedication exercises President Coates will call the convention to order in one of the rooms of Hilgard Hall, where Prof. Babcock will talk upon The Vital Question and Dr. Coit upon Advantages of Selected Scions From Recorded Trees.

GUARANTY SALE

December 5 has been set for the date of the Holstein Breeders' Guaranty Sale at Sacramento, California. It is expected that about twenty leading breeders of California will consign some of the top animals from their herds.

At a meeting of prominent breeders a committee was named to select and pass on all cattle before consignment to this sale, the committee consisting of Frank L. Morris of Woodland, James W. McAlister of Chino, and C. L. Hughes of Sacramento.

Eighty head will be gathered for this sale, which promises to be the most important Holstein event that has yet taken place in the west. California Breeders' Sales and Pedigree Company will manage the sale.





### Majestic answers the call to economy

The Majestic answers the nation's call for war on waste. It *saves—all ways*: Uses less fuel; because it is riveted tight and holds all the heat in. Prevents food waste because its heat-tight oven bakes perfectly. Cuts repair bills and outlasts three ordinary ranges, because its malleable parts are unbreakable and its charcoal iron body resists rust three times longer than steel.

U. S. Government orders over 150 carloads of Majestics—because the Army must have the best range service.

Do you know that now much less crops will buy a Majestic than a few years ago? Less than 2 acres of corn pays for it—think how little seed and labor you give for an article that means so much to the whole family. One quality; many styles and sizes. There is a Majestic dealer in every county of 42 States. Send for free booklet and name of dealer near you. Majestic Mfg. Co., Dept. 203 St. Louis, Mo.



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### MORE BETTER LIGHT

Install a PRIVATE GENERATING PLANT and have ELECTRICITY FOR LIGHT AND POWER. The Uni-Lectric system generates the standard 110-volt direct current, which will operate from 1 to 50 lights. It will run your sewing machine, electric iron, vacuum cleaner, churn, washing machine, etc.

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High speed gasoline motor, generator and automatic governor, all complete. Uses standard lamps and fixtures. Can be used for one or more houses.

WRITE FOR ILLUSTRATED CATALOGUE TO

KARL A. HEDBERG

104-106 Clay St.

San Francisco, Cal.

## Household Department

### ONE, TWO, THREE

It was an old, old, old, old lady,  
And a boy that was half past three;  
And the way they played together  
Was beautiful to see.

She couldn't go running and jumping,  
And the boy, no more could he,  
For he was a thin little fellow  
With a thin little twisted knee.

They sat in the yellow twilight,  
Out under the maple tree;  
And the game they played I'll tell you,  
Just as it was told to me.

It was hide and go seek they were playing,  
Though you'd never have known it to be—  
With an old, old, old, old lady,  
And the boy with the twisted knee.

The boy would bend his face down  
On his one little sound right knee,  
And he'd guess where she was hiding,  
In guesses one, two, three.

"You are in the china closet..."  
He would cry and laugh with glee—  
It wasn't the china closet,  
But he still had two and three.

"You are in papa's big bedroom;  
In the closet with the queer old key..."  
And she said: "You are warm and  
warmer,  
But you're not quite right," said she.

"It can't be the little cupboard  
Where mama's things used to be—  
So it must be the clothespress, gran'-  
ma..."  
And he found her with his three.

Then she covered her face with her  
fingers,  
That were wrinkled and white and  
wee,  
And she guessed where the boy was  
hiding,  
With a one and a two and a three.

And they never had stirred from their  
places,  
Right under the maple tree—  
The dear, dear, dear old lady,  
And the boy with the lame little knee.  
This dear, dear, dear old lady,  
And the boy who was half past three.  
H. C. Bunner.

### JOY IN WORK

ONE of the most delightful and satisfyingly sensible household writers we meet in going through our exchanges is Hepsy Neff of Wheaton, Illinois. The article we give here is written by her for the National Stockman Farmer. It is much along the line of letters we have had in the Cultivator from our California home makers, so that is another reason for reproducing it; we know it will be appreciated.

Perhaps August, the busiest month of a busy season, may be thought a poor time to talk about joy in work. To my mind it is the very best time. Work has been crowding, and is crowding, until we are bewildered and do not know what to do first. Such a state of things offers the best kind of an argument for not doing some things at all and weeding out all unnecessary. The very first essential of joy in work is to choose between what it worth doing, what is profitable, and what is not worth doing just now. No one can find joy in work that does not pay; that offers neither profit nor pleasure. Work must pay either in profit or in pleasure, or both, before it can even begin to be joyous. No, this is not a sermon on Thrift. That subject has been turned over to our thoughtful men and women. But thrift is like the devil fish of the sea; it has so many tentacles that one can hardly escape its long arms. Profitable working is as necessary as profitable saving and joy in work is equally necessary.

Perhaps we shall need to find something else beyond profit; beyond even pleasure, before we shall find joy in our work. We are queer bipeds, we women. Quite likely men know nothing at all of that exasperating prick—that goad of conscience which says, "What will they say when they see what I have done?" "They" being neighbor Brown or Grundy or Smallweed. You would put your clean,

white sheets in the drawer with the fragrance of the summer still lingering in their unironed folds, but what would Mrs. Grundy say if she should see them? You would sweep your house only when conditions plainly demanded a broom, instead of daily or weekly, as has been your custom, but what if Mrs. Brown should call! You have not baked a pie for a week or a month, but are in terror for fear Mrs. Smallweed should drop in and catch you without a pie in the house. No joy for you in sweet-smelling sheets or a merely tidy house or good apple sauce so long as you are in terror of Mrs. Grundy.

A few miles away lives the most famous woman gardener in all the countryside. The first bulbs of spring bloom in her garden and the last petals of the autumn fall upon her table. All summer long she lives out of doors. Some of our immaculate housekeepers would simply fall in a dead faint the moment they stepped across her threshold. Her house is a perfectly good shelter, eating place and sleeping place. Let those who wish to do so entertain; she finds more joy in her roses.

A little farther away lives a woman who devotes very much of her time to birds. Already she has published most interesting articles on bird music and has reproduced bird notes for the piano, making both the bird and the carol familiar to thousands of people. Plainly she cannot be at the piano and wielding a broom at the same time. Is the point clear? If you want an immaculate kitchen, if you want your highest joy in scrubbing, and washing and ironing and baking and serving, Heaven bless you in it. The man who loves astronomy would rather study the stars than eat. The man who loves his engine could not be dragged away from it with a cart rope. But other men do not feel themselves disgraced unless they sit up nights watching the stars or smear their clothes with engine grease. Why can't women be as sensible?

But some one will say, women have no choice in the matter. They must cook and keep house whether they find joy in this kind of work or not. Some truth there I admit. Perhaps the man who loves to study the stars would have little time for his chosen work if he must embroider his trousers and tat his collars and do his hair in fearful and wonderful shapes at least twice every day. There are some frills that women can cut off when they really want to do so. Then in the matter of eating. Who taught men to want ten different kinds of foods at a meal? "Somebody will say something." Of course. And when you have done and outdone all the talkers they will still go on talking. Then where is your joy in your work, your joy which you have a plain and inalienable right to have? You have missed it and when you have missed it a dozen years or so the corners of your mouth begin to sag and the wrinkles gather between your eyes. What is the use?

We cannot do all the things we should like to do nor half of them. But we can make a beginning. We need not be selfish, either. We can meet the actual needs of our families. We can do something to show them the difference between needs and wants. We can learn that difference for ourselves; and until we do learn it nobody can do much to help us find joy in work.



## The Cultivator Patterns



- 8500—Girls' Dress. Cut in sizes 6 to 14 years. The dress is in one piece and has a shield.
- 8515—Ladies' Camisole. Cut in sizes 34 to 44 inches bust measure. This camisole is very simple and easy to make.
- 7992—Ladies' Waist. Cut in sizes 36 to 42 inches bust measure. Linen, or crepe de Chine can be used for this waist.
- 8487—Ladies' House Dress. Cut in sizes 36 to 44 inches bust measure. Sleeves may be long or short and the skirt is cut in three gores.
- 8498—Misses' Dress. Cut in sizes 14 to 20 years. The dress is cut in one piece and is to be slipped on over the head.
- 8517—Girls' Empire Coat. Cut in sizes 4 to 14 years. The collar may be rolled high or low and the skirt section is in three pieces.
- 7624—Ladies' Skirt. Cut in sizes 22 to 34 inches waist measure. Skirt is cut in three gores.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

### HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send ten cents in coin or (1 or 2c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department  
California Cultivator  
Los Angeles

## VINEGAR FROM FRUIT CUTTINGS

By W. V. Cruess

Vinegar can be made from many waste fruits not suitable for canning or jelly making. For example, fruit peelings, cores, etc., can be used to advantage. In certain seasons of the year grapes can be obtained for a very moderate price and can be used for vinegar making. The University of California college of agriculture recommends the following methods:

### Vinegar from Whole Fruit

Crush fruit thoroughly and heat almost to boiling. Press out through a jelly bag or cloth while still hot. Allow the juice to cool over night in a quiet place. On the following day add one cake of compressed yeast to each three gallons of juice. One yeast cake will be enough for three gallons, but will not be too much for quantities less than three gallons. Crush the yeast up in the juice so that it is well mixed with it. A wooden bucket or barrel or a stoneware crock should be used. Do not use a kettle that is made of metal to hold the juice. Allow the juice to ferment. This will take about ten or 12 hours. When the fermentation is over, add to each three gallons of the fermented juice one quart of strong vinegar. If less than three gallons is made, add the vinegar in the same proportion. Leave the vinegar in an open crock or barrel, covering the container with cheese-cloth to keep out insects. Allow it to stand until it is sour enough to use. In making up a second lot of vinegar after the first has been made it will be possible merely to ferment the juice with the compressed yeast as described above and then add one quart of the home-made vinegar instead of the vinegar that is bought at the store. Thus the only vinegar needed to start the home vinegar is the first quart of vinegar. Under no conditions should the vinegar be added to the juice until the yeast fermentation is over. The vinegar will kill the yeast fermentation and prevent the making of vinegar if it is added before the yeast fermentation is over. The yeast fermentation is complete when the liquid no longer gives off bubbles of gas and when there is no longer a taste of sugar.

### Vinegar from Fruit Scraps

Such scraps as peach peelings, apple cores, etc., can be used for making vinegar. Sugar, however, must be added in this case. To every cup of scraps add about three cups of water and boil for 15 or 20 minutes. Press out the watery juice. To this juice add about one pint of sugar to the gallon and dissolve. Allow to cool over night. Add compressed yeast and proceed as in above recipe. The vinegar made in this way will not be so good as that made from the whole fruit, but still a very palatable product can be produced.

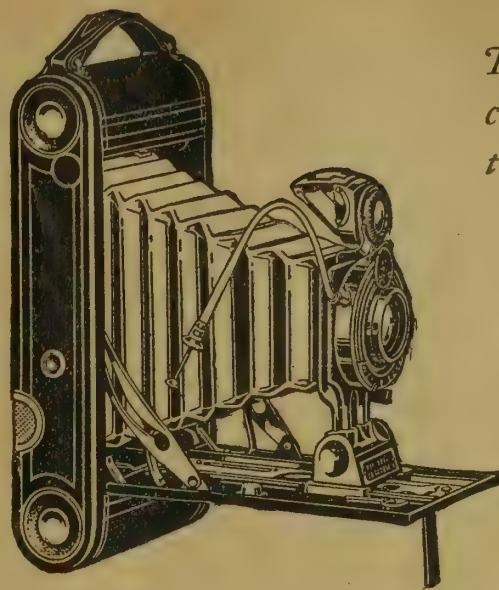
### OCTOBER PRIZE CONTEST

For our next contest we are going to ask for original stories of from 100 to 400 words, subjects to be chosen by the writers.

#### Cash Prize

For the best story the Cultivator will give a cash prize of \$2.00; for second best, \$1.00; for all others published one year's extension of subscription unless such extension has already been granted in 1917.

Stories will be published in Cultivator of October 27. All should be received in this office by or before Thursday morning, October 18. Please write on one side of paper only.



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## The 2c Kodak, Jr.

The long narrow picture (2 1/8 x 4 1/8 inches) is best adapted to the average view. For landscapes it cuts out the undesirable surplus sky and foreground; for portraits it gives the pleasing panel effect. And this shape in the picture makes possible a slim, thin camera that fits the pocket.

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The germs are killed by a chemical process in water in the container. Empty once a month. No more trouble to empty than ashes. Closet absolutely guaranteed. Guarantee on file in the office of this publication. Ask for catalog and price

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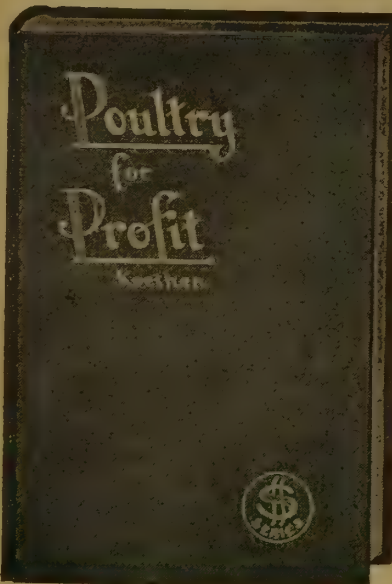


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### Los Angeles Market

Los Angeles, Oct. 3, 1917.

#### BUTTER

Produce Exc. Quotations.  
Price to trade 4c higher.  
California extra creamery  
Dairy Exch. prices past week.  
Sept. 26 27 28 29 Oct. 1 2  
'17 ... 45½ 46 46 46 46 46  
Rets. wk. ending Oct. 2, 305,000 lbs.

#### CHEESE

Brokers prices:  
California fresh, lb. ....25@26  
Oregon Longhorn .....28  
Tillamook Trip .....29  
Domestic Swiss .....32

#### EGGS

Exchange quotations. Prices include  
cases and fillers valued at 35c.

Fresh extras .....51  
Case count .....46  
Pullet .....42  
Dairy Exch. prices past wk.  
Sept. 26 27 28 29 Oct. 1 2  
'17 ... 50 51 51 51 51 51  
Rets. wk. ending Oct. 2, 545 cases.

#### POULTRY

We quote to producers:

Broilers, 1½ lbs. and up, 29; small....29  
Hens—Leghorns, 19; Heavy Col'd....24  
Roasters, 3 lbs. and up .....23  
Ducks, lb. ....15@17  
Squabs, doz. ....2.00@3.00  
Rooster, old .....10  
Geese .....10

#### LIVE STOCK

We quote cwt. f. o. b. L. A.  
Corrected Wednesday morning, Octo-  
ber 3, by the Cudahy Company.

Cattle—  
Beef steers, av. 1000 to 1100 lbs.8.50@9.00  
Heifers, good .....6.50@7.00  
Cows, good .....5.50@6.50  
Canners .....4.50@5.00

#### HOGS—

Av. 125 lbs. ....14.50  
Av. 150 lbs. ....15.50  
Av. 175-200 lbs. ....16.00  
Rough, docked 20 lbs.; piggy sows, 40  
lbs., stags, 40 per cent. ....9.50@10.00  
Ewes .....9.00@9.50  
Lambs .....13.50  
Yearlings .....10.00@10.50

#### POTATOES

Wholesale selling price:  
Northern Burbanks .....2.90@3.20  
Rurals .....2.40@2.50  
Sweet, lug .....1.00@1.15

#### ONIONS

Wholesale selling price:  
Brown, cwt., 2.35; white .....2.35  
Garlic .....8

#### VEGETABLES

Wholesale prices:  
Artichokes, doz .....1.00  
Beans—Wax .....6@6½  
Limas, lb. ....6@6½  
Ky. Wonder .....6@6½  
Beets, sk. ....1.00  
Cabbage, lb. ....1¼  
Carrots, doz .....1¼  
Cauliflower, doz .....1.35  
Celery, doz. ....1.85  
Corn, lug .....70@75  
Cucumbers, lug .....70@75  
Egg Plant, lb. ....3@3½  
Horseradish, rt. lb. ....15  
Lettuce, doz. ....35@40  
Leeks .....30  
Mint .....40  
Onions, green, doz. ....25  
Okra, lb. ....10@12  
Peas, lb., Telephone .....8½@9  
Peppers, Chili, lb., ¾@4; Bell....3@3½  
Parsnips, doz. ....40  
Parsley, doz. ....20  
Radishes, doz. ....20  
Rhubarb—Strawberry .....1.10  
Romaine, doz. ....50  
Spinach, doz. ....25  
Squash, Summer, cr. ....70@75  
Crownneck .....70@75  
Hubbard, lb. ....22  
Tomatoes, lug .....60@65  
Turnips, doz. ....80

#### FRUITS

Wholesale prices:  
Apples—Skinners Seedling, ....1.50@1.75  
Bellflowers .....1.10@1.15  
Jonathan and King David....1.75@2.00  
Avocados, doz. ....7.00@8.50  
Bananas, lb. ....5  
Cantaloupes—Standard .....1.50  
Persian .....2.25  
Casabas, lb. ....1¼  
Figs, bx. ....1.25@1.50  
Grapes—Black .....1.10  
Malagas, lug .....1.10@1.15  
Muscat, lug .....1.10@1.25  
Tokays .....1.50@1.65  
Nectarines, lug .....1.25  
Pineapples, lb. ....10  
Peaches, lug .....90@125  
Pears, Bartlett, lug .....1.50  
Plums, lug .....75@125  
Quinces, lug .....75  
Watermelon, lb. ....1¼@1½

#### CITRUS

Lemons, 4.25@5.50; juice .....2.25  
Grapefruit .....3.25@3.50  
Limes, basket .....1.00  
Valencias .....3.25@3.35

#### HONEY

Wholesale prices:  
Extr. White, lb. ....11½@12½  
W. W. lb. ....12@14  
Comb, case, W. ....3.75  
W. W. case .....4.25@4.50

#### NUTS

Almonds—Almond Growers' Exch. an-  
nounces prices on 1917 nuts.  
Nonp. ....21¼  
I. X. L. ....19½  
N. P. U. ....18¼  
Drakes .....16  
Peanuts, raw .....12  
Pine Nuts .....20  
Pecans .....19  
Walnuts—Cal. Walnut Growers' Associ-  
ation named prices Oct. 1:  
No. 1 Soft Shell, lb. ....20  
No. 2 Soft Shell, lb. ....16  
Budded, Diamond Brand .....24

Budded, Standard Brand, (same size  
as No. 1 Soft Shell) .....21  
Prices delivered in East 1½c higher.

#### RICE

Wholesale quotations:  
Cal. ....6.25  
Broken .....4.75@5.60

#### BEANS

Wholesale Prices:  
Lady Washington .....13.50  
Limas .....13.50@14.00  
Pinks .....10.00  
Manchurian Reds .....10.50  
Baby Mex. ....9.00  
Garbanzos .....9.00@10.00  
Small White .....13.50  
Blackeyes .....8.00  
Tebary .....7.00  
Lentils .....18.00

#### HAY

Quotations by Nichols-Loomis Com-  
pany. Wholesale prices to growers f.o.b.  
L. A. carlots.  
Tame Oat .....21.00@23.00  
Volunteer Oat .....16.00@18.00  
Wheat .....17.00@20.00  
Barley .....18.00@21.00  
Alfalfa .....18.00@21.00  
The Alfalfa Growers' Association of  
Southern California writes:  
"The Association is now asking \$23.50  
for No. 1 cow hay f. o. b. cars Los An-  
geles and Southern California points.  
The later cuttings are short and we are  
experiencing a shortage in our crops.  
Hay is selling very readily and all buy-  
ers are offering high prices. We have  
heard nothing under \$20 per ton being  
offered the growers for alfalfa. That  
price offered is of course net to the  
grower. We find that little hay is stored  
for this winter's use and that there will  
undoubtedly be a shortage before  
spring."

#### GRAIN AND FEEDSTUFFS

Wholesale cwt. f.o.b. L. A.  
Alfalfa Meal .....1.75  
Alfalfa Molasses .....1.80  
Barley, Rolled .....2.85  
Barley, Re-cleaned, Whole .....2.90  
Barley, Hulled .....3.45  
Beet Pulp .....1.80  
Bran, Heavy .....2.25  
Cocoanut Meal .....2.50  
Cottonseed Meal .....3.30  
Corn, Yellow .....4.45  
Corn, White .....4.55  
Corn, Cracked .....4.50  
Corn, Feed Meal .....4.55  
Corn, Egyptian .....3.50  
Middlings .....3.05  
Milo .....3.25  
Oat Chop .....1.90  
Oats, White .....2.85  
Oats, Rolled White .....2.90  
Oats, Hulled .....4.75  
Oats, Rolled Chicken Groats .....4.85  
Oilcake Meal .....3.40  
Wheat, No. 1 .....4.00@4.05  
Wheat, Cracked, No. 1 .....4.40  
Rye .....4.00  
Blood Meal .....5.10@5.20  
Bone, Green .....2.85@2.95  
Bone, Dry .....2.05@3.15  
Charcoal, 50-lb. sk. ....2.70@2.80  
Clam Shell .....70@80  
Grit, Granite .....65@75  
Oyster Shell .....1.25@1.35  
Sunflower Seed .....4.10@4.20  
Soya Bean Meal .....3.40@3.50  
Scratch Feed .....3.70@3.80  
Gritless .....3.90@4.00  
Rice Bran, ton .....40.00  
Middlings, ton .....45.00  
Rice Polish, ton .....49.00

### San Francisco Markets

San Francisco, Oct. 2, 1917.

#### BUTTER

Dairy Exchange quotations, lb.:  
Fresh extras .....44½  
Prime firsts .....43½  
Dairy Exc. quotations past wk.  
Sept. 25 26 27 28 29 Oct. 1  
'17 ... 44½ 44½ 44½ 44½ 44½

#### CHEESE

Dairy Exchange quotations:  
Cal. Flats. 18@21 Y. Am. ....22@25  
Ore. Young Am. ....25  
Jack Cheese, full cream. ....23@24

#### EGGS

Dairy Exchange quotations:  
Extra .....47  
Firsts .....46  
Selected Pullets .....43  
Firsts .....42½  
Dairy Exc. quotations past wk.  
Sept. 25 26 27 28 29 Oct. 1  
'17 ... 47½ 48 46½ 46½ 47

#### POULTRY

Receipts were very light yesterday,  
only 14 coops of chickens having arrived  
by express. Trading was almost at a  
standstill. Two and possibly three cars  
of Eastern chickens are expected to ar-  
rive today and dealers said that buyers  
were holding off in their purchases until  
this Eastern stock was on the market.  
While there was not enough trading to  
justify new quotations, the market was  
easy and dealers predicted that spring  
chickens would open today at about 1  
cent per pound under yesterday's figures.  
We quote from producers, lb.:  
Hens, large, 25@28; Leghorns....20@24  
Small colored .....22@24  
Broilers .....30@34  
Roasters .....31@34  
Squabs, doz. ....2.00@3.50  
Ducks .....14@18  
Geese .....18@19  
Belgian Hares, live, 14@17; dr....17@20  
Turkeys .....20@30

#### LIVE STOCK

Prices gross weight:  
Cattle: The following prices are for  
grass fed stock. Hay fed bring ½ to ¾ c  
more.  
Steers, lb. 6@9; cows and heifers,  
4@7½; calves, 7@9½.  
Sheep: Wethers, 10½@11; ewes, 8½@  
9½; lambs, lb., 10½@11.  
Hogs: Hard grain-fed, weighing 100 to  
150 lbs. 14½c; 150 to 300 lbs. averaging

175 or less, 15½c; averaging 175 or over,  
16c; 300 to 400 lbs. 15½c.

#### POTATOES

Wholesale selling prices at wharf:  
Cwt. ....1.90@2.10  
Salinas Burbanks, cwt. ....3.10@3.30  
Sweets, lb., .....2½@3

#### ONIONS

Wholesale selling price on wharf:  
Australian Brown .....1.85@2.10  
Yellow .....1.85@2.10  
Garlic, lb., new .....50

#### VEGETABLES

Wholesale selling price:  
Avocados, doz. ....4.00@5.00  
Beans, string, lb. ....4½@5  
Fy. Garden, 5@7; Lima .....5½@6  
Brussels Sprouts, lb. ....30  
Celery, doz. ....40@45  
Corn, Green, sk. ....1.00@1.10  
Cucumbers, lug .....75@81  
Pickling, lug .....90@95  
Egg Plant, lug .....50@55  
Okra, box .....65@70  
Onions, Pickling .....50  
Peas, lb. ....50  
Peppers, Bell, lug, 50@75; Chili....60@65  
Rhubarb, bx. ....1.00@1.10  
Squash—Marrowfat, sk. ....60  
Hubbard, lug .....50  
Pumpkins, sk .....50  
Tomatoes, lug .....50@55

#### FRESH FRUIT

Berries—Strawberries, 5.00@8.00 ch.  
the trade; raspberries, 7.00@8.00; huckle-  
berries, lb., 10@12½.  
Peaches—Small bx. 40@69; small lu-  
40@60; large lug, 75@90; Santa Cla-  
peaches, small lug, 60@80; large lug,  
@1.00; mountain freestone peaches, b-  
yellow, 50@65; strawberry freestone,  
75; strawberry clings, lug, 75@1.00.  
Plums and Prunes—German and Gra-  
Duke, cr., 1.25@1.50.  
Figs—Black, double layer bx.: 60@75  
Pears—Bartlett, No. 1, second pickin-  
lug, 1.00@1.25; Lake County Bartlett  
lug, 1.75@2.25; Oregon, bx., 1.00@1.50.  
Grapes—Malaga, cr., 50@65; small lu-  
60@75; Thompson seedless, small lug,  
@1.00; cr., 75@1.00; big lug, 1.25@1.50  
Muscat, bx., 50@60; small lug, 65@85;  
65@85; big lug, 90@1.25; black, cr. 40@60  
lug, 75@1.00; Tokay, lug, 75@1.25; Im-  
bella, cr., 75@1.00; fancy, 1.25@1.35  
lady finger, cr., 75@1.00.  
Apples—Bx.: Bellow, 90@1.00; Spiti-  
enberg, 4-tier, 1.75@1.85; B grade, 1-  
@1.25; Pearmain, 90@1.00; Smith elde-  
4-tier, 1.15@1.25; 4½-tier, 1.00@1.15  
Jonathans, 1.50@1.75; Baldwin, 1.15  
1.35; Wagner, 1.15@1.25; Hoover, 1.00  
1.25; Newton Pippins, 1.00@1.15.  
Cantaloupes—Delta: lug, 50@75; Tu-  
lock, cr., standard, 1.00@1.25; ponies,  
@1.00; casabas, doz., 35@1.50; cr. 15  
67@75; Persian, cr., 1.00@1.25; Hon-  
Dew, cr., 65@85.  
Watermelons—Doz., as to size, 2.00@  
4.00.  
Citrus Fruits—Bx.: Lemons, fancy,  
6.00@6.50; choice, 5.00@5.50; stand-  
3.00@4.00; lemons, 3.00@4.00; grape-  
fruit, fancy, 3.00@3.25; choice, 2.00@2.50  
lower grades, 1.50. Oranges—Bx.  
New Valencias, fancy, 3.00@3.25; choice  
2.00@2.50; lower grades, 1.50@2.00.  
Bananas, lb. ....2.50@3.50  
Pineapples, doz. ....2.50@3.50

#### DRIED FRUITS

Manager Niswander of the California  
Peach Growers advises that a limited  
quantity of peeled peaches, either in  
sortments or carload lots, will be sold.  
RAISINS—The California Associate  
Raisin Company announced on August 2  
new 1917 crop prices effective at once:  
Muscats, Package Seeded, cs. of 48 lb.  
\$4@4.20; cs. 36 16s Sun-Maid and B.  
\$3.15, Ch. \$3.00; cs. of 45 12s, Fy. \$3.20  
Ch. \$3.10. Bulk Seeded, 25 lb. bx. Baker  
Sun-Maid \$1.75, Fy. \$1.90, Ch. \$1.75. Loose  
Muscats, 50 lb. cs. 1 cr. Re-cleaned an-  
Floated, \$4.15, 2 cr. \$3.40, 3 cr. \$3.65,  
cr. \$3.90. Layers and Clusters, 20 lb. bx.  
3 cr. London Layer \$1.60, 4 cr. \$1.85,  
cr. Imperial Cluster \$2.70.  
Thompson's Seedless, Package, cs. of  
47 16s, Sun-Maid Seedless \$4.65, cs. of  
35-12s Re-cleaned, \$2.80, other brands, cs.  
of 48 16s, \$4.75, cs. of 50 12s, \$4.00. Bul-  
Re-cleaned Baker's, 50 lb. cs. \$4.90.  
Sultanas, Package, 48 16s \$4.75, 50 12s  
\$4.00. Bulk Re-cleaned, 50 lb. cs. \$4.50.  
Bleached Thompson Seedless, Northern  
50 lb. cs. Ex. Fy. \$5.37-¼, Fy. \$5.12-¼,  
Ch. \$4.87-¼, Soda Dipped, \$4.75; San Jo-  
quin Ex. Fy. \$5.50; Fy. \$5.25, Ch. \$5.00.  
Regular California dried fruit contrac-  
Pacific coast rail shipping points price  
on all but bleached and dipped raisins  
guaranteed against our decline (sales to  
United States government excepted) Janu-  
January 1, 1918.

All Muscats, October-November, sell-  
er's option; also November or December  
buyer's option.

Thompsons and Sultanas, September-  
October, seller's option; also November  
or December, buyer's option.

No rebate allowed on export sales.  
Prices subject to change without no-  
tice.

DRIED FRUITS—Apricots, per lb.  
bulk basis: Standard, 14½c; choice, 15c  
extra choice, 15½c; fancy, 16½c; extr  
fancy, 17½c; fancy Moorpark, 17½c; ex-  
tra fancy Moorpark, 18½c; prunes, 60  
to 90s, 6½c basis; 50s to 60s, ½c prem-  
ium; 40s to 50s, 1½c premium.

Apples—in 50-pound boxes, lb.: Fancy  
13½c; extra choice, 12½c; choice, 12½c.

PEARS—Bulk basis, per lb.: Fancy  
11½c; extra choice, 9½c; choice, 8c  
standard, 6c.

#### NUTS

Almonds—Cal. Almond Growers' Exch.  
gross prices: Nonpareils, 21½c; I. X. L.  
19½c; No Plus, 18½c; Drakes, 16c; hard  
shell, 11½c.  
Pecans .....16@18  
Pine Nuts .....16@18

#### HONEY

Comb, W. W., lb. ....13@15  
Lt. A., 11@12; A .....9@11  
Extr. W., lb., 13; Lt. A. ....11@13  
Beeswax, lb. ....3@3½

#### BEANS

Jobbers' prices, cwt. re-cleaned:  
Limas .....14.00@14.25



Bayous	8.50@9.00
Small Whites	12.50@12.75
Mexican Red	8.50@9.25
Large White	12.00@12.50
Pinks	9.60@9.75
Black Eyes	8.75@9.00
Cranberry	11.00@11.25

HOPS

Per lb: California crop of 1917, 35¢@40¢; on contracts, spot, 1916 crop, 18¢@22¢; old, 8¢@15¢.

HAY

Under date of September 29, Scott, Wagner & Miller say: Receipts past week 2196 tons, last week 2848 tons. Several orders for hay out of warehouses have already been placed for shipment to this market and the only reason that the receipts are not heavier is that cars have been practically unobtainable. We do not see that the car situation is going to be any better. The railroads hold out no hope for improvement. Much of their equipment is busy moving government supplies which of necessity must be given preference. The market has been well maintained and we believe can be quoted \$1.00 per ton higher. Fancy wheat and tame oat hay are in good demand and selling at top figures.

Fancy Wheat Hay (light 5 wire bale, ton)	23.00@24.00
No. 1 Wheat or Wheat and Oat Hay	20.00@22.00
No. 2 Wheat or Wheat and Oat Hay	17.00@19.00
Choice Tame Oat Hay	20.00@22.00
Other Tame Oat Hay	17.00@19.50
Wild Oat Hay	17.00@20.00
Barley Hay	17.00@20.00
Alfalfa	17.00@20.00
Stock Hay	15.00@17.50
No. 1 Barley Straw, bale	50¢@99¢

GRAIN

Grain Exchange prices, cts. Wheat — Government price at San Francisco, \$3.50 cwt., or \$2.10 bu., with 4 cents added for sacks on No. 1 (60 lbs.); No. 2 (58 to 60 lbs.), 3 cents discount; No. 3 (56 to 58 lbs.), 6 cents discount. Corn, California Yellow .....3.75@4.00 Barley, Feed .....2.45@2.50 Oats, Red Feed, cwt. ....2.65@2.75 Oats, New Black .....3.25@3.50

FEEDSTUFF

Wholesale prices per ton:	
Bran	41.00@42.00
Cornmeal	86.00@87.00
Cracked Corn	88.00@87.00
Middlings	50.00@55.00
Alfalfa Meal	28.00@30.00
Cocconut Meal	40.00@41.00
Rollod Barley	50.00@51.00
Shorts	43.00@44.00

SEEDS

Prices in round lots, lb.:	
Millet, re-cleaned	4½¢@5¢
Alfalfa	20¢@21¢
Flax	6¢@6½¢

FISH

The following are the maximum retail prices at which these varieties of fish could legally be sold on Tuesday, October 2, 1917, in San Francisco, Oakland, Berkeley and Alameda. Dealers are free to sell at lower prices, but could not legally charge more. Purchasers who are overcharged are invited to make complaint in writing to the State Market Director: Codfish, cleaned or sliced, lb. ....12½¢ Flounders, whole .....12½¢ Mackerel, whole .....10¢ Rockcod, weighing less than 5 lbs., whole .....15¢ Do, weighing over 5 lbs., whole .....12½¢ Do, black, whole .....10¢ Sable fish .....6¢ Salmon, cleaned or sliced .....25¢ Sanddabs, whole .....10¢ Skate, cleaned .....5¢ Smelt, whole .....13¢ Sole, large, whole .....10¢ Do, small, whole .....5¢ Do, fillet, black skin off .....17½¢ Do, fillet, black and white skin off .....20¢

Citrus Fruit Market

Los Angeles, Oct. 3, 1917.

A much better price obtains in the orange market and Valencia are selling remarkably well. Shipments are running around 50 cars per week, which is exceptionally low. Shipments of lemons are very light, also running from 40 to 60 cars. Prices at present very satisfactory.

Shipments

Shipments of oranges from Southern California since November 1, 1916: 33,782 cars, lemons 7526, total 46,308; to same date last season oranges 30,541, lemons 6673, total 37,214. From Central California to date this season oranges 5044, lemons 164, total 5208; to same date last season oranges 5396, lemons 146, total 5544. From Northern California this season oranges 845 cars; to same date last season oranges 610, lemons 1.

FROM THE AUCTION

September 29	
New York: 3 cars. Val. \$0.70@\$.80.	
Cleveland: Val. \$1.40@\$.35.	
St. Louis: 6 cars. Val. \$2.10@\$.205, lem. \$4.30@\$.55.	
September 27	
New York: 19 oranges, 1 lemon. Val. \$1.30@\$.50, lem. \$5.60@\$.65.	
Pittsburg: 2 cars. Val. \$1.55@\$.305.	
Boston: 6 cars. Val. \$1.75@\$.30.	
September 28	
New York: 11 oranges, 1 lemon. Val. \$0.90@\$.40, lemons \$5.55.	
Boston: Val. \$1.35@\$.20.	
St. Louis: 3 cars. Val. \$1.85@\$.20.	
October 1	
New York: 22 oranges, 1 grapefruit, 1 lemon. Val. \$1.20@\$.25, lem. \$4.70@\$.50, grapefruit \$1.20@\$.20.	
Cleveland: 2 cars. Val. \$1.50@\$.30.	
Philadelphia: 8 cars. Val. \$2.20@\$.35.	
St. Louis: 6 cars. Val. \$1.15@\$.20.	
lem. \$3.85@\$.50.	
Boston: 7 cars. Val. \$1.80@\$.35.	

lem. \$4.75@\$.65.

October 2

New York: 14 oranges. Val. \$1.35@\$.45.  
Philadelphia: 6 cars. Val. \$1.00@\$.45.  
Boston: 6 cars. Val. \$2.35@\$.45, lem. \$4.55@\$.65.

WEEKLY WEATHER AND CROP REPORT

San Francisco, October 2, 1917. Light showers occurred during the week in the southern coast counties and in the interior of the valley as far north as Sacramento. They began in the south on September 28 and ended in the north September 29. The amount did not exceed a trace at any of the reporting stations and consequently the damage to raisin grapes, prunes and apples in the process of drying was inconsequential. Unusually warm weather prevailed in nearly all parts of the state during the fore part of the week, and this weather was on the whole favorable, except in the case of wine grapes, which were shrivelled somewhat by the heat. Excellent progress was made in drying raisin grapes and the bulk of the crop has been secured in excellent condition. Prune drying is practically finished and the apple harvest is well advanced. Both crops are turning out as well as expected. The gathering of wine grapes has become general and while the crop is not a heavy one, the quality is better than usual.

The sugar beet harvest is proceeding slowly, principally on account of scarcity of labor. Beets generally are undersized; but their sugar content is high and the crop on that account is a very good one. The bean harvest is drawing to a close and the crop is large, more on account of increased acreage than from the productiveness of the vines, which in many places did not mature a good crop, due to a number of causes, not the least of which was damage done by insect pests.

An excellent crop of rice is being harvested, under favorable weather conditions. It is the best rice crop ever raised in California and from about a million acres planted to rice yields as high as 35 to 45 sacks to the acre are common. Late potatoes are maturing nicely and this crop has improved considerably since the rains of the preceding week.

Walnut picking has become general and the crop is better than expected. Strong winds on the 28th aided greatly in harvesting this crop in Santa Barbara County. Lemons bloomed a little all the week in Orange County and a few have been picked at Lemon Cove in Tulare County.—E. A. Beals, District Forecaster, United States department of agriculture weather bureau.

MARKET NOTES

Receipts of butter and eggs in the San Francisco market the past week have been practically nil. Prices are so high that the demand has fallen off and anyway the supply is light. On one day last week a consignment of 1444 cases of dehydrated eggs was received from China.

The recent rise in butter quotations on the Los Angeles market is credited by dealers to the fact that a Northwest broker took a large government contract which he was unable to fill in his own section, so he was forced to come to San Francisco to obtain supplies and this sent up both the San Francisco and Los Angeles markets.

Owing to the fact that the corn crop came through without suffering frost damage the country's supply of canned corn will be fully up to expectations. Corn prices are holding up.

A campaign has been started by the United States food administration, to cover the months of October and November, when all grocers of the country will be asked to urge consumers to buy and store in their homes supplies of potatoes. This it is thought will induce a larger consumption of potatoes and thereby save wheat.

Higher prices on cheese, 22 per cent above last year, have decreased consumption until large warehouse holdings are proving embarrassing and it is possible reduction may be necessary.

Eggs are coming out of cold storage very rapidly and yet prices continue to mount higher. Los Angeles cold storage houses report about three per cent more eggs in coolers now than a year ago.

The Michigan bean crop has been materially lessened by weather conditions and the department has made a ruling that no more futures shall be sold until harvest.

Wholesale prices on onions are resting around \$2.25 to \$2.50 and some dealers are asking as to the possibility of a corner similar to that of last year when fabulous prices were secured. It is generally thought this will not be the case in this year's market.

New York state Elberta peaches filled the fruit markets last week. During the week a total of 1662 cars were shipped to New York. The week previous the shipment was only 193 cars.

The apple shipping season develops the fact that the supply is heavier than anticipated but in face of that fact prices are firmer and even slightly higher.

New York has moved more than four times as many cabbage as last year this date and its shipments of celery are likewise heavier.

Save your money and buy a Liberty Bond.

Olive oil is in keen demand. A local daily has: "It was reported last week that one large Southern California packer sold 1500 gallons for bulk shipment at \$3.20. This is the highest price yet recorded, in fact, it is more than a dollar above normal.

Potato prices are hardening. Los Angeles reporting big shipments at from \$3.25 to \$3.40, this for first class stock. One complicating feature is the shortage of shipping facilities.

Dried fruits are selling well. Some growers are still refusing to sell excepting when long prices are made.

Riverside Fair

By R. L. Taber, Secretary

The final nail will be driven in the plans for a greater Riverside County Fair so that all will be in readiness for the opening of the fifth annual educational exhibition on the morning of Tuesday, October 9 when Governor William D. Stephens presses the button to set in motion the wheels of the fair.

The Riverside fair this year will combine for five days an exhibition of

All of the 21 departments at Riverside have been enlarged and filled with new exhibits. Particular attention is being paid to food production and food conservation with exhibits from the state council of defense, Herbert Hoover, food administrator and other sources. There will be daily demonstrations of various foods on all parts of the grounds.

A \$5000 program of horse races, bringing forth the fastest running and



Going to Riverside

livestock, dairy products, goods from the apiaries, women's work, educational features and other displays gathered from every corner of Southern California.

Livestock in greater numbers will be exhibited this year. A number of the famous Tamworth hogs from the Rancho El Rincon near Chino will be exhibited. These English animals are new to Southern California. Peters, Lamson & Walker of Devore will make a large showing of Duroc-Jersey animals as will Joseph S. Prendergast of San Bernardino. From the Elliott-Brant Rancho at Owensmouth will be shown some famous Guernsey cattle as well as from the Hollow-Hill Farm of Colton. Other livestock exhibitors will be F. L. Hall, Perris, Jersey cattle, Berkshire hogs and heavy draft horses; Falladale Farm, Perris, Duroc-Jersey swine; Charles Fish, Rialto, unregistered driving horses; Dixie Ranch, Corona, Belgian horses.

trotting horses on the Pacific Coast, will be on the card each afternoon except Thursday, Indian Day. On that afternoon the Indians from all reservations and government schools in the Southwest will meet at the fair for Indian sports and pleasures. A feature of the day will be an exhibition by 700 students from Sherman Institute.

An exhibition of all the prize winning stock in front of the grandstand on Friday night will bring forth the best blooded horses, cattle, swine, sheep and goats in Southern California. These animals will be paraded in front of the grandstand by their proud owners and grooms, following the presentation of the awards by judges of all livestock.

WEATHER CONDITIONS

San Francisco, Cal., Sept. 29, 1917.

	Rainfall		Temp.	
	Wk.	Season	Norm.	Max.
Eureka	.00	.66	1.28	64
Red Bluff	.00	.78	.78	100
Sacramento	.00	.51	.37	98
San Francisco	.00	.02	.28	93
San Jose	.00	.01	.36	96
Fresno	.00	.00	.25	98
San Luis Obispo	.00	.01	.46	98
Los Angeles	.00	.00	.05	96
San Diego	.00	.00	.06	92

ALFALFA LAND FOR DAIRYING

Leveled, checked and in stand of Alfalfa. Also first-class Orchard, Bean and Sugar Beet land, with plenty of water for irrigation. For sale in tracts of 20 acres and up.

BRENTWOOD IRRIGATED FARMS, 50 Miles from Oakland in Contra Costa County. For Prices, etc. Address BALFOUR, GUTHRIE & CO., LAND DEPT., 350 California St., San Francisco



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"A Sperry Product"

1918

**JANUARY**

1918

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SAT

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
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This 1918 Surelay Egg Record Calendar  
Will Help You in Your Poultry Business

5



Keeping an accurate monthly account of the number of eggs your hens lay, the cost of feeding them and to know whether or not you are making a satisfactory profit out of your hens, are essential, if you want to make a success of the poultry business.

2

1

It is easy to keep these records with a SURELAY Calendar, devised and planned especially to meet your particular needs. Every poultryman should have one and use it.

9

2

This valuable and beautiful three color Calendar will be mailed to you without cost on receipt of the special Calendar Certificate to be found in every sack of SURELAY manufactured after October 1st. You will find it just as serviceable for keeping your records as SURELAY is for making your hens lay the most eggs at the lowest possible cost.

6

**SPERRY FLOUR CO.**

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27

28

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31

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# CALIFORNIA CULTIVATOR

**THE LIVESTOCK** *Combined* **CALIFORNIA**  
*and DAIRY JOURNAL* *with* **CULTIVATOR**

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

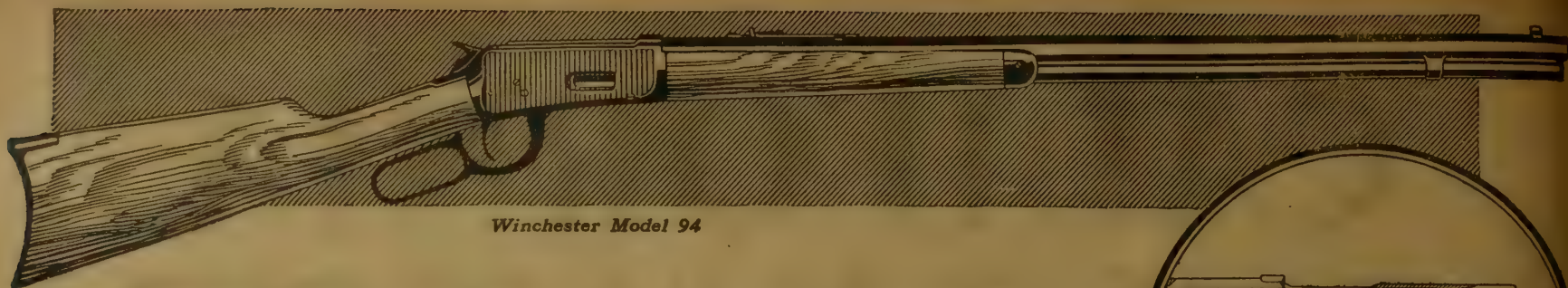
October 13, 1917

SAN FRANCISCO



Harvesting the California Walnut Crop





## Why Sportsmen choose the "94"

The Winchester Model 94 repeating rifle is chosen by more sportsmen than any other because of its wide variety of uses.

The Model 94, as nearly as any rifle on the market, is an all-round rifle.

Deer hunters choose it because it is a sure game-getter within the range that most shots at deer come.

Campers and canoe hunters take it because it is accurate even for birds, makes very little noise, and will stand all sorts of rough handling.

New shooters prefer it because of its lightness and very slight recoil.

Farmers demand it because they can get it in the exact caliber they need, at a low price, and can buy the ammunition for it anywhere that firearms are sold.

Because of this wide adaptability the Winchester Model 94 is the gun for the one-gun hunter; but for the same reason it is also a great favorite with sportsmen who own many guns.

The Winchester Model 94 is furnished in a great variety of styles, in five different popular calibers, (.25-35 and .30 Winchester, .32 Winchester Special, .32-40 and .38-55 cartridges), and in an extra lightweight model (weight about 7½ lbs.). For the high power cartridges this rifle is fitted with a nickel steel barrel.

### The barrel is the gun

Men who know guns realize that the accuracy and durability of a

rifle lie in the barrel. On the quality of the barrel depends the quality of the gun. There is absolutely no difference in the standard of quality of the barrels on the highest and lowest priced Winchester guns. With Winchester the barrel is the gun and the single standard of quality has been attained only by the most unremitting attention to the boring, finishing and testing of the barrel.

### The Winchester barrel

The barrel of the Winchester Model 94 has been bored to micrometer measurements for the cartridge it is meant to shoot. In rifling the barrel, the exact twist that is necessary to produce the best results with a given cartridge has been mathematically calculated and is verified by exhaustive practical tests before leaving the factory.

A bullet fired from a Winchester barrel spins point on with unerring accuracy to the limit of its range. The Bennett Process, used exclusively by Winchester, gives the Winchester barrel a distinctive blue finish that, with proper care, will last a lifetime.

### What means

This mark on the barrel means *Viewed and Proved Winchester*. This stamp stands for Winchester's guarantee of quality, with 50 years



Strong, smooth action, few working parts of the Model 94

of the best gun-making reputation behind it.

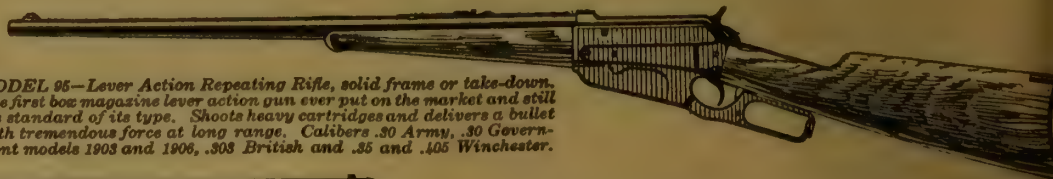
Every rifle that bears the name "Winchester" and that is marked with the Winchester Viewed and Proved stamp has been fired many times for accuracy and smooth action, and with excess loads for strength. At every stage of Winchester manufacture, machine production is supplemented by human craftsmanship. It is a *test and adjustment process*.

It is this thoughtful care in manufacturing that has produced in the Model 94 a rifle of unsurpassed game-getting qualities and that has made it the favorite with hunters the world over.

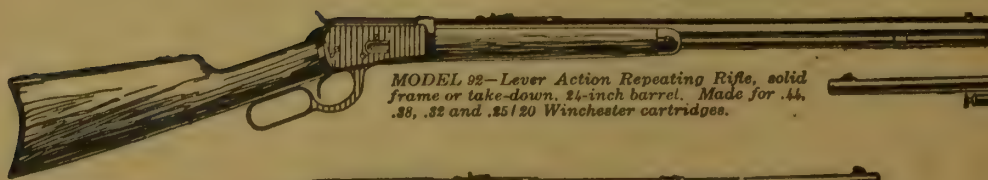
Write for details of Winchester rifles, shotguns and ammunition

The Winchester catalog is an encyclopedia on rifles, shotguns and ammunition. Every hunter should have one. It gives detailed specifications of the Model 94 and describes at length the principles on which every one of the world famous Winchester rifles and shotguns is built. Write today. We will mail you a copy free, postpaid.

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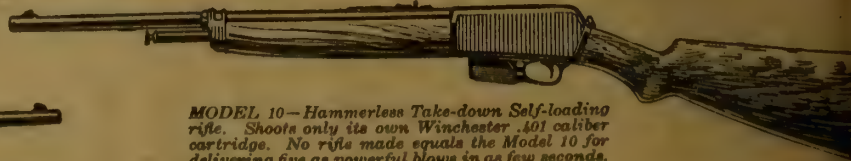
MODEL 95—Lever Action Repeating Rifle, solid frame or take-down. The first box magazine lever action gun ever put on the market and still the standard of its type. Shoots heavy cartridges and delivers a bullet with tremendous force at long range. Calibers .30 Army, .30 Government models 1903 and 1906, .303 British and .35 and .405 Winchester.



MODEL 92—Lever Action Repeating Rifle, solid frame or take-down, 24-inch barrel. Made for .44, .38, .32 and .25/20 Winchester cartridges.



MODEL 07—This is the world-famous .351 Hammerless, Take-down Self-loader, shooting only its own .351 caliber Winchester cartridge.



MODEL 10—Hammerless Take-down Self-loading rifle. Shoots only its own Winchester .401 caliber cartridge. No rifle made equals the Model 10 for delivering five as powerful blows in as few seconds.

# WINCHESTER

World Standard Guns and Ammunition



# California Cultivator

Vol. XLIX No. 15

LOS ANGELES: October 13, 1917

One Dollar Yearly

## Leading Other States in Land Settlement

America Has Been Prodigal In Her Distribution of Public Lands. As These Are Exhausted Serious Condition Confronts Settlers. California Movement Will Doubtless be Imitated in Many States

**N**O state which has rich soil and favorable conditions for producing but has been promoted by more or less mistaken or dishonest operators. Cheap lands have been purchased, irrigation systems installed, roadways laid out—sometimes graded—and 25 to 50 per cent selling expense and perhaps 15 to 50 per cent profit has been added, and the "farmers" have been secured from wherever gettable, and the project too often has ended in heartache and ruin for those who have been "promoted."

As noted above, some of these promoters have been mistaken. They have been told of certain trees or certain plots of a few square feet, or sometimes of a certain plant which has produced such yields that if an acre or five acres or some other number of acres could be secured it would mean a fortune. They have heard the story told and have told it until they affect at least to believe it, and it is retold to the would-be California farmer who comes to the state with a life's savings which may be only sufficient to make the first "one-third down," with one-third in one year and one-third in two years, at ten per cent. Of course the future payments are always to be met by returns from the land—but the story is so familiar to need repeating. No section of California but has heard it, and for years careful observers have been appealing for a correction of this evil and for honest dealing with ourselves and our would-be citizens. Since Dr. Elwood Mead went to Australia as an irrigation expert and returned after having worked in land settlement projects, he has brought back to California so much information and so much enthusiasm that Californians have been asking: "Can we apply these land settlement methods, partly

European and partly Australian, to California conditions?" At first we all denied the practicability of such a scheme. But it was worth thinking about, and we thought, we acted, and finally the legislature acted, and now the land settlement commission is a reality, and in its hands is the sum of a quarter of a million dollars, with a small additional sum for the expense of initiating the measure.

At the close of one of the meetings of this board held in Sacramento during state fair week we had the pleasure of a few minutes interview with Chairman Mead as to the hopes of the commission regarding its work. He referred to the fortune and to the happiness brought to many a settler in New Zealand and in Australia because of similar efforts giving opportunity to many people who are capable but have been unfortunate. Homes have been established and capital advanced for equipping farms, and while there have been occasional failures the successes have generally overbalanced them so that the experiment has proven a winner and is even making new capital for the state to use in enlarging its work along similar lines. The plan followed is for the state to purchase a large tract, expediting, if not every acre, at least every plat, determining not only surface conditions but subsoil conditions; a price is fixed according to the estimates of this expert, this price to cover original cost, the cost of irrigation or other improvements, and perhaps \$20 per acre added for operating expense.

The smallest of these plats is of 20 acres, and from that they will range up to 100-acre size. The average, however, is expected to be not far from 40 acres. One of the first requirements which will be made is that the farmer must agree to conduct diversified farming. He must be a live-

stock keeper as well as fruit grower. The commission is firm in the belief that this diversified farming is the only means of securing assurance of success.

We say that the smallest plat is to be of 20 acres. This is true excepting that near the center of the settlement will be a section of one and two acre plats for laborers' homesites, and presumably this center will also become a social and, to a certain extent, a commercial center. There will be a superintendent or farm agent who must to an extent be an expert in agricultural practices. His services will be at the command of settlers. At present the work of the commission has to do only with selection of the site. From Circular No. 1 we note that the commission is asking for land which must have real agricultural value. In making request for information as to available lands the board gives its plan as follows:

The board desires from four to six thousand acres for subdivision, improvement and settlement. This land should be either irrigated or suitable for intensive cultivation and stock raising without irrigation, either in one tract or a few contiguous tracts. Owners of land of the character indicated, and who are willing to sell on the terms hereinafter outlined, are invited to communicate with the board.

The board will enter into a contract with the owners under which it will make a cash payment of five per cent and will immediately begin subdivision and improvement of the property, expending whatever is necessary of the state appropriation of \$260,000. The land will then be opened for settlement and as settled a cash payment of 45 per cent of the purchase price of the settled portion, making one-half of the purchase price, will be made. The remainder will be paid in

amortized payments, which may be extended over 36 years as a maximum, interest on deferred payments to be made at the rate of five per cent per annum.

Regarding this effort of California to give practical aid to the farmer and to the government a writer in Century says:

"When the war is over, it is safe to assume that most of the countries of Europe will turn their attention to the intensive cultivation of the land. England will endeavor to feed herself instead of being dependent upon America and Denmark. Canada was already experimenting with this policy as well as with the taxation of land values to break up large estates, and will seek to lure settlers not only from Europe, but from the United States \* \* \*. And partly in anticipation of these conditions, the state of California has created a state colonization commission which is projecting a big program for colonization of home-owning farmers in the state \* \* \*."

"The state-aided farm colony plan does not fully meet the agricultural problem. It does not solve the difficulties of marketing or of transportation. It does not provide cold-storage warehouses or terminals. Nor does it insure cheap land, which is essential to successful agriculture. It does, however, lend the aid of science to agriculture. It does provide education and direction by experts. It offers very cheap credit. Most important of all, ownership awakens ambition and hope. It insures permanency of tenure. It aims to reestablish conditions similar to those which peopled America with land-hungry immigrants in the days when land was to be had for the asking, and places agriculture on a firmer foundation of security than that which now prevails."

**F**ORTUNATE in being located in the center of a large and productive area of the great San Joaquin Valley, and equally fortunate in having a body of energetic men to promote its annual district fair, the city of Fresno is putting on an exposition that is a credit to California. True, there are a number of improvements that should be made in connection with the livestock division of the fair, but these matters will be worked out all in good time. The officials in charge of the livestock department devoted their entire time during the week toward making exhibitors comfortable and extending them every courtesy. For instance, the price of alfalfa hay was very reasonable, the stalls were all bedded down free of charge when the exhibitors arrived, and wagons and teams were furnished free for hauling to and from the fair.

## Fresno District Fair

Showing of Livestock, Fruits and Soil Products of San Joaquin Valley at the State's Center

But some very important things were overlooked and a discussion of them at this time is in order: First, the fair directors should eliminate prize moneys for all those breeds which rarely show and when they do show have no competition; secondly, separate classification should be made for Milking and Beef Shorthorns; third, exhibitors should be awarded prize money won before leaving the grounds. Modesto has given this matter first consideration, and it is an excellent plan because many of the young breeders are inconvenienced if they have to wait until they return

home before receiving premiums. Fresno is not the only fair in California at fault in these matters, and it would be an excellent idea if the associations got together and adjusted premium lists, had some binding understanding with carriers so that stock cars could be handled with dispatch, and adopted every advanced method practiced by the larger fairs so that exhibitors would look forward with eagerness to the show circuit each year. After all, it is the livestock and agricultural exhibits which make our fairs worth while. The horse races, the merry-go-round, and

so on are merely incidents and should take second place. It is the educational rather than the amusement feature of our agricultural shows which must be encouraged.

The livestock show at Fresno was up to standard in some departments and below in others. The Holstein division missed the Morris herd, but with Bridgford, Gibson, Minor and Thornton, Buena Alta herds and others on deck there were probably 30 more Holsteins entered than in 1916.

Ayrshires, Dutch Belted, and Red Polled cattle were absent this year, but Beef Shorthorns and Milking Shorthorns made the best exhibit in the history of the fair.

J. Bidegaray exhibited his usual flock of fine Merino and Hampshire sheep. Mr. Bidegaray sends a bunch to the fair every year, more to help make the sheep division measure up

Continued on Page 384



Senior Champion Holstein Bull at Fresno  
This bull, Segis Creamcup Pontiac, is owned by J. S. Gibson Company



First Prize at Fresno  
Holstein bull calf exhibited by Frank Helm



# POWER

## TO SPARE

One of the chief reasons the MOLINE-UNIVERSAL tractor has become the "favorite" with the farmers is because it has *power to spare*. It is possible to give it more than it will pull, but not possible to stall its drive-wheels. This PROVES it has plenty of power. You know that the motor is the "heart" of any tractor—that's why we have built into the

### MOLINE <sup>ORIGINAL</sup> <sup>2</sup> <sup>WHEEL</sup> UNIVERSAL TRACTOR

the most powerful and dependable motor that money, factory equipment and skill could devise. Our reputation is too sacred to put out a tractor which is not right. So, to be doubly sure, we built the motor in the MOLINE-UNIVERSAL with POWER TO SPARE.

"My MOLINE-UNIVERSAL TRACTOR is so handy for all kinds of work. I cut all my oats with it and did all my fall plowing—more than 100 acres. The ground was so hard and dry it would have been nearly impossible to plow with horses. I have had no expense on the tractor."

A. J. ANDERSON, Harcourt, Iowa

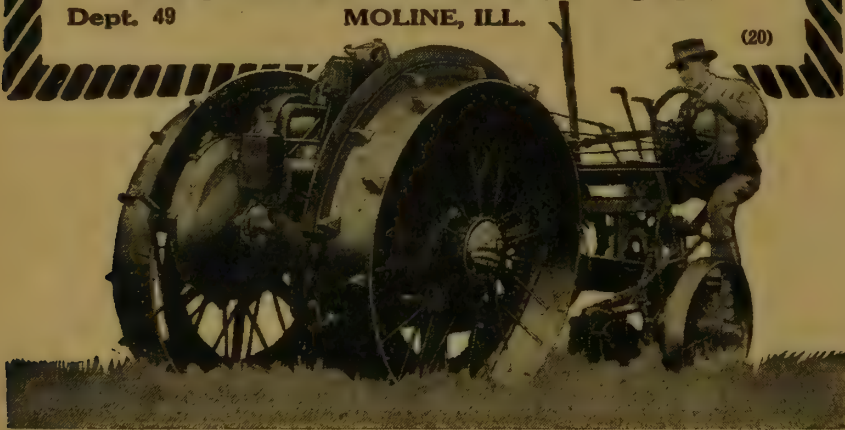
Every part of the Moline-Universal is built extra strong. It weighs nearly a ton less than others. This means much lower operating cost. ALL ITS WEIGHT IS TRACTION WEIGHT. Remember, you can not only plow with this tractor but plant—cultivate—harrow—disc—mow—harvest—do all farm work. Write for free catalog-folder—it will interest you.

### MOLINE PLOW CO.

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## "Nothing but praise"

HUDSON—H. O. Harrison Co., San Francisco—

"Many owners of Hudson Super-six cars use Zerolene. We hear nothing but praise for it."

FORD—Fahy-Atterbury Sales Co., Los Angeles—

"we recommend Zerolene for the lubrication of Ford cars."

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"we are convinced that Zerolene is giving uniformly satisfactory results."

## ZEROLENE

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—because the records of their service departments show that Zerolene, correctly refined from California asphalt-base crude, gives perfect lubrication—less wear, more power, least carbon deposit.

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(California)

For tractors,  
Zerolene Heavy-Duty  
is especially recommended

When writing advertisers, mention The Cultivator.

## More About Citrus Canker

With Photos Taken by Avery S. Hoyt

**A**FTER Avery S. Hoyt's article on citrus canker as it exists in Florida was published in last week's Cultivator a more complete article was received from him. From this additional matter we make extracts below. The photographs used are far more convincing than words of the awfulness of this dread disease and the disaster to California should it gain entrance to our groves. Mr. Hoyt writes:

No cure or control has yet been found for citrus canker. Before adopting the final expedient of destruction of infected trees many experiments were made in the effort to devise some means by which this disease could be eradicated or controlled short of actual destruction. The results of these trials all pointed definitely to one conclusion and the prompt destruction of infected trees was adopted. A great many growers having reason to believe that portions of their groves had been exposed to infection have voluntarily destroyed or authorized the destruction of such trees in the hope of saving the remainder. Some growers have gone so far as to issue permanent authority to their district inspectors to burn the four or eight trees immediately surrounding every infected tree found in their groves. The choice as to whether four or eight trees shall be burned in such cases is left to the district inspector who decides this question after a thorough investigation of the conditions. The burning of infected trees is done with extreme care to prevent spreading the disease during the very process of destroying it. The ground under and surrounding the tree is first sprayed with a solution of formaldehyde. A kerosene torch is used in burning, with which the tree is defoliated and the trunk and branches are thoroughly blackened with the flame. The tree is then cut down, the roots carefully grubbed out and with the blackened top piled on the spot and burned. Thorough disinfection of the soil with formaldehyde follows at once, great care being taken to allow the disinfectant to penetrate as far as possible into the ground.

The inspectors on the canker eradication forces of Florida are required to observe the most rigid precau-

Immediately upon the discovery of citrus canker in a grove a quarantine is established covering all citrus within a mile in all directions from the boundaries of the infected grove. The planting or movement of citrus trees or budwood within this prescribed territory is prohibited. The necessity for this requirement is clearly stated in a report by State Plant Commissioner Wilmon Newell a part of



Inspecting for Citrus Canker

Owing to the great size of these trees it is sometimes necessary to use 26 foot ladders to reach an elevation sufficient with the aid of field glasses to view the tops.

which follows: "There have been 63 instances in which canker has appeared for the first time in a new locality. In each and every one of these cases the disease first appeared upon citrus trees shipped by citrus nurseries prior to the adoption of Rule 5." (Rule 5 provides legal authority for the quarantines maintained about infected properties.) "In 56 of these cases the trees which developed the canker came from nurseries in which no infectious has been found



Soil Disinfection

After removal of infected tree a solution of formaldehyde is sprayed over the surface of the ground and then thoroughly worked in to give deepest possible penetration. The top and roots of an infected tree piled ready for burning are seen. (All engravings of citrus canker from original photographs taken by Avery S. Hoyt).

tions to prevent the possibility of their spreading the disease. Special one-piece inspection spits designed to completely cover the clothing, with leggings, high shoes and special hats are worn at all times in citrus properties. These articles are disinfected by submerging in disinfecting solution and the hands, arms, necks and faces of the inspectors are carefully sponged with disinfectant. This disinfection is practiced without fail both upon entering and leaving all groves under inspection. This means that if one enters five different citrus groves in a single day he must disinfect ten times and five times as he enters the groves it is with wet clothing. Laborers employed in infected groves must follow these same requirements which are not without a noticeable effect on labor conditions.

up to dates of shipment. This proves that citrus trees can carry the disease although they do not show infection and although the nursery from which they come does not show infection."

### OLIVE INSECTS

"The Olive Insects of California" by E. O. Essig, is being mailed by the experiment station of the college of agriculture at Berkeley to all who request it. The bulletin touches upon the more important olive insects of California, the first of course being the black and other scales and twig borers; it also discusses insects of minor importance, with general and detail engravings of many of the pests.



# avocados Recommended for Planting

COMMITTEE on classification and registration was appointed by the California Avocado Association to collect and publish data as to of the many varieties of avocado best to plant under California ons. From the committee's re-e quote:  
 list includes only varieties of called thick-skinned or Guate-type, which in general it is be- is the best and most reliable or commercial planting. The ttee does not believe that it is e at the present time with our knowledge and experience, to t to pass on the relative com- importance of the different of fruits. Only time can de- what the market demands. The fact remains, however, the present time, a large ma- of the experienced growers in- nia favor the use of the Guate- type.  
 y varieties that are frequently ned in discussions are not in-

The percentages of oil or fat given under each variety are taken from analyses made by Professor M. E. Jaffa of the University of California, except in the case of the Spinks, which is from an analysis made by E. M. Chace of the United States department of agriculture. These are not averages, but the highest percentages found in any single analysis of a variety. The percentage of fat increases as the fruit matures and in view of the few analyses that have been made of any one variety, it is thought to be more instructive at present to give the highest analysis rather than an average.  
 The other descriptive information relative to the varieties listed is self-explanatory, but it must be remembered in using the list, that there are many variations and extremes that cannot be given in a condensed table.  
 Avocado orchards require several years to reach full bearing age and size, and it is somewhat common practice to plant the orchard more thickly than is ultimately desired, using some



Burning Infected Grapefruit Tree  
 kerosene torch is used with which the tree is defoliated and the trunk and es blackened with the flame.

In this list. The list must be merely as the best judgment of mmittee, at the present time, of eties safest to recommend for ug. Several very promising va- are not mentioned, as the edge of the committee concerning is insufficient to justify passing ent on their qualities and com- ve value. Again, some of the les mentioned in the list will bly be discarded later. This list, ommittee expects to be of tem- value only. It should be revis- the association every year and at up to date to keep pace with cing knowledge. As soon as jus- by experience, varieties of oth- es should be included.  
 varieties are listed according to n of maturing and not in the or- of their merit. It is well recog- by growers that the season of ing of a given variety is very le and may extend more or less ight the year. The placing of a y in a definite season merely tes its usual season of maturing t may be expected to be at its Varieties may extend from one n to another, and when in the ent of the committee, a variety be considered as important in seasons, it is listed under both. is happens that several varieties sted twice.

regularly devised system providing for the removal of a certain number of the trees. The trees that are intended to be removed are ordinarily spoken of as filler trees. Special attention is directed to the value of the Lyon for use as a "filler" tree in planting. Its upright habit of growth and early fruiting render it particularly valuable for such use.

## Rootstocks

So much injury may be done by the use of tender or poor rootstocks in the propagation of the avocado that the committee would strongly recommend that only seedlings of the hardy Mexican avocado be used for budding and grafting stocks. Nurserymen should use this type of rootstock only for trees propagated for sale, and planters should demand that the trees purchased for planting should be of this stock. Seedlings of the ordinary varieties of the avocado grown in Florida, the West Indies, Hawaii and Tahiti, are usually so tender that they cannot withstand the cold of California winters and are thus unsafe for use as stocks. Seedlings of the Guatemalan type are not such strong growers as the Mexican and are probably not so good to use as stocks, though they have not been thoroughly tested. Committee, H. J. Webber, chairman, C. D. Adams, I. J. Condit, William

## LIST OF RECOMMENDED AVOCADO VARIETIES

eties	Season Dates (Inclusive)	Ave. Seed in Oz.	Ave. Wt. of Fruit in Oz.	Pct. of Oil or Fat	Shape of Fruit	Color of Mature Fruits
ng	Jan. to Aug.	12-14	1.52	30.72	Pyriform	Green
s man	Apr. to Aug.	16-20	3.25	16.46	Obovate* to Pyriform	Purplish black
	Apr. to Aug.	16	2.50	17.27	Pyriform	Green
	Apr. to Aug.	16	2.75	16.31	Pyriform	Dark green
er	Apr. to Aug.	16-20	3.25	16.46	Obovate to Pyriform	Purplish black
s man	Apr. to Aug.	16	2.50	17.27	Pyriform	Green
	Apr. to Aug.	16	2.75	16.31	Pyriform	Dark green
nson	June to Oct.	12	1.36	20.36	Obovate	Purplish black
	May to Oct.	16	3.13	16.53	Obovate to Pyriform	Green
nson	May to Oct.	16	3.13	16.53	Obovate to Pyriform	Green
less	June to Oct.	12	1.36	20.36	Obovate	Purplish black
	Oct. to Feb.	20	3.00	24.23	Pyriform	Dark purple maroon
er	Oct. to Feb.	20	3.00	24.23	Pyriform	Dark purple maroon
less	Dec. to Feb.	8-10	1.50	26.68	Obovate	Dark purple
a**	Jan. to Aug.	12-14	1.52	30.72	Pyriform	Green

\* Obovate, a term used to designate the shape of an inverted egg.  
 \* Puebla is not strictly a Guatemalan type, but is supposed to be a hybrid.



# Cleveland Tractor

Geared to the Ground

## Now You Can Forget The Labor Shortage

—and the lack of horses and mules as well.

A single Cleveland Tractor will do the work of three 3-mule teams and their drivers—and do it quicker, better and at much lower cost.

Under the very conditions found in the South and in the fruit lands of the West the Cleveland will plow 3½ miles an hour. Such speed used to be considered impractical. The Cleveland has made it not only possible but highly desirable. At such speed it does the prettiest job of plowing you ever saw.

It will plow 8 to 10 acres a day, through loose sand, soft gumbo, flint laden cotton soil or soggy rice fields.

Think of such speed! Think of the labor saved. To say nothing of the saving in time and money.

No other tractor built can perform so successfully under the conditions you have to face.

The Cleveland will not pack the soil. Nor will it slip, mire or flounder. For it is light—only 2750 pounds—and has 600 square inches of continuous traction surface.

All this means more cotton, rice, sugar—greater prosperity for Cleveland Tractor owners.

And here's another most important point. The Cleveland is only 52 inches high and 50 inches wide—actually small enough for use among small fruit trees. It is just what hundreds of grove owners have been looking for.

Even in the forests it can perform to advantage, threading in and out between trees, and hauling heavy logs as neither horses nor mules can do.

The Cleveland delivers 12 h.p. at the drawbar and 20 at the pulley belt—more than enough for all your requirements.

It is built by Rollin H. White, the famous motor truck engineer. Throughout its construction he has used only the finest motor truck parts. He has protected all gears by enclosing them in dirtproof, dustproof cases. He has so designed the Cleveland that it steers by the power of its engine. Any-one can drive it and care for it.

These are big important advantages. There are others just as vital. They combine to make the Cleveland just the tractor needed to solve the labor problem of the South.

You need the Cleveland and need it badly. Send today for full particulars and name of the nearest Cleveland dealer. We are so crowded with orders that we cannot promise delivery before December 1. We suggest ordering now for delivery then. Do not delay in getting full information. Address Dept. BF, or use the coupon.

\$1185

f. o. b. Cleveland

CLEVELAND TRACTOR COMPANY

Cleveland, Ohio

Cleveland Tractor Co.  
 Dept. BF,  
 Cleveland, Ohio  
 Please send me full information about the Cleveland Tractor.  
 Name \_\_\_\_\_  
 City \_\_\_\_\_  
 County \_\_\_\_\_ State \_\_\_\_\_

## Ditching

—usually the hardest job on the place—make it the easiest and save time and help-hire besides by using

**THE Martin**

**All Steel—Lasts a Lifetime**

Simple and practical. Cuts V-shaped ditch up to 4 feet deep; cleans old ditches; grades roads; builds terraces, dykes and levees; works in any soil, wet or dry. 2, 4 and 6-horse sizes; large size fine for tractor. Write for catalog and list of users near you. No charge. No obligation.

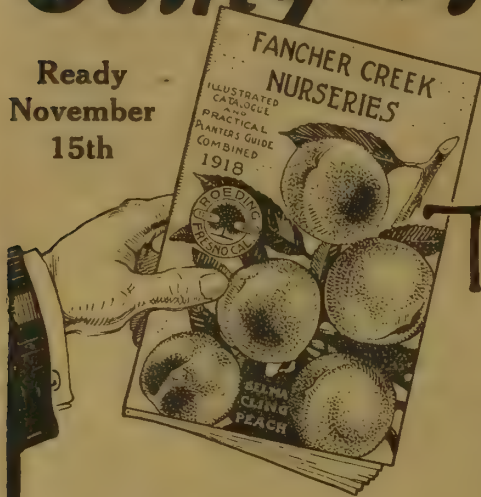
OWENSBORO DITCHER & GRADER COMPANY, Desk 1B, DENVER, COLO.

Extra parts are always available without delay for standard advertised machinery. This class always found in the California Cultivator.



# Going to Plant?

Ready  
November  
15th



## Send for This Book

Which accurately describes and prices more varieties of trees, shrubs, vines and roses than any other Nursery Catalogue in the United States.

### This New Illustrated Catalogue and Practical Planters Guide (REVISED AND COMBINED)

**SENT FREE ON REQUEST**

#### Some important features of this book are:

- Beginning right.
- Best methods of planting.
- Proper pruning for big crops.
- Soils, Cultivation, Irrigation, etc.
- New varieties of trees you will want to know about.
- Roeding's Landscape Service Department.

This book is equally valuable for the small fruit grower as well as the grower who controls hundreds of acres. Even though you have only a few vines or trees, you will find this book useful as it tells you about all kinds of plants and trees and how to grow them.

**Fancher Creek Nurseries**  
201 Holland Building  
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### SAVES TIME, LABOR, MONEY

## Makes the Biggest Power Sprayer a One-Man Outfit

**SIMPLE, EFFICIENT  
DEPENDABLE**

Takes entire capacity of the largest sprayer through one line of hose. One man with this Spray Gun does the work of two or three men with ordinary nozzles.

#### Made in Two Sizes

**BEAN GIANT GUN**

Cap. 8 gal. per min.

**BEAN PONY GUN**

Cap. 4 gal. per min.



Full Solid  
Fog to  
Long Distance

## Spray

Tops same trees as  
10 or 12 foot bamboo extension or

sprays full solid fog by  
half turn of handle.

**Bean Spray**

**Pump Co.**

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SAN JOSE, CAL.

Bean  
Spray

Pump Co.,

212 W. Julian

St., San Jose

Please send me literature describing the Bean Giant Gun and other spray accessories.

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State .....

# LIME

Our Ground Limestone Will Increase  
Your Soil Production. Write for Booklet.

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640 Title Insurance Bldg.  
LOS ANGELES, CAL.

"Fertilizer Dept."

To keep thoroughly posted subscribers should read every advertisement in the California Cultivator columns.

Hertrich, L. B. Scott. Approved by the board of directors August 16, 1917: Thomas H. Shedden, William H. Sallmon, H. J. Webber, Charles D. Adams, T. U. Barber, Willett L. Har-

din, E. E. Knight, F. C. Popenc, H. Sharpless.

The California Avocado Association will hold its semi-annual meeting exhibit at the Glenwood Mission, Riverside, October 26 and 27.

## State Fruit Growers Convention

**S**TATE Horticultural Commissioner George H. Hecke announces arrangements practically completed for the "Fiftieth" State Fruit Growers' Convention which will be held in Sacramento November 21-23, or rather, it will convene as a state convention of horticultural commissioners on Monday morning, November 19, when two days will be given to discussion of horticultural matters, especially those touching upon police regulation of movement of plants and fruits from one section to another.

The first day will be given over to discussion of questions of the year or the problems which have confronted various county horticultural commissioners. State Commissioner Hecke will have charge of these meetings. There will also be present representatives of the United States department of agriculture and of the United States biological survey. Specialists of the survey will give information regarding squirrel control. Representatives of the state government having to do with state lands are invited to be present and it is hoped a method will be devised through which control of pests on such lands may be secured.

Standardization will take up the second day of the horticultural commissioners' convention. There are many problems as to maturity standardization of our fruits, especially of citrus fruits, in which there is as yet no decision as to "color line," "eight to one."

#### State Convention Proper

The state convention of fruit growers opens on Wednesday morning, the 21st. There will be the usual opening welcome, report of the commission and reports from various fruit growers' and shippers' associations. In

the afternoon there will be discussion of the matter of production of fruits, led by Dr. H. J. Webber. C. B. Lipman will discuss soils, especially as affected by cover crops. day's session leads up to the session which will be a standing meeting by Eastern specialists presumably those who have had with the selling of California products and who can give information the attitude of the Eastern market. Standardization of deciduous and citrus fruits both will be discussed.

On the 22nd State Market Director Weinstock and associations affiliated with him in his work will have place on the program during the forenoon session. A ride to County will take the place of the forenoon session. Commissioner Hecke fruit ranch is in that county and is probable that an opportunity will be given to inspect his methods of culture. Features of the day will be tractor demonstrations and speeches by students of the university farm. Davis to give fruit growers an opportunity to judge of the type of educational work being done by the university. These will all be on agricultural subjects and by students of agricultural courses.

Friday the 23rd will be given discussion of the labor situation affects producers of California. Wisker will preside at the morning session and C. C. Teague at the noon session.

The session of Saturday, November 24, will be an executive session of county horticultural commissioners.

H. S. Maddox, secretary of the Sacramento chamber of commerce, have charge of local entertainment and presumably every visiting grower will be cared for.

## Government to Purchase Nitrates for Fertilizers

**T**HE department of agriculture authorizes the following:

Secretary Houston stated that the department of agriculture has for some time been giving careful consideration to the problem of securing nitrate of soda for fertilizer use. Under a recent authorization of congress there is available an appropriation of \$10,000,000 to be used, at the discretion of the president, to secure nitrate of soda and to supply it to farmers at cost for cash.

It is proposed to coordinate all government purchases of Chilean nitrate for this country through the purchasing committee of the war industries board, so that there will be no competitive bidding for this material. This should very much simplify the problem and make it feasible to secure the best possible terms. The price of Chilean nitrate on board ship in Chile has greatly increased within recent months without justification. Shipping rates also have increased.

#### Cause of Increased Prices.

The increase in price is due in part to unfounded statements regarding the demand for Chilean nitrate for munitions purposes and for fertilizer. As a matter of fact, the demands of this country for nitrate of soda will be smaller than heretofore. The navy already has placed contracts to satisfy its needs for the next 12 months. The war department announces that practically all the sodium nitrate which it has been planned to procure from the gradual building up of the war reserve already has been contracted for. The quantity which may be purchased for fertilizer use under the special appropriation of congress will not be an addition to the quantity normally used.

#### Demand May Decrease.

Any quantity purchased by the gov-

ernment and sold to the farmer simply take the place in part of quantities heretofore supplied to through private agencies. As a matter of fact, unless satisfactory can be secured, it is probable the farmers will not seek as large quantity of this material as has been used in the last year or two. contracts have been made already for farmers for nitrate of soda. In view of all these facts, it is probable the aggregate demand for the five or six months will be below normal. It is certain that unless market prices, which are now in the neighborhood of \$100 a ton, fall, farmers' demand for nitrate of soda will decrease.

As has been stated, the purchase will be handled directly through the war industries board. The department of agriculture will cooperate with the purchasing committee in effort to procure nitrate of soda as is authorized by law to secure as to the demand for fertilizer, including nitrate of soda, their consumption, costs, and prices, the basic facts, relating to their production, transportation, manufacture, storage, and distribution. This inquiry is now being conducted through the bureau of markets. In connection with this the needs of farmers will be ascertained, and amounts purchased for their use. After the shipments reach the ports, they will be taken charge of by the department and will be distributed to farmers at cost for cash. The collections will be turned into the treasury.

#### May License Distribution.

Authority has been given the president, if necessary, to license the transportation, manufacture, storage and distribution of fertilizers, to require the licensees to submit reports to permit entry and inspection of their places of business. The



is further authorized, if he shall that any storage charge, commis- profits, or practice of any li- is unjust or unreasonable or iminatory and unfair, to cause to be discontinued, and in lieu ach may determine what is just reasonable, and his finding shall rima facie evidence in any court hich proceedings may be brought. also provided that licenses may evoked for cause. If it becomes ssary to exercise the licensing r, the department of agriculture, igh a special agency, will utilize services of the licensing division e food administration. ere has been available no thor- ly satisfactory data as to the is of crops due solely to the ap- tion of nitrate of soda, and, efore, as to the price at which ers can afford to use it. Realiz- this fact, the secretary of agricul- directed the bureau of plant in- ry last spring to make 100 experi- ts. These experiments are being e with corn in five Southern s — Virginia, North Carolina, h Carolina, Georgia and Alabama ten counties in each state and on farms in each county. It is hop- at the results of the investigation be available within the next six s. When information is secured ill promptly be given publicly.

#### RED SPIDER EXPERIENCE

Written for California Cultivator  
By W. S. Guilford

**I** WOULD suggest that now is a good time to discuss the red spider problem — and am sure the columns of the Cultivator are open for such discussion.

My experience in several Glenn county prune orchards this year seems to indicate that the best thing to do for spider control next year is to spray trees thoroughly with atomic sulphur early in the season before any spider has made its appearance.

When the spider does appear it is generally found to be almost impossible to entirely check it. After a season of spraying the trees four, or perhaps eight times it is possible to keep the trees from being defoliated — and that is about all.

In many orchards a considerable quantity of the fruit has been affected. Where the trees have been defoliated the spider the prunes have not "sugared up" and are a sort of "pit, pulp skin" affair without much sugar content.

Unless they are cured very dry on trays there is danger of molding. Prunes cannot be put in the bins with much moisture in them as the prunes that have developed on trees damaged by the spider.

We have tried atomic sulphur and various combinations in our orchards. Mr. John in Glenn County. We did not get the work started as early as we will next year. At first we were disappointed with the results from atomic sulphur, but after careful study the season will rely entirely on atomic sulphur next year.

There has been plenty of spider experience this year. Let us hear from others.

#### FARM BUREAUS

In a score of counties active work on the formation of farm "Centers" is under way. A county bureau is under way "order way" in time of war when farmers' duty is so great means the slightest suggestion looking toward greater efficiency is a command to service. As a rule every farmer stands at attention until the demand comes.

The university formerly waited until the farmers requested the adviser in their county. Now, however, Commander Hoover recommends immediate action in every county. So the university has appointed a number of staff to act in the 20 or more counties which have no farm adviser and agricultural counties. An outline of the work and statement as to need was given in Dr. Hunt's address, a portion of which was given in the Cultivator of September 29.

At Los Angeles, the county council defense called a meeting last Saturday. Every section of the county was represented. The necessity for immediate action was appreciated, the enthusiasm marked and a definite

step toward permanent organization taken in the election of Senator P. F. Cogswell president; Volney H. Craig first vice-president, C. A. Griffith second vice-president, W. S. Rosecrans secretary, and Ralph McNees treasurer of the temporary organizing body.

Evidence of the interest was shown in the jingle of the dollars as they rained on the treasurer's table.

The work of these temporary officers, who also constitute an executive committee, will be to organize some 20 or 25 sections, each of like products so far as possible, into local centers. These in turn to elect delegates to perfect a permanent farm bureau.

#### HORTICULTURAL STATUTES

State Commissioner of Horticulture G. H. Hecke has just received from the state printer 5000 copies of the revised horticultural statutes which are now ready for distribution. This little book of 150 pages contains all the horticultural laws and quarantine orders now in force, the state insecticide and fungicide laws, and a complete list of the horticultural commissioners and inspectors now operating throughout the state. Anyone desiring a copy should make application to the State Horticultural Commissioner, Sacramento.

## DOAK ENGINES

Simple, Reliable, Efficient

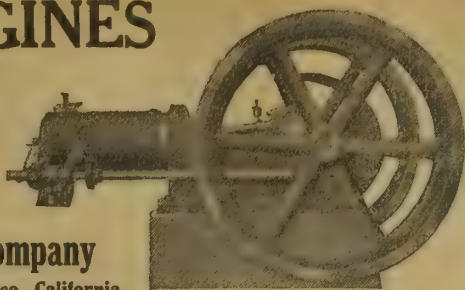
Operate on Stove Distillate,  
No. 1 Distillate or Gasoline

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embodies these advantages:—

It has 20% greater carrying capacity than either riveted steel or cast-iron pipe, costs much less and lasts at least as long as the latter and several times as long as the former.

Redwood is immune to the attacks of insects, acids and alkalies.

It is not affected by heat or cold. Arid or humid climates do not reduce its life.

Here we have long life, continuous service, complete satisfaction, and at a cost so low that none should lay any other than Pacific Redwood Pipe.

Our engineers will be glad to give you an estimate of the cost of the pipe you should have, if you'll tell us the conditions creating your needs.

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Gentlemen:

Please send promptly your catalogue of Water Tanks.

I need a tank to hold..... gallons.

It should be mounted on a tower .....feet high.

The water to be delivered from .....

Pipe { Length.....  
Size.....

Name.....

Address.....



## Autumn in the Garden

Written for California Cultivator by Ernest Braunton

**N**OW is a splendid time to put in lawns or renovate old ones. The ground should first be graded and the fact kept in view that the surface can never be more smooth and even than it is when you get through with grading.

The soil must be well pulverized and most thoroughly soaked. If light and sandy it will pay to haul in some adobe or heavy soil to put on surface. No soil grows better grass than adobe. If soil is very light it would be better not to use blue grass or clover, but to depend upon lippia or some other soil cover. Good stable manure is the best material one can put in the soil for fertilizer and do not let anyone deter you from using it if available. If you don't have it use commercial lawn fertilizer at the rate of 50 pounds to 1000 square feet. A heavy raking to mix this with the top soil should be sufficient. The amount of seed needed is not less than six pounds to 1000 square feet. Some use

one-third clover and two-thirds blue grass and this makes a fine combination. The two should be sown separately as one is heavy and the other very light. Sow both very evenly over the whole surface.

After sowing rake the soil over lightly to cover the seeds. Better rake it twice, the second time crosswise to the first, but do not pull the soil about so that any of the seed is deeply covered or any moved about after sowing evenly. If possible roll the surface after sowing. Then water with a fine spray until thoroughly wetted and afterward gently spray the surface at any time of day the least dryness shows and keep this up until the grass is in evidence. Get good seed; do not hunt for a place where it is sold at a lesser price than elsewhere. As a rule you will get what you pay for.

### Oxalis for Borders

Oxalis, cowslips, Bermuda butter-

cups, or whatever you choose to call them, were not given in our bulb list for I could never warm to them. They do not furnish cut flowers as the stems are too short, and the colors of many species and varieties are poor, especially the pinks that have a tinge of blue in them. For a low border or edging plant or for carpet or ground-cover effects they are very good. The foliage is good, the flowers of fair size and in the better types the flowers are bright little blossoms. They are of easy culture and usually multiply rapidly. They may be had in white, yellow, pink, rose, and crimson; also a magenta.

### Giant English Daisies

Have you seen the new giant strain of English daisies, or *Bellis perennis*? If you have not I can assure that the increase in size of flowers in this daisy has been greater than that attained with any other flower in the last decade. If in good soil and kept damp they are really wonders. It pays to feed and water them well for I notice that if given poor soil and care they do not attain fine size. As a border plant or for flat bedding they

can hardly fail to please. seeds or plants may be had for colors of flowers, white, and pink.

### Wallflowers Becoming Popular

Wallflowers thrive best in weather and therefore seeds or should be put in the soil now. are "deucedly English," you know, and the old-fashioned English seldom thrive in California, at not in the southern half of the state. But we have American strains that do not need the cool damp mate of England to bring them perfect flowers, and these strains will please Californians. winter I saw as good flowers, large heads, as I ever saw in England or elsewhere. The flowers have lightful fragrance and the color rather unusual in gardens, the reds and browns, as well as the lows tinged with brown, being attractive. Plant in cool spot.

### Sweet William

William was very sweet indeed in early spring in my garden. was furnishing an abundance of flowers in a great variety of colors at a time when flowers were scarce. colors, shades, and combinations. colors were too many to describe. range was from pure white to crimson and for the first time pure pink ones though the flowers were not so large nor the plants robust as in the other shades. colors. But the color was fine and a departure from the usual color to be very pleasing. Sweet William are hardy subjects and do well in nearly any soil and any location.

### Plant Verbenas Now

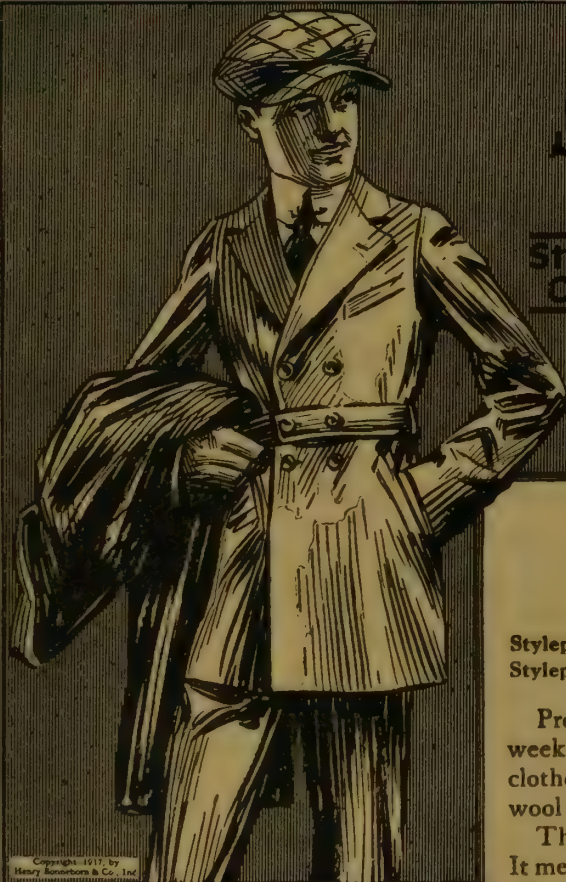
Verbenas are splendid bedding plants. one may get strong vivid colors will brighten any garden or landscape. The range of color too is great. there are none better than the verbenas. Some very fine effects may be obtained with mixed colors, for though they come in great variety it is seldom a jarring or conflicting shade appears and even so the offender may be plucked from thence and cast into the uttermost depths of the trash can. After one has a small stock of verbenas he may propagate from cuttings the colors he admires and the others away. They grow so fast from cuttings that a small child soon increase the stock to enough to fill a garden.

## The Onion Situation in California

By R. G. Risser, Assistant Truck Specialist for the Pacific Coast

**D**ETERMINATION of the quantity of onions yet on the market from the principal onion district in California has been the object of a special trip of investigation following reports of a short crop. East the recent movement of onions has been much greater than prior to September 1 and has been limited only by inadequate transportation facilities, especially the lack of cars. The total quantity of onions moved from the river landings on September 15 was 1165 cars, probably 200 cars of this number ready in the warehouses awaiting shipment.

Of the original area in the state of 8300 acres, 200 acres in the Costa County was abandoned, leaving 8100 acres to be harvested. Of this acreage it is estimated that 1000 acres are grown under contract. The bulbs produced from this portion



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Styleplus Clothes \$17



Styleplus Clothes \$21

The same prices the nation over.

*The Big Buy*

Always the greatest value at the price

Styleplus Clothes \$17 (black label) always excel at that price  
Styleplus Clothes \$21 (green label) always excel at that price

Progressive merchants from coast to coast are this week featuring Styleplus suits and overcoats—the only clothes in America sold on a known price basis—all wool and guaranteed.

This policy has made a hit with the men of America. It means that whenever and wherever they buy Styleplus, they know the quality and the price.

We developed the known price idea in clothing. It enables us to concentrate our volume, lower our costs, give exceptional all-wool fabrics, style and tailoring at moderate price.

For three years we have maintained Styleplus Clothes \$17 in the face of war conditions, because we could buy in advance and operate on an increasingly larger scale.

When the United States entered the war, the fabric market underwent violent changes. To

meet these new conditions we added a \$21 grade, thus insuring the wide selection of fabrics and models and enabling Styleplus Clothes to meet every individual demand as usual.

Each grade the greatest possible value at the price. See for yourself at the Styleplus store. Write us (Dept. AB) for free copy of "The Styleplus Book."

Style plus all-wool fabrics + perfect fit  
+ expert workmanship + guaranteed wear.

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**New KEROSENE Light Beats Electric or Gasoline**  
10 Days FREE—Send No Money

We don't ask you to pay us a cent until you have used this wonderful modern white light in your own home ten days, then you may return it at our expense if not perfectly satisfied. We want to prove to you that it makes an ordinary oil lamp look like a candle; beats electric, gasoline or acetylene. Passed by Insurance Underwriters, Children handle easily. Tests by U. S. Government and 25 leading Universities show that the new ALADDIN BURNS 50 HOURS ON ONE GALLON common kerosene (coal oil), no odor, smoke or noise, simple, clean, won't explode. Over three million people already enjoying this powerful, white, steady light, nearest to sunlight. Won Gold Medal at Panama Exposition. Greatest invention of the age. Guaranteed.

\$1000 Reward will be given to the person who shows us an oil lamp equal to the new Aladdin in every way (details of offer given in our circular). We want one user in each locality to whom we can refer customers. To that person we have a special introductory offer to make, under which one lamp is given free. Write quick for our 10 Day Free Trial Offer and learn how to get one free, all charges prepaid.

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Our trial delivery plan makes it easy. No previous experience necessary. Practically every farm home and small town home will buy after trying. One farmer who had never sold anything in his life before writes: "I sold 51 the first seven days." Christensen, Wis., says: "I have never seen an article that sells so easily." Norring, Ia., says: "82% of homes visited bought." Phillips, O., says: "Every customer becomes a friend and booster." Kemmerling, Minn., says: "No flowery talk necessary. Sell itself." Thousands who are coining money endorse the ALADDIN just as strongly. NO MONEY REQUIRED. We furnish stock to get started. Sample sent prepaid for 10 days' free trial and given absolutely without cost when you become a distributor. Ask for our distributor's plan. State occupation, age, whether you have rig or auto; whether you can work spare time or steady; when can start; townships most convenient for you to work in.



rop are intended primarily for  
ng in December 1917 for seed  
ction during the year 1918, and  
ertain that at least a portion  
product of this acreage will be  
for that purpose. But it is al-  
known that part of these onions  
be put on the market, and it is  
le that seedmen may buy up  
than they have grown, or, if  
are high, they may do as they  
st fall, sell some of the bulbs  
arket which were grown espec-  
to be planted for seed product.  
It was reported to the bureau  
here would probably be nearly  
cars of onions used for seed  
ng next year, and this investi-  
followed, but it has failed to  
that the quantity to be used for  
urpose will be equal to the es-  
Contracts for growing seed  
not yet been signed, hence it is  
sible to say definitely, at this  
what quantity will be used. It  
stomary to use from 30 to 70  
per acre, depending upon va-  
and size, 50 sacks being the  
ge. At this rate 4000 cars would  
24,000 acres for seed. Normally  
creage of seed onions in the en-  
tate does not exceed 4500 acres,  
here is no likelihood that such  
crease in acreage is possible for  
year. Seedsmen would like to  
a larger acreage, and if they  
the entire product of the 1700  
yielding 200 sacks per acre  
could plant 6800 acres which  
not be too much under present  
ions. But the seed growers  
had a poor crop and the cost of  
ction has been very high. Un-  
circumstances they are badly  
traged and seedmen will have  
difficulty in signing up the  
ge they desire to grow on terms  
actory to both parties. The  
ion is so serious that it is prob-  
that not over 5000 acres will be  
ed, and this will require 833  
of bulbs for planting.

onions are a little smaller than  
and smut has developed in  
of the bulbs, but the product is  
ally good. The yield is running  
acks per acre averaging 105  
s each.  
ecapitulation follows: 8100 acres  
ions (total crop) averaging 200  
per acre, 1,620,000 sacks, or  
cars. Shipped up to September  
on river landings, 1165 cars. Re-  
ng in fields and on river land-  
4235 cars. Estimated quantity  
planted for seed growing 835  
Balance 3400 cars.  
s impossible to tell what portion  
s balance has been sold, but not  
red. Storage space has all been  
ed and it is probable that a  
quantity will be held over.

#### ICATION OF HILGARD HALL

Saturday of this week occurs  
edication of the recently complet-  
lgard Hall on the campus of the  
rsity at Berkeley.  
griculture in California During  
rd's Time" will be discussed by  
ayo Newhall, president of the  
of trustees of Stanford Univer-  
er addresses will be made by  
Benson Storey, vice-president of  
anta Fe railway, Stoddard Jess,  
lent First National Bank, Los  
es, Hon. Peter J. Shields, W. B.  
nan, Dr. Thos. Forsyth Hunt and  
lent Wheeler, these addresses to  
ade during the forenoon.  
s afternoon session or sessions  
be a series of conferences held  
2:30 to 3:30 in various rooms of  
rd Hall. Agronomy, room 123,  
ulture, room 339, forestry, 115,  
ics, 201, pomology, 217, soil tech-  
y, 24, viticulture, 216.  
3:30, closing session Convention  
ornia Nurserymen, room 125.  
ere will be an exhibit of citrus  
semi-tropical fruits in room 215  
of new plant creations in room  
these exhibits both open from  
5.



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We have built this new  
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It is not a racing car, in  
the sense that comfort is  
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it a show car, in the sense  
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It is simply a very well-  
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fortable automobile—a  
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The overhead-valve motor  
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The body of the car is  
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Established 1888. Twenty-eighth Year

**The California Cultivator**

A Journal of Horticulture, Agriculture and Live Stock

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**Saturday, Oct. 13, 1917****OUR ADVERTISERS RELIABLE**

We guarantee our subscribers against  
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 tempt, however, to adjust trifling differ-  
 ences between subscribers and honest,  
 responsible advertisers, nor will we pay  
 the debts of honest bankrupts. Notice  
 of complaint must be sent us within 30  
 days from date of the transaction, and  
 the subscriber must have mentioned the  
 Cultivator when writing the advertiser.

**THIS WEEK'S COVER**

Walnut harvesting is nearly  
 over. It has been one of the greatest  
 of walnut harvests, especially from a  
 financial standpoint, for never in the  
 history of the industry have such  
 prices been obtained as this year. It  
 is probable the output will be around  
 12,000 tons; it would have been much  
 greater had it not been for the heat  
 of mid-June. Walnut planting will be  
 general this year, for the industry  
 needs encouragement. This country  
 imports more nuts than it grows, but  
 California's increase in walnuts and  
 almonds is reducing this excess of im-  
 ports every year.

**EAT SPUDS**

After sending out many appeals  
 for conservation now comes the de-  
 partment of agriculture with, "Make  
 special effort to eat potatoes October  
 22-27 inclusive." Presumably this is  
 meant as a measure to conserve ce-  
 reals, and as potatoes are more easily  
 and quickly grown than wheat and as  
 nothing on earth is much better than  
 a mealy baked potato, let us all ob-  
 serve potato week.

**BORROWER'S BULLETIN**

There is soon to be issued from  
 the federal farm loan bureau at  
 Washington a "house organ," "The  
 Borrowers' Bulletin." It will contain  
 a great deal of advice and information  
 which will be of interest to borrow-  
 ers and possible borrowers under the  
 federal farm loan system. Informa-  
 tion regarding this bulletin may be se-  
 cured by writing Federal Farm Loan  
 Board, Treasury Department, Wash-  
 ington, D. C.

**F. K. ADAMS**

One of California's busy work-  
 ers, for years identified with the cit-  
 rus industry, manager of two of the  
 largest packing houses in the state,  
 died last week. F. K. Adams, manager  
 of the packing house at West Ontario  
 commonly known as the Narod pack-  
 ing house, busy with work connected  
 with the association and filled with  
 thoughts of how to render best serv-  
 ice to the growers, in his absorption  
 stepped in front of an Overland ex-  
 press and was instantly killed. The  
 community suffers a great loss in his  
 passing.

**DOING; NOT ADVISING**

We have referred to the farmer  
 becoming tired of receiving such a  
 continuous stream of advice as he has  
 for the past eight months. New York  
 farmers, however, are taking advice  
 with more grace because of its being  
 sugar-coated with some practical do-  
 ing on the part of the state adminis-  
 tration. The state council of defense  
 has given, so far as it could, advice.  
 Better, it has secured the purchase of  
 40 medium type tractors. These have  
 been distributed in various parts of  
 the state (through the county agents)  
 where they are taking the place of  
 many of the horses which have been  
 drawn away to Europe.

Give us more practical capitalizing  
 of farm operations if highest efficiency  
 and production is desired.

**MORE EQUIPMENT**

When "twenty a month and  
 found" was the price for most efficient  
 farm labor, the old wheelbarrow to  
 handle farm wastes, cultivators or oth-  
 er implements in indifferent condition,  
 dull axes and other tools were mat-  
 ters of little importance, but today  
 when it is far nearer twenty per day  
 than per month the farmer who  
 would succeed is inspecting every la-  
 bor saving appliance.

The twenty per day is not an exag-  
 geration to make a point, but a fact,  
 if not on the farm; many a factory in  
 the East is paying more than \$20 per  
 day for some of its help—not of great-  
 est efficiency either. But on the farm  
 \$50 or \$60 and found is not unknown  
 in many communities.

True, farming with most up-to-date  
 implements, tools and power calls for  
 large investment, but we believe that  
 more than ever it is a necessity if  
 farming products are to be a factor in  
 these strenuous days.

**LIBERTY LOAN**

It has been said that when the  
 United States has invested as much in  
 the present war as has Germany, in  
 proportion to the wealth of the coun-  
 tries, her bonded indebtedness will  
 exceed \$200,000,000,000. This makes  
 the little \$2,000,000,000 and the \$3,000,-  
 000,000 now asked for seem a mere  
 bagatelle.

The United States will never be  
 called upon to make such great in-  
 vestment, but were it necessary the  
 people would not be found wanting.  
 The first liberty loan was oversub-  
 scribed by 50 per cent. We believe  
 that before the present drive ends it  
 will also be greatly oversubscribed,  
 but the desire of the administration  
 and of the people of the entire coun-  
 try is to make it as universal as pos-  
 sible. As has been said, "Unless we  
 come across, the Kaiser will."

Are you saving your money to in-  
 vest in the second issue of the liberty  
 loan?

**SALVAGE**

The Red Cross is making appeal  
 for salvaging everything of value, and  
 we are all finding that there is much  
 of value that the American people  
 have been wasting. Now even the old  
 newspapers, tinfoil about our chewing  
 gum, old shoes, junk of all kinds, are  
 aiding in the preservation of democ-  
 racy. When Gerard spoke to enthus-  
 iastic crowds in San Francisco regard-  
 ing the second liberty loan the admis-  
 sion charged was an old pair of shoes.  
 These are to be repaired and sent to  
 the needy of France and Belgium.

Now comes the geological survey,  
 reporting on the iron mines of the  
 country, stating that they are all pro-  
 ducing to full capacity, then calling  
 attention to the scrap metal rusting  
 away on farms of the country.

In the Northeastern states scrap  
 metals have long been more or less  
 fully taken care of, mainly by the ubi-  
 quitous junk man, and along most rail-  
 ways and about most industrial plants  
 they are now salvaged systematically.  
 However, in the greater part of the  
 United States little attention is given  
 to saving the old metal scattered  
 about the industrial plants of the farm-  
 ers, where abandoned binders, plows,  
 mowers, rakes, etc., decorate the fence  
 corners and roadsides, and discarded  
 stoves, pumps, pipe, and small uten-  
 sils rust about the barns and sheds.  
 A considerable part of this junk is al-  
 ready on wheels with tongue and  
 whiffletree attached, ready in fact to  
 be "walked on its own legs" to the  
 freight station.

Junk now has real value. Gather it  
 and turn it over to the Red Cross or  
 get it into use in foundry or shed in  
 some way.

**EXEMPTIONS**

Since Cain killed Abel and since  
 David showed his skill with the sling  
 war methods have materially chang-  
 ed, and today the fighting man at the  
 front requires from six to a dozen of  
 us at home to keep him supplied with  
 food and munitions of war. Europe  
 is now proving that the labor and the  
 sacrifices of those at home are  
 amongst the greatest factors of suc-  
 cess. The United States is profiting  
 by Europe's lesson and has determin-  
 ed to interfere as little as possible  
 with activities essential to the suc-  
 cess of the men selected to go to the  
 trenches.

But no law or system can be car-  
 ried out without some mistakes or in-  
 justices. As the liberty boys march  
 away to Camp Kearny or Camp Lew-  
 is, or possibly to the Eastern canton-  
 ments many a farm or shop which is  
 active in producing things needed at  
 this time is left without proper help-  
 ers.

We believe this is felt to a greater  
 extent on the farm than in any shop  
 or office. "Any chump can farm" is  
 the belief of too many, but in reality  
 there are few callings which require  
 more experienced or efficient help.  
 Especially is this the case in irrigated  
 farming. Imperial Valley, for ex-  
 ample, where many of the helpers are  
 aliens, particularly because of its  
 nearness to the Mexican line and be-  
 cause it has proved attractive to  
 thousands of Asiatics, now finds it-  
 self required to send almost every  
 available American citizen of draft  
 age to fill its quota. In fact, in all  
 California this is more largely true than  
 in Eastern farming sections, and Cal-  
 ifornia's food output will be materially  
 lessened unless this labor need is sup-  
 plied.

An entire day is to be given to dis-  
 cussion of these questions at the com-  
 ing fruit growers convention at Sac-  
 ramento. It is to be hoped that some  
 clean cut statement of California  
 conditions will be made which will  
 prove of value to exemption boards.

**Agricultural News News**

There is an 18,000 acre potato  
 at Starks, Wisconsin.

The National Canners' Assoc-  
 will hold its next annual conven-  
 Boston in February.

The United States expects to  
 by the end of 1918, 1600 me-  
 ships with a total tonnage of 9,2

Cheese prices have been fir-  
 England by the food control  
 take effect October 1 and Novem-

The United States departm-  
 agriculture has completed a  
 year test of cold storage of  
 It has been shown that the cele-  
 keep in perfect condition for  
 months at least.

In answer to many rumors  
 there will be a suspension of  
 tion of the grain standards act  
 the war, the department of a-  
 ture has announced that the  
 ards will be enforced.

Wholesale fish distributors fr-  
 parts of the country have been  
 ference with the food commis-  
 Washington, to lay plans to p-  
 the sale of fish in order to sav-  
 for shipment to our Allies.

Special licenses will not be re-  
 for shipment of raw cotton to  
 Britian, France, Italy, Japan, Ru-  
 any of their colonies. This pr-  
 is result of a special order of  
 ports Administration Board.

The "Pink Bollworm" bill has  
 signed by the governor of Texa-  
 bill creates a zone embracing  
 ties along the Rio Grande, in-  
 production of cotton is prohibi-  
 bill is designed to exterminate  
 pink bollworm.

The war has had no apparen-  
 on imports of silks, raw silks  
 in for manufacture the pas-  
 amounting to \$156,000,000  
 \$119,000,000 last year which  
 record. The United States is  
 greatest silk manufacturer  
 world.

Careful plans have been m-  
 prevent waste of garbage in the  
 army cantonments establish-  
 different parts of the country.  
 been found that the garbage  
 food served to ten to 15 men w-  
 one hog. Bones and other wa-  
 be turned into fertilizer.

Bean growers and dealers fr-  
 fornia, Colorado, Michigan an-  
 bean growing states recently  
 conference with Food Admin-  
 Hoover in Washington when  
 nounced that the food admin-  
 would not fix a price on beans  
 speculation, and forced high  
 made it necessary.

Kentucky has a seed law pr-  
 that in lots of one pound or  
 agricultural seed offered for  
 the state must be accompan-  
 statement giving name of seed  
 and address of person offerin-  
 sale, approximate percent  
 weight of purity and approxi-  
 centage of germination.

A rumor has been widely  
 throughout the country that  
 ed States government is plan-  
 take from every family all  
 goods in excess of 100 quarts.  
 sections it has been stated  
 excess of fruit is to be taken  
 the country entirely and ship-  
 England. So persistent wer-  
 rumors that the department  
 culture has thought it wise to  
 a statement declaring it an  
 falsehood.



# Agricultural News Notes of the Pacific Coast

## Northern California

Winters, Yolo County, reports harvesting a big crop of peaches.

Growers of wine grapes in Napa County are receiving \$24 a ton.

Lake County reports an exceptionally good grain crop this season.

Some damage was done by the recent rain to beans and raisins in Yolo County.

A new farm bureau center has been organized at Penobscot in Eldorado County.

Slight damage was caused to drying fruits and tomatoes by last week's showers.

Military training of all students at the Davis university farm began September 27.

A carload of hogs shipped to Portland last week from Gridley brought the growers \$2800.

The Capay Valley in Yolo County claims to produce one-fourth of the state's almond crop.

The board of supervisors of Glenn County is providing free poisoned grain to fight squirrels.

It is estimated that 35,000 tons of grain have been grown in the section about Dixon, Solano County.

The rice harvest began in the Sacramento Valley September 18, the earliest date yet in that valley.

Apple growers of Napa County are offering cash prizes for best packs of apples at the Napa County fair.

Sutter County farmers are organizing local farm bureaus in expectation of securing a county farm adviser.

H. P. Eakle and V. F. Dulcini of Yolo County each brought home a string of prizes from the state fair.

The newly organized Western Duroc-Jersey Association has begun an active campaign for the betterment of the breed.

Requisitions have been made for the purchase of more than 100,000 pounds of frankfurters by public institutions of the state.

Seventeen carloads of cattle were shipped out of Dos Rios, Mendocino County, on one day last week. Six and seven cents is being paid.

The government has made a base price on wheat at San Francisco and Los Angeles of \$2.10 per bushel. This is equivalent to \$3.50 per hundred.

There will be a large exhibit of livestock at the San Francisco Land Show, special exhibits of dairy cattle being made the week of October 13-21.

Anderson, Shasta County, shipped its first carload of prunes September 22. Growers are paying 25 cents a box to pickers instead of ten cents as last year.

A big \$100,000 bean cleaning and storage plant is nearly completed at West Sacramento across the river from the municipal wharves. It will be ready in time to handle this year's crop.

H. J. Baade, formerly farm adviser of Napa County, now has oversight of farm bureau work in the eight northern counties of Napa, Marin, Sonoma, Lake, Mendocino, Humboldt, Modoc and Trinity.

The newly established state cattle protective board has opened offices in Sacramento. One hundred fifty inspectors will be placed through the state to enforce provisions of the hide and brand bill.

## Central California

Fresno County will have two assistant farm advisers.

The cannery at Tulare is shipping in tomatoes from the Santa Clara Valley.

Kings County made a big winning at the state fair in Poland-China awards.

Rice growers of the Oakdale section of Stanislaus County report offers of four cents.

The horticultural commissioner of Kings County set aside the week of October 8-13 as squirrel week.

A 20 page bulletin on hog raising has been issued by the agricultural club of the Kerman high school.

Kings County creameries paid \$250,000 to dairymen for August butterfat. The highest price paid was 48 cents.

W. J. Higdon of Tulare County recently made the sale of four pure bred Holsteins to be shipped to South America.

The Tulare National Farm Loan Association has received its charter. Loans amounting to \$40,900 have been approved.

Milk producers of Fresno County are demanding a wholesale price of 20 cents per gallon because of the increasing cost of feed and labor.

The Dos Palos farm center at its last meeting discussed dairy sanitation and the coming wheat campaign to be taken up by the government.

The Stanislaus County farm bureau at its recent annual picnic pledged itself to do its bit in increasing the acreage of wheat and other food products.

Bean growers of Fresno County are planning to hold an after-harvest convention. There will be a general swapping of ideas on all cultural and harvesting questions.

The cannery at Manteca, San Joaquin County, is working night and day shifts to fill government contracts for tomatoes. It expects to pack between \$200,000 and \$300,000 worth of tomatoes.

The newly enlarged plant of the California Peach Growers' Association is now nearing completion, the rush work of packing going on amid the installation of new machinery and equipment.

The water has been turned off the rice fields in Stanislaus County and the harvest is in full swing. Buyers offering four cents have been turned down, the growers anticipating at least a six-cent price.

Chowchilla, Madera County, will soon boast of the biggest plow in the world. It is a subsoiler which will break up a sandstone hardpan to a depth of four feet. It requires three "75s" to operate it.

To furnish labor in the bean harvest the high school trustees of Salinas, Monterey County, decided to abolish temporarily the morning session of school, holding the afternoon session from 1 to 5 o'clock. The boys earn 35 cents an hour pulling beans.

At the recent meeting held in San Francisco, at the call of State Market Director Weinstock, representatives were present from 17 marketing associations including in their membership 50,000 producers of California. Permanent organization will be effected at a meeting to be held in the near future.

## Southern California

The Piru section of Ventura has suffered from forest fires during the past week.

A plant for the manufacture of orchard heaters is to be constructed at Upland, San Bernardino County.

Approximately \$6,000,000 will be the returns to walnut growers of Southern California for this year's output of nuts.

The canning company at Banning is making an addition to its plant to be used as a storeroom for its immense output.

The San Dimas Fruit Exchange reports 875,170 boxes shipped this season, an increase of nearly 300,000 boxes over last year's total.

Dry farmers in the "Mountain Empire" in San Diego County report splendid crops of potatoes, milo, feterita, corn and other products.

It is estimated that the Escondido, Twin Oaks and San Marcos Valleys in San Diego County have a total of 500 acres planted to tomatoes.

Broom corn has proved a success in San Diego County, one grower reporting the sale of his entire experimental crop to a factory in San Diego.

The new \$20,000 walnut warehouse at Saticoy, Ventura County, will this year handle 15,000 tons. The first shipment of 50 tons was made to Pittsburg.

The California Walnut Growers' Association named prices October 1. The association reports having received orders for twice as many No. 1 Softshell as it has.

The ginning of Imperial Valley's cotton crop began October 1. The acreage in that valley is nearly 12,000 and it is thought this year's production will be more than double that of last year.

Nineteen head of steers belonging to a farmer near Brawley recently died. The steers had been grazing on a field of Sudan grass and death is thought to be the result of prussic acid poisoning.

Growers of lima beans this year are expecting to get their share of the high prices paid for their crop. Last year by the time the price had gone up, practically all of the beans were out of their hands.

Winthrop Howland, who for several years conducted a goat ranch near Redlands in San Bernardino County, has removed to Monterey County. The goats, 80 in number, were shipped by auto truck.

A party of 150 men, women and children arrived in the Imperial Valley recently from Texas to work in the cotton harvest. They are from one of the banner farming sections of that state but have been driven out because of the two years' drouth.

The Hemet-San Jacinto Growers' Association celebrated on Friday, September 28, the second anniversary of the building of its cannery. There was an all day gathering of members and friends at the cannery and an inspection of the plant was made.

Directors of the Imperial County farm bureau are seeking to secure exemption from the army draft of Paul I. Dougherty, the local farm adviser, because of his being "engaged in agricultural enterprise necessary to the maintenance of military establishment, etc."

## The Coast

Redmond, Oregon, will hold its potato show, October 18-20.

The Northwest Livestock Show will be held at Lewiston, Idaho, November 8 to 15.

Shipments of the rutabaga and turnip crop of Washington will begin about the 15th.

Idaho will harvest 6,000,000 bushels of potatoes, according to estimate of the state university.

Some government contracts for potatoes have been made in the Seattle district at \$25 a ton.

A largely increased acreage of wheat will be sown in the McAllister district of Arizona this fall.

Some sections of Idaho report the loss of 50 per cent of their prunes by dropping induced by the heat.

Kootenai County, Idaho, is planning to open up a road system through the Coeur d'Alene Indian reservation.

A shipment of Jonathan and King David apples left Wenatchee on the last day of September for Australia.

Yields of from 650 to 850 pounds of beans per acre are reported from the Lenore and Gifford sections of Idaho.

The United States government is spending annually \$20,000 in Arizona and New Mexico in the destruction of predatory animals.

According to estimate of the state agricultural department of Washington that state has harvested 17,431 carloads of apples.

Cattle men of Kootenai County, Idaho, have formed an association to buy and sell cooperatively. E. R. Whitla is president.

This is prune picking season in the Boise Valley of Idaho and despite severe losses by dropping of fruit the crop is sizing up very well.

Idaho's state fair held at Boise September 24-29 was a great success. The exhibit of dairy cattle was one of the largest ever made in the state.

More wool remains in the hands of the sheep men of the Lewiston district of Idaho than for many years past. The sheep men are holding for larger prices.

Dairymen of the Frazer River Valley of British Columbia have formed a marketing association which has become strong enough to fix prices to the milk buyers.

The cranberry crop of Western Washington this year will be about three-fourths of normal. Some of the older plantings will run as high as 100 barrels to the acre.

With the exception of potatoes shipments of fruit and produce from the state of Washington to Eastern markets have been heavier than any preceding year. Several carloads of cantaloupes were shipped as far East as Cincinnati.

Pinto beans, comparatively a new crop, were this year produced in Colorado and New Mexico to the extent of 3,000,000,000 bushels. This is a pinkish bean spotted with brown, a little larger than the Lady Washington and produces well on dry land.

Dr. C. D. Marsh, poisonous plant expert of the United States department of agriculture, has just completed a series of meetings in Arizona showing by lantern slides the poison plants of the district and results to animals of eating them.



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McClure Farm, Santa Ana, Cal., OCTOBER 16-17, 1917

This sale is suited to the buyer who wants foundation animals of the greatest desirability. Within this sale three entire herds will be completely dispersed, placing at the mercy of public bidding great breeding animals that would not be sold under any other circumstances.

Both breeders and dairymen owning grade herds will find in this sale an unusually good selection of bulls ranging in age from calves up to mature bulls, some of them right in every way to head pure bred herds, and some young fellows that are just right to head grade dairy herds.

### Contributors to the Sale:

E. O. McClure, Santa Ana.  
A. Satterberg, San Jacinto.  
P. H. Jarrett, Lancaster.  
R. Nadeau, Saugus.

Santa Anita Rancho, Santa Anita.  
McAllister & Sons, Chino.  
Aro Herd, Buena Park.

### The Females Include:

A 28 pound cow and her three daughters.  
Sixteen daughters of King Pontiac Netherland Segis, son of King of the Pontiacs.

Twelve A. R. O. cows with records up to 28.43 pounds butter in seven days.

A full sister to a 31 pound four year old.

A granddaughter of Rag Apple Korndyke 8th.

A granddaughter of Tilly Alcartra.

Four heifers sired by a 29 pound grandson of King Segis.

A granddaughter of Hengerveld De Kol.

A granddaughter of Sarcastic Lad.

Eighteen granddaughters of King of the Pontiacs.

Many of these good females bred to sires of famous breeding.

### The Bulls Include:

King Pontiac Netherland Segis, proven son of King of the Pontiacs and out of a good record daughter of King Segis Pontiac. The breeder who wants a high class herd sire should look this bull and his daughters over carefully.

A son of a great 34 pound daughter of Sir Sadie Cornucopia, making him the highest record bull sold at public auction in California.

A son of Colantha Johanna Lad out of a granddaughter of Pontiac Korndyke.

A son of James J. Jeffries' great young herd sire, King Segis Pontiac Jannek, out of an 18 pound junior three year old daughter of a 21 pound cow.

A son of King Pontiac Topsy out of a splendidly bred 18.22 pound junior four year old.

And others of great desirability, including in the summary 14 grandsons of King of the Pontiacs.

Every animal over six months of age tuberculin tested and has individual certificate. Sale Begins Promptly at 10 A. M. Tuesday, October 16. Under Management

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When writing advertisers, mention The Cultivator.

## Who's Who

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photographs and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Written for California Cultivator By F. F. Stonerod

### E. A. NOYES AND CHAS. NOYES

THE two photographs are the likeness of Ed A. Noyes and his son, Charles. As the two are inseparable and closely associated in the purebred Hereford business we asked

ever win any premiums competing in such fast company. Right then and there E. A. determined he would breed a pen of birds which would beat this cocky gentleman if it cost him a large sum of money. He sent East and got a setting of eggs from



Ed A. Noyes



Charles Noyes

permission to say something about them together.

The elder Noyes has been a cattle man all his life. He graduated from the Hesperin school at Woodland in his early twenties—which was nearly 40 years ago. From that time to the present he has devoted most of his time to his cattle interests, excepting a three-year vacation spent in Santa Cruz. He calls that a vacation, but he did other things besides kill time while there.

Mrs. Noyes has a fondness for Plymouth Rock chickens and at one of the big poultry shows entered a pen of fine birds. Her husband became interested also and together they thought they had a pen of prize winners. When the judge placed them down the line about fourth or fifth another exhibitor joshed Mr. Noyes about the inferior quality of his birds and asked him if he thought he would

a noted breeder and the next year entered a pen of this breeding which won the championship in competition with the unbeatable exhibitor.

His object accomplished Mr. Noyes soon tired of chickens and ocean breezes and bought a big cattle ranch near Sutter, Sutter County, and he has been there ever since. He purchased a pure bred herd of Herefords last year in the East and now owns the foundation for a show herd. He knows beef cattle of course, and there are a lot of other virtues under his broad Stetson which have a charm to those who know him intimately. His son is now the active partner in the cattle business and is fortunate in having a tutor who has had a life long experience in breeding. Both father and son are members of the new Pacific Coast Hereford Breeders Association and of the National Association. They plan to exhibit a show herd at the fairs next year.

## Gophers in Alfalfa Fields

Written for California Cultivator By J. M. Bomberger



HAVE read the article "Protect Snake and Owl" in the Cultivator of September 15, relative to their helpfulness in keeping down the gopher,

and I am sure the snakes and owls are very helpful and should be protected, but on my Green Gold Ranch I found the common yellow weasel very much more effective in destroying gophers in an alfalfa field than any other enemy of the gopher.

In an alfalfa field the mower usually cuts up the gopher snakes so that their number are kept at a minimum, and it is very difficult for an owl to see a gopher in a good stand of alfalfa, while the weasel, whose burrowing habits are very much the same as those of the gopher, is right at home with the gopher, so to speak, being able to get the gophers in their

own runways and the young gopher in their nests. The mower does not get the weasel, even dogs do not get them readily. They are forced out at irrigating time, but are quite able to take care of themselves and should not be killed purposely at that time unless they get very close to the buildings.

On my ranch the gophers had gotten quite plentiful, but when the weasels began to make their appearance and to multiply they solved the gopher problem for us in a comparatively short time. Now since the gophers have been reduced to a minimum the weasels have automatically reduced so that there are now very few gophers and very few weasels. We kill weasels when they get very close to the buildings where the poultry is. We depend upon the cats to keep down the gophers close to the building. I do not know that we have lost any poultry because of weasels.





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The Disinfecting White Paint

Carbolic acid, mineral pigment combined with a powerful 20 times stronger than carbolic acid but not so corrosive or caustic. Positively kills lice, mites, ticks and is a preventive of contagious diseases that affect poultry and livestock. Ready as soon as mixed with water to apply with brush or sprayer. Has no odor and does not blister, scale or peel. One pound makes a gallon of paint that covers 200 square feet. Get some today and have it ready when wanted. Will not spoil by standing.

10 lbs. (10 gals.), \$1.00 and postage.  
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50 lbs. (50 gals.), \$4.00 delivered.  
Total package that covers 250 square feet and booklet for 25 cents postpaid. Get it from your dealer or  
Germann Seed & Plant Co.,  
Los Angeles, California.

## SHORTHORNS

PAICINES RANCH COMPANY

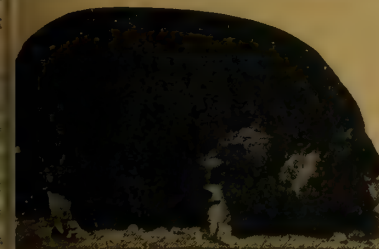
For summer and fall delivery registered and unregistered breeding bull and heifer calves. For prices and particulars apply to Paicines Ranch Co. Telephone and Telegraphic address Hollister, Cal.

Post Office Address: Paicines, Cal. Railroad Terminal: Tres Pinos, Cal.

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### Large Type Poland Chinas



W. H. Browning  
Woodland, Yolo County, Calif.

## Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count Glory, 426982, grand champion at the California State Fair, 1916. Berkshire herd won Premier Exhibitor's banner at P. P. I. M.

513 Hearst Bldg., San Francisco  
Carruthers Farms, Mayfield, Cal.

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We offer an unexcelled service for the conduct of dispersal and consignment sales of registered livestock. Sales conducted anywhere. Write for terms and dates.

California Breeders' Sales and Pedigree Co.

L. HUGHES, Sales Mgr., SACRAMENTO, CAL.  
L. Ben A. Rhoades, Auctioneer, Los Angeles

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Sizes 1 to 13  
Heights 6 to 17 in.  
Wear Overland Aluminum Shoes. They last twice as long as all leather, rubber or wood-soled boots and shoes.

Water-Proof, Rust-Proof, Rot-Proof. Best leather uppers. Thick felt insoles. No metal touches you. Warm, comfortable, easy to walk in. Keep feet in good condition and prevent sickness. Best by test for all work in any weather. MONEY BACK if shoes do not suit with your approval. Write for FREE catalog which shows sizes, gives prices and tells how to order. A postal brings it.

OVERLAND SHOE CO., Dept. 1018, Racine, Wis.

## AGRICULTURAL FAIRS FOR COCHISE COUNTY, ARIZONA

By A. L. Paschall, Agricultural Agent  
There is nothing more beneficial in bringing the people of a community together for real and wholesome enjoyment and valuable lessons than district or community agricultural fairs. The farmers bring out samples of their crops, compare them, etc., which bring about better crop growing methods, crop standardization, better community unity and co-operation. The fair committees arrange for sports and games, such as baseball, foot races, potato races, sack races, etc. The ladies provide luncheon, or each bring their own basket lunches, and all have a good time. Every farming community should have a good agricultural fair this fall.

Thirteen of such fairs have been planned for Cochise County this fall, as follows: Friday, October 19—Stronghold Schoolhouse; Saturday, October 20—Light (for the 19th and 20th); Monday, October 22—Rucker Canyon Schoolhouse; Tuesday, October 23—Webb Schoolhouse; Wednesday, October 24—Double Adobe Schoolhouse (near McNeal); Thursday, October 25—McNeal; Friday, October 26—Garces Schoolhouse; Friday, October 26—San Simon; Saturday, October 27—Buena; Tuesday, October 30—St. David; Wednesday, October 31, Pomerene; Thursday, November 1, Cochise; Friday, November 2—Mt. View Schoolhouse near Willcox.

The local farmers' organization, where there is one, will have charge of the local fair. The local president of the organization or of the local fair appoints a committee of one for each of the following: livestock, poultry, field crops, garden, canned goods and other home products, arrangements, sports and games, boys and girls clubs. Each of these committees will set about to secure good exhibits and games, etc.

It is urged that the farmers secure a premium list for the state fair, which can be secured by writing secretary of the state fair, Phoenix, and make out the local exhibits to conform to the requirements of the state fair so that the exhibits can be used for the local fair and then be sent on to the state fair. Transportation for exhibits to the state fair will be free. Every person who has anything at all for a good exhibit should make entry on the form which can be obtained from the secretary of the state fair and make entries before November 3.

### SHEEP SCAB QUARANTINE

The first release of territory in Texas from quarantine on account of sheep scabies since the imposition of the quarantine against the entire state, July 1, 1914, is announced by the United States department of agriculture to become effective October 15. The removal of the quarantine affects 107 counties of an aggregate area of 121,451 square miles, or nearly one-half the area of the state.

At one time Texas, New Mexico, Colorado, Wyoming, Montana and all states to the west were under quarantine. From time to time the states and portions of states to the east also were under quarantine. The disease now has been brought under control to such an extent that the quarantine has been raised from most of this territory. After October 15 there will remain under quarantine only ten counties in California and the portion of Texas not included in the release just announced.

Sheep scabies is caused by a small mite which irritates the skin of sheep, causes the loss of large quantities of wool and sometimes results in the death of the animals. The disease is combated by dipping the affected animals in a weak nicotine solution, or in a solution of lime and sulphur.

### LIVESTOCK AT LAND SHOW

Among the beef breeds and dairy cattle which will be exhibited at the Land Show at San Francisco which opens October 13, B. E. Nixon, manager of the Revada Farms, near Napa, will exhibit his prize Guernsey herd. The State Hospital will send its blue ribbon Holsteins and William Mitchell his herd of pure bred Jerseys.

From other sections of California will come blue ribbon winners. A. J.

## SIXTEENTH SEMI-ANNUAL CONSIGNMENT SALE OF

# Pure Bred Holsteins

AT

LAKE MILLS, WIS.

October 23 and 24

### A Two Day Sale of Mighty Good Pure-Breds from Fine Herds and Absolutely Right

The Dispersal of Recreation Farm Holsteins, owned by Julius Lindstedt, Manitowoc, Wis. Thirty in number, well bred animals, and ten A. R. O. cows.

Some High Class animals taken from one of Wisconsin's best Show Herds, also from one of the good Show Herds of Minnesota.

A large number of Fine Cows—dividend Makers for Winter, many with A. R. O. records. There are 18 pound two year olds, a number of 20 pounders; some 24 and 25 pound four and five year olds, and one with 26.50 pounds.

These cows are in calf to a son of Rag Apple Korndyke 8th; to Count Paul Segis Pontiac, Sir Fobes Oak Homestead, North Star Parthena Sir Beets, Canary Oak De Kol Homestead, Lilith King of Rock, King Pontiac Thanatos and Segis Pontiac of Rock.

A daughter of King Alcartra De Kol Pontiac, the Karlen bull whose dam is a 36.59 pound three and one-half year old and whose sire is the \$50,000 King Segis Pontiac Alcartra.

A daughter of Johanna McKinley Segis; sons and daughters of King Segis Pontiac; a son, daughter and granddaughter of a 31.05 pound cow; a 33.48 pound bull, and a 35.59 pound bull.

### BE SURE TO ATTEND THIS SALE

Write for Catalog to

FRANK H. EVERSON, Mgr., LAKE MILLS, WIS.



## Santa Anita Rancho

Anoakia Breeding Farm



ARABIAN THOROUGHBREDS: Two-year-olds, sired by imported Stallion Ibn Mahruss, head of our Arabian stud. Dams are the choicest thoroughbred mares on Santa Anita Rancho.

SADDLE HORSES: Some of which were sired by Ibn Mahruss, world renowned imported desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle stallion. These horses are mostly three-year-olds.

POLAND-CHINA AND BERKSHIRE BOARS: Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird Grandson's Duke and Fashion's Longfellow 5th. The dams are from the best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

HOLSTEINS: We will sell a number of young bulls. Some sons and grandsons of the noted Prince Gelsche Walker, and bulls from one World Record sow and two California State Record Cows. Write for details.

Correspondence Invited

Anita M. Baldwin

W. H. TAYLOR, Superintendent

Santa Anita, Cal.



Lady Beatrice

Senior and grand champion cow at the 1917 California State Fair and a big winner in the English show yards.

## MILKING SHORTHORNS

The cow for the California farmer. Make milk and butter in large quantities. Make choice beef. Are free from diseases common to other breeds. Calves will weigh 900 pounds at one year of age. Our herd consists of animals from leading herds of England and the United States. All milk records from females are official. We have cows giving as high as 8000 pounds of milk a year. Buy bulls from these cows and use them in either your beef or dairy herd and be convinced.

Alexander & Kellogg

(On Grizzly Island) SUISUN, CALIFORNIA

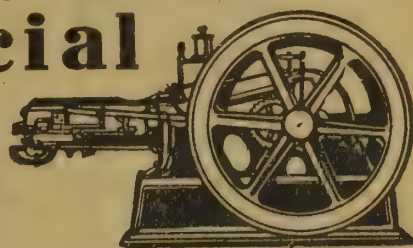
A GOOD engine that gives GOOD service ALWAYS—the

# Commercial

Quality made and guaranteed. Costs a little more than some and worth a great deal more. Illustrated Catalog Free.

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Welch of Redwood City will exhibit eight pure bred Guernseys, among them Polly's Beauty, last year third in the United States test for butterfat production. In addition to several

other fine Guernsey herds there will be an impressive showing of Holsteins, Jerseys, Ayrshire, Shorthorns and other pure breeds of dairy and beef cattle.

## The Glenn County Fair

Written for California Cultivator By W. S. Guilford

**A** NUMBER of great district and county fairs have been held in California this year and they have been a credit to the state and the districts in which they have been held.

Judged by the enthusiasm of the directors and exhibitors, as well as the people of Glenn County and the Sacramento Valley, and by the variety and excellence of the exhibits, this was one of the most successful fairs of the season.

Last year the Orland Center of the Glenn County farm bureau held a one day stock show. Briggs of the Cultivator conducted the judging ring; Prof. C. W. Rubel of the state university judged the stock; and Farm Adviser W. H. Heileman was general utility man. At that time it was decided that there should be a Glenn County fair this year, and this has been a prominent subject for discussion at every meeting of the local farm bureau centers and the meetings of the board of directors of the county farm bureau organization. So the Glenn County fair is a farm bureau "baby," just one of the many good things the bureau has done for the agriculture of this part of the Sacramento Valley.

The fair was held at the ball park and on adjoining property, right in the town. A movement is on foot now for the purchase of permanent grounds for next year. Financially it was a success, the receipts for the first day being enough to more than cover all expenses.

Orland folks claim that nothing can stop anything they start. The tents in which the main exhibits were housed were blown down a few days before the fair was to have been held. This compelled the postponement of the event for one week, a thing that would kill some fairs, but this one was held bigger and better than it would have been had it been held on time.

And this one is just a starter. If one quarter of the livestock and agricultural exhibits that enthusiastic growers plan to exhibit next year are brought forward it will take a big area to house the show.

Space will not permit mention of all of the creditable exhibits in the agricultural section. There was a fine community display from Ord, one of the best irrigated sections of the valley. This won first prize. Princeton also made a creditable show and won many prizes in the individual classes. Frank B. Glenn of Glennaire had a show of many varieties of grains and vegetables. There was a lot of Indian corn that would have looked good in a real corn belt show, and all kinds of milo, feterita and such grains. Guilford Farm at Orland won first on citrus fruit display, olives and pears. There were apples and grapes and peaches that had been held in cold storage for weeks by growers all over the county.

In the industrial section there was a big show of automobiles—many of which were sold—and of tractors and farm machinery.

Orland is a real Jersey cattle breeding center, and the show of this breed was in keeping with the claims made. "The biggest and best show of Jerseys outside of the Island of Jersey," is one of the slogans of the Glenn County fair, and the claim is made that the Jersey show was the best made at any state or county fair in America this year. Over 100 head were shown—not a poor one—and hardly a common one in the lot. A detailed list of awards in this class is appended.

Jersey exhibitors were: S. F. Williams, McLouth and Dado, A. J. and Nellie A. Morey, H. D. Ward, D. F. Nickell, R. R. Smith, Al. Standiford, W. G. Gurnett, C. A. Whitsett, H. W. Hand, all of Orland, and Charles L. Leonard of Glenn.

Awards were:

Three year bull—1, Williams; 2, McLouth and Dado; 3, Morey. Two year bull—1, Williams; 2, Ward; 3, Nickell. Senior yearling bull—1, Smith; 2, Williams; 3, Standiford. Junior yearling bull—1, Williams. Senior bull calf—1, Morey; 2, Hand; 3, Gurnett.

Three year cow—1, Morey; 2, McLouth and Dado; 3, McLouth and Dado. Two year cow—1, Morey; 2,

McLouth and Dado; 3, McLouth and Dado. Senior yearling heifer—1, McLouth and Dado; 2, McLouth and Dado; 3, Morey. Junior yearling heifer—1, Morey; 2, Williams; 3, Leonard. Senior calf heifer—1, Hand; 2, Leonard; 3, McLouth and Dado. Junior calf heifer—1, McLouth and Dado; Leonard; 3, Gurnett.

Senior champion bull—William Junior champion bull—Morey. Senior champion cow—Morey. Junior champion cow—McLouth and Dado. Grand champion bull—Williams. Reserve grand champion bull—Morey. Grand champion cow—Morey. Reserve grand champion cow—McLouth and Dado.

Best herd—Morey. Best five cows in milk—McLouth and Dado. Breeder's young herd—Morey. Best females and bull, Jersey Cattle trophy—Morey. Best cow in farm reau cow testing department—W. S. sett.

The attraction of the swine exhibit was the show from Anchorage Farm. A model individual hog house, with fresh water wallow and corn shades and pens, was erected, an exact duplicate of the quarters at farm. The hogs shown were S. Leader, the reserve grand champion Berkshire boar of the world, and sired by him and by Iowa Champion Peer 2d and Mayhew's Leader 6th. Berkshires were also shown by A. L. Stevenson of Los Molinos and B. C. Ranch of Red Bluff.

There was a big show of Dutch Jerseys. H. P. Slocum & Sons of Los Angeles brought their state fair winners to compete with E. A. Kirk and F. Hicks of Orland. Slocum was the leading winner both of breeding stock and fat barrows.

Chester Whites were shown by Harry Hoffman of Chico.

Poland-Chinas made a strong showing of the hog show. They were exhibited by S. F. Williams, Erickson and Yarnall and Wesley McKay of Orland.

There was a big show of horses, particularly of good mares and foals. The prize of the stallion register board is a big incentive to the breeding of good horses. W. A. Greenwald of Orland won this on the get of the first prize Percheron stallion Radiant.

Butte City Ranch won six all-trophies on ponies exhibited by W.

## Kings County Breeders' Directory

### Big Type Poland Chinas

Won Grand Champion Sow at State Fair  
Won Reserve Champion Boar at State Fair  
Won Grand Champion Sow at Hanford  
Won Grand Champion Boar at Hanford

**Wm. Bernstein**

HANFORD - CALIFORNIA

### HOLSTEINS

32 Females

Herd Sire Juliana De Kol King Segis  
Grand Champion Kings County Fair  
CHOICE BULLS FOR SALE  
A. B. COMFORT - Guernsey, Cal.

### HOLSTEINS

Select Herd Headed by  
CREAMCUP FIDESSA CORNUCOPIA  
DE KOL

A SON OF FORMER STATE RECORD COW  
Nicely Marked Calves For Sale

### Poland China Hogs

The California Farmers Hog  
Make Rapid and Cheap Gains  
PRICES REASONABLE  
ROSSMEAD FARM, Hanford, Cal.

### The Little Kingdom of Kings

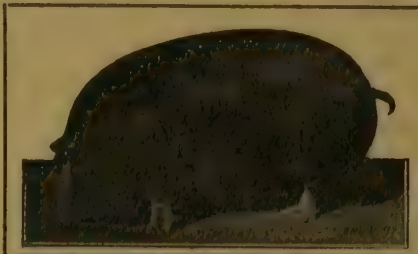
Kings of the soil and the products thereof,  
till the lands of rich Kings County

## Poland Chinas, Medium Type

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain. 12 firsts, Junior Champion and Reserve Grand Champion Boar. Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

**M. Bassett**

Hanford, Kings County, Cal.





Dwyer, Jr., Thos. R. Dwyer and Richard C. Dwyer.

There is increasing interest in sheep in this part of the country, particularly in small farm flocks. Hampshire sheep were shown by McInnes and Salz of Red Bluff; Cotswolds by W. E. Searce and J. A. Younggreen of Orland; Karakules by W. R. Graves and Brownell Bros., of Orland; Merinos by W. E. Searce, and Shropshires by Guilford Farm of Orland. Guilford Farm Shropshires won the R. A. Beland silver trophy for the best flock of sheep exhibited by a Glenn County breeder. This must be won three years before it becomes the property of the winner.

There were special booths and exhibits at the fair made by the forestry department of the United States, department of agriculture, the Glenn County farm bureau, the Glenn County library and the University of California.

There were special excursions from nearby towns each day—and a big attendance all the time.

## Kern County's Second Annual Fair and Live Stock Show

Written for California Cultivator  
By F. F. Stonerod



KERN County's 1917 show was a lot better exhibition in some respects than the 1916 show and not to be compared with last year in others, particularly livestock.

There had been no material changes made in the buildings for the accommodation of the stock exhibits, and exhibitors complained with reason that new stables and pens had not been installed and that premium money was insufficient to break even on expense of exhibiting. But this fair has great possibilities. Kern County is the second largest county in the state. Her hills and valleys turn off millions of dollars worth of livestock annually. Her alfalfa districts are equaled by few and surpassed by none. The county is just on the threshold of wonderful development of natural resources and needs encouragement. Appropriating appreciable sums of money to finance a first class agricultural exhibit will assure Bakersfield and surrounding country wide recognition. The writer talked with several of the fair officials and was advised that next year's show will be a real attraction if war conditions do not prevent. New and modern stock pavilions are planned, large increase in premium money, elimination of prize lists for breeds of stock which do not show, better transportation facilities and so on.

The swine show this year was the big attraction to fair goers. Poland-Chinas predominated, with a limited number of Berkshires and Duroc-Jerseys on hand. Bassett and Marsh fought it out in the ring, and both breeders were satisfied with the awards. Chief Victor won grand championship honors from I B A Wonder who was placed ahead of him at Sacramento. Both Mr. Bassett and Mr. Marsh made splendid sales of breeding stock during the week. There is no better territory in which to dispose of breeding stock than Kern County. Marsh's big boar occupied a corner pen, and any hour of the day a large and wondering crowd could be seen inspecting this behemoth of the show. He was probably the largest boar ever exhibited in that part of the state.

Alexander and Kellogg showed their string of Milking Shorthorns with no competition, and the beautiful dual purpose cattle got more than their share of attention.

As usual, the horse section was well patronized although the classes were made up from entries of exhibitors of one or two animals. Professor Major judged cattle and assisted Mr. Bassett with the horses. The county farm adviser, assisted by Mr. Major, judged the swine.

The directors of the Kern County fair, headed by Fred Hall, are a fine lot of public spirited gentlemen who are going right ahead with plans for the show next year. Once annual exhibitions are established in Los Angeles and San Francisco these smaller shows on the circuit will secure livestock exhibits worth while, but the different fairs must offer inducements commensurate with the benefit such a

show would be to the community. If they do this it is certain that present facilities will be inadequate.

## San Francisco Land Show

Manager Joseph E. Painter of the livestock department of the San Francisco land show writes to Cultivator readers appealing for more attention to the livestock industry of the state. California livestock interests are increasing at a wonderfully rapid rate but under present stress he feels that still greater development should be urged and to that end has bent every energy to add to the attractions of San Francisco's land show by bringing together a great showing of pure bred and of fat cattle. He writes:

"California has reached near the topmost rung of the ladder in some avenues but is woefully lacking in up-to-date requirements in meat animal production. True, many good cattle have been introduced into the state during the last year or 18 months but these serve only to prove the inadequacy as a whole. It is almost inconceivable that California does not possess a public stockyard or competitive livestock market, and neither of these will materialize until a livestock exhibition worthy of present day requirements is an accomplished fact. As one visits the various county and local fairs, merit of high order is to

be seen. If the enterprising citizens of a locality get together a show of local merit why can not the citizens of the larger cities and communities get together and establish a show where the best of California can assemble and meet the best the entire country produces in a common arena, and upon equal terms. What is the world crying for today if not for meat? Is it not a fact that those peoples and nations, whose basic operations throughout the ages have been found-

## Holstein Bull Calf

High per cent of fat. Dam and sire's dam both test over 4.2 per cent fat.

Dam's official record at two year 24 pounds butter in seven days, 186 days 450 pounds butter. Test 4.28.

Sire's dam official record seven days 34.79 pounds and for thirty days 133 pounds butter. Test 4.21.

Sire's sister Grand Champion at Panama Exposition last year, also at National Dairy show Chicago in 1912. Note the combination high records and show ring type. Very cheap for quick sale. Write for extended pedigree and price. Delivered at your station guaranteed as represented.

**G. M. Brown**  
care Burr Creamery Co.  
LOS ANGELES, CAL.

## Alfalfa Seed



### PURITY

Let this trade mark be your insurance against foul weeds and low germinating alfalfa seed this season.

Satisfy yourself BEFORE PLANTING that the words Green Gold Brand on every sack means purest alfalfa seed at low cost. Ask us how.

Write today for price and sample of

**New Crop Seed**

**BOMBERGER SEED COMPANY**

P. O. BOX 986, MODESTO, CAL.

"Trade name and firm name on every sack."

## Third Sacramento Sale

State Fair Grounds  
Sacramento, Cal.

OCTOBER 30-31, 1917

**125 REGISTERED HOLSTEIN COWS,  
HEIFERS AND BULLS**

### CONTRIBUTORS TO THE SALE:

A. W. Morris & Sons, Woodland.  
Fred W. Kiesel, Sacramento.  
University Farm, Davis.  
Frank Hatch, Modesto

Bridgford Company, Knightsen.  
McAlister & Sons, Chino.  
Santa Anita Rancho, Santa Anita.

The splendid cattle in this sale will abundantly justify the claim made for them that they comprise the highest average in breeding and individuality of any offering yet made at Sacramento. There are many individuals in this sale, both females and males, that match in every respect the animals found only in the highest class offerings.

This sale will be particularly attractive at this time when breeders and dairymen are seeking the best cattle to be had, and it offers a rare selection of high class foundation animals. Never before in the history of Holstein sales in the West have so many females bred to such high class bulls been offered.

**And to cap the climax of rich breeding and individual excellence every animal in this sale is sold subject to tuberculin retest by the purchaser.**

A brief sketch of a few of the animals listed in this sale shows the splendid breeding which buyers will find on sale day:

- A 28 pound cow of splendid type.
- A show heifer sired by a 33 pound son of Pontiac Korndyke and out of a 21 pound daughter of De Kol 2nd's Butter Boy 3d.
- A daughter of King Walker 5th out of a 29.53 pound cow.
- A beautiful granddaughter of Pontiac Korndyke.
- A daughter of a 37 pound sire, bred to a 30 pound show bull.
- A 25.89 pound cow bred to a bull whose dam made 847.55 pounds butter in one year.
- A heifer whose dam is a 21 pound granddaughter of De Kol 2nd's Butter Boy 3d, bred to a 35 pound sire.
- A daughter of a 29.50 pound cow, bred to the only sire in the west with three 30 pound daughters.
- A daughter of a 38 pound sire and out of a 24 pound dam.
- A granddaughter of Colantha Johanna Lad.
- A granddaughter of Sir Veeman Hengerveld.

This list by no means covers the outstanding females in this sale, and the sires to which they are bred are a story by themselves, for no sale in the West has ever approached this sale in respect to the outstanding breeding of the bulls to which the offerings are bred. We find a very large number of females in calf to such sires as Prince Gelsche Walker; King Mead of Riverside; King Morco Alcartra; Sir Aaggie De Kol Acme, son of Aaggie Acme of Riverside 2nd; Prince Gelsche Walker Korndyke; It, son of the first 37 pound cow and the first cow to make 1200 pounds butter in one year; Sir Skylark Ormsby Hengerveld, the only sire in the West that has three 30 pound daughters; King Segis Alcartra Prilly, son of the \$50,000 bull and out of a 30 pound granddaughter of Prilly; King Segis Alcartra Abbekerk, son of the \$50,000 bull and out of a 30 pound daughter of Tidy Abbekerk Prince.

The unusual offering of high class bulls in this sale will win the approval of the many discriminating buyers now in the market for extra good herd sires. These are typical of those to be sold:

- A grandson of King Korndyke Sadie Vale out of a 29.39 pound three year old daughter of King Segis Pontiac.
- A son of Prince Gelsche Walker out of a 29 pound dam.
- A son of Prince Gelsche Walker Korndyke out of a 27 pound dam.
- A son of Prince Gelsche Walker out of a 24 pound dam that made over 800 pounds butter in one year.
- A son of Prince Gelsche Walker out of a good two year old daughter of a cow that made over 800 pounds butter in one year.

- A son of King Segis Alcartra Abbekerk out of a 26 pound junior two year old daughter of a 30 pound sire.
- A show bull sired by a 34 pound sire out of a 19 pound two year old whose sire is a 33 pound son of Pontiac Korndyke.
- Two sons of King Mead of Riverside out of a 27 pound dam.
- A son of King Mead of Riverside out of a dam that made 24.75 pounds butter in seven days five months after calving, and 29.545 pounds milk and 1077.75 pounds butter in one year.

The catalog of this sale will not be available until close to sale day. Write for a copy now and one will be mailed at the earliest possible time.

### Management of

**California Breeders Sales and Pedigree Co.**

**J. M. HENDERSON, Jr., President**  
**C. L. HUGHES, Sales Manager**

**SACRAMENTO, CALIFORNIA**



## Retained After-births

**Cows can be made to clean easily without using force**

When cows do not clean properly after calving, it indicates a germ infection which is likely to run through the entire herd and result in abortion and barrenness.

Our Government and other authorities assert that retained after-birth, premature calving, sterility and calf scours are all the result of infection by the abortion germ, and retained after-birth is one of the first symptoms.

The after-birth should be removed at once without force and the cow treated with a powerful antiseptic to prevent her becoming an aborter or sterile. Authorities state that while there is no absolute cure for abortion and sterility, nevertheless the infection can be controlled by prompt treatment and the animal saved for successful breeding.

B-K is scientifically correct for this work. Used as a douche for the uterus, it quickly brings the after-birth, dissolves the slimy albuminous matter, kills the germs, stops discharges and controls the infection. B-K does not cause straining, but is soothing and heals the tissues.

Other germicides such as carbolic acid, cresol, Lugol's solution, iodine, etc., tend to irritate, do not dissolve the slimy albumins, but tend to coagulate or thicken them, thereby preventing destruction of the germs and cleansing of the tissues.

B-K is convenient. Just add water as directed, and you have your treatment for calves, bulls and cows and also your disinfectant for general use.

B-K is used so successfully by leading breeders that it is now sold over the entire world and the demand for it has increased five hundred per cent in three years. A well known breeder of registered stock says:

**Clean and clear as water**

"B-K is of great value in douching cows which do not clean readily after calving. Have never known it to fail to bring all things right before the fourth day.

B-K is sold by dairy and farm supply houses, druggists, general stores, etc., everywhere. Dealers wanted everywhere.

Write us for more evidence from users and for our bulletin No. 52, "Contagious Abortion."



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One service bull from 29 pound dam. 102 pounds milk one day. His two nearest dams through sire yearly record average 21,000 pounds milk and 812 pounds butter.

Write me for low prices and further information.

**Frank Reed Sanders, Mesa, Ariz.**

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that make a horse Wheeze, Roar, have Thick Wind or Choke-down, can be reduced with

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When writing advertisers, mention the Cultivator.

## THE FRESNO DISTRICT FAIR

Continued from Page 371

to the others than to advertise because he is a range sheepman and not a pure bred breeder in the strict sense of the word. The judge put his stamp of approval on the Bidegaray exhibit and it was indeed one to be proud of when it is considered that the owner brought his animals in



Looking Their Prettiest in Front of Grandstand at Fresno

from the hills two days before the fair opened.

The swine section was strong in Poland-Chinas and Duroc-Jerseys, particularly the former. H. I. Marsh fought it out with Will Bernstein for Poland-China honors. Bernstein was unbeatable in most of the sow classes, while Marsh got the lion's share of the ribbons on boars. Old I. B. A. Wonder, veteran of many California show ring battles, emerged victorious over Rosebud Chief who was reserve

four years. This herd also lacked condition but had outstanding merit. Prince Riverside Walker, the Higdon herd bull, finished in the third money but looking at him from a strictly dairy standpoint, considering his wonderful breeding, and his having probably the best middle of any bull in the show, this son of Prince Gelsche Walker should leave a lasting impression on the breed in California be-

cause he is in good hands. The Gibson bull seems to get better with every show. He did not show to advantage at Sacramento, but at Modesto and Fresno he was hard to beat. He has wonderful length and quality, and in another year with careful handling he will be a strong competitor in the show yards.

Frank Helm brought out a string of 30 head, and J. T. Phillips, a young breeder showed for the first time. Both exhibited herds more to fill in



First Prize Guernsey Herd

This is B. E. Nixon's great herd, winner of the \$300 feature class, five herds competing.

champion at Sacramento and grand champion boar at Hanford last week. Hale also got in the money with Smooth Orphan.

J. B. Thorp, who had made the Nevada fair at Fallon the previous week showed the classiest lot of red hogs and the only herd of Jersey cattle. He won consistently with his hogs. The Fresno County boys pig club made a splendid exhibit which was worthy of emulation.

The Holstein show was a fine one. Gibson and Bridgford had enjoyed seeing each other get beaten all the way from Sacramento. They had a friendly tilt at Modesto the preceding week and then resumed the battle at Fresno. Professor Rubel tied the ribbons and tied them with satisfaction. He liked the Bridgford Company's cow, Miss Korndyke Mercedes 2nd, as well as did Prof. Kildee at the state fair and gave her senior and grand champion with the sensational Bridgford senior heifer calf, Princess Inka Buttergirl, as junior champion. Gibson Company won senior champion bull on Segis Creamcup Pontiac, but was beaten for grand champion honors by the Bridgford state fair champion, King Segis Alcartra Prilly. Mr. Thornton showed Admiral Burke in this class and ran second. This bull made a remarkable showing considering the fact that he was brought from the Thornton ranch the opening day of the fair without any fitting whatsoever. He is the bull which formerly headed the Sherman herd in Fresno County and whose get are uniformly good individuals, particularly in the rear end. Six of his calves shown by Mr. Thornton were evidence of the ability of this great sire to produce straight backed, mellow fleshed heifers with excellent udders. W. J. Higdon brought up the best herd he has exhibited at Fresno in

the dairy cattle section than to win ribbons because neither had employed a herdsman to fit the stock for competition. That they got in the money several times in competition with animals which had been out for weeks is noteworthy. Mr. Helm showed a splendid two year old cow in Netherland Vale Quesac and won second prize with her. He was first in the junior bull calf class and second in senior bull calves. Higdon, Bridgford, and Gibson captured the lion's

share of the prizes in get of sire, produce of cow, and the herds.

T. T. Miller exhibited the Short-horn herd he had at the state fair and it was even in better condition, which speaks well for the efficient handling of the herdsman, Andy Simpson. Dr. Little, in charge of Alexander and Kellogg's Milking Shorthorn string led a wonderful class into the ring. It was the first opportunity Fresnoans had to see a full herd of the dual purpose cattle, and they showed their appreciation of the exhibit throughout the week of the fair. There was no competition on the Shorthorn classes but both exhibitors had plenty of competition at Sacramento and captured the majority of the big prizes. Mr. Miller plans to show at Riverside and then at San Francisco and possibly Portland.

The Nevada Guernsey herd attracted more attention possibly than any single exhibit on the grounds. It was the first time Fresno fair goers had had the opportunity of seeing a high class display of this breed. The barn was beautifully decorated and old Itchen Daisys May King of Langwater who has been a sensation on the circuit this year turned away the crowds last week. Mr. Nixon's one regret was that he had no competition, and it was George Hemming's first show where he had no competition. However, the pleasure of introducing the Guernsey breed in this part of the state more than compensated the owner, and when the Nevada herd lined up alongside four other herds of a different breed in front of the grand stand on Thursday and won first prize in the \$300 classic of the show, Mr. Nixon had reason to feel proud. The Bridgford Company got second money and third. This feature of the fair is a big one and the amount of prize money offered larger than is offered for a single dairy class in any show in America.

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## Hollow-Hill Farm Guernseys

We are offering some bull calves from 4 to 8 months old out of Imported and A. R. Cows and by

**KING OF HOLLOW-HILL 25876**

The sire is a son of Itchen Daisy's May King of Langwater 17349, which was recently sold to a California breeder for the record price of \$8000, and of Caroline of Chilmark 24812 which has just finished an A. R. test with 15,185.9 pounds milk and 722.97 pounds butter fat.

King of Hollow-Hill combines the May Rose blood of Imp. Itchen Daisy III 15630 and Dolly Dimple 19144 with that of Imp. Mashers Galove 8572, Imp. Cora's Governor of Chilmark 8971 and Governor of the Chene 1297 P. S.

The prices on these calves are reasonable.

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Perkins - - - California

8  
BULL  
CALVES



## Feeding the Layer

Written for California Cultivator By Jean A. Koethen

**T**HE wise feeder does not feed his hens always in the same way. He uses the feeds which he has or can procure for the least money and finds ways of adding variety by the use of vegetables or an occasional moist mash or by occasional feeding of green cut bone. Sprouted grains are always an appetizer, but sprouting in summer in California is not as successful as in winter. Hens that are fed all the sprouted oats or barley they will consume need little other grain.

When the pullets are nearly ready to lay additional protein in the form of linseed oil cake or soy bean meal may be added to the mash. These vegetable meals do not take the place of the fish meal or beef scrap; they supplement them and add variety to the ration.

Encouragement is never more necessary, perhaps, than during the molting season. We have so far outlived the idea that hens should be forced to molt at a certain time whether they are ready or not that we are willing to concede that there may be certain advantages in keeping them laying as late in the fall as possible. A few hens lay on clear through the molt, but many more, and they are usually the best layers in the flock, continue laying while the old feathers are dropping. A little care in feeding may keep these hens laying until the first of October or even till November. Vegetable protein in the mash, sprouted oats, clabbered milk, green cut bone, all kinds of greens in unlimited quantity will help them to keep the egg basket full till the pullets are ready to relieve them.

One of the best ways of getting fall

eggs from hens of the heavy breeds is to let them hatch and rear a brood in early summer or late spring. This cannot be done on a large scale, of course, but where the flock is not large it is possible to set nearly every hen sometime during the summer. I prefer to set mine in August, just as they are approaching the molt. The long fast makes the old feathers fall quickly. The hens will not lay as many fall eggs as the hens that have hatched in June, but they are ready for the breeding season in January, and some may begin to lay in November.

Comfort plays a large part in hen efficiency. It is wonderful how hens will sometimes lay in spite of mites, lice, filthy yards and houses, lack of shade and ill ventilated sleeping quarters, but the hen that can keep going with everything against her will be a top-notch if she has a chance. Water is so cheap, why not let them have it always clean and cool? Shade is as cheap as water, why let them swelter in the sun or under the roosts of a henhouse that is as hot as an oven? Elbow grease costs nothing but will power, why let filth accumulate on dropping boards or in runs? As for mites and lice, there are all sorts of powders and sprays and paints; it is pure laziness that lets hens suffer from these pests. If the war teaches us to do the best we know and to let our hens have a chance to do their best, there is that much of a silver lining to the cloud. If it is worth while to save crusts and crumbs it is surely worth while to make the hens for whose living we pay so dearly bring in the greatest possible income.

## Save the Feathers

**T**ONS of feathers are lost each year in small amounts because farmers and poultrymen do not think it worth while to save the small quantities plucked from birds used at home and for the local market. Another reason probably is that the prices are thought to be too small to make saving these feathers seem worth while. If a few minutes be taken when plucking is done to separate the various grades and to practice the best methods of curing them there is no reason why a nice little sum could not be saved and the aggregate make a considerable advance in the annual returns from poultry.

Chicken, duck and goose feathers are always in demand and should be saved but ought to be kept separate and the larger feathers placed by themselves. In no case should chicken and turkey feathers be scalded because hot water removes the animal oil and reduces the grade. Such feathers scalded command only a fraction of the price paid for dry picked ones.

Another good point is to keep the white separate from the colored feathers because white stock brings a higher price than dark. After being

plucked the feathers should be spread out until the moisture is thoroughly dried out of them. During this time they should be turned every day. Turkey body feathers, while too large as they come from the bird are often chopped and used in cheap pillows.

Not long since I heard a dealer state that hen and turkey body feathers have only saving value when dry picked. They should be laid out on the floor and forked over daily and should be in a marketable condition in about three days, when they can be shipped in burlap bags.

Chicken quills should be thrown away and never mixed with softer body feathers because they will spoil the grade. Turkey quills should be graded, the long tails put in one box, those from the first two joints of the wings in another and those from the last joint in a third. The shorter quills and those from the rump ranging from five to eight inches in length should be placed in a burlap bag. After a thorough airing they may be packed for shipment. Moisture allowed to remain in quills rots them very quickly and thus reduces the grade.—Exchange.

## It Pays to Fatten Chickens

To market chickens which have not been properly conditioned through some method of fattening is an economic waste. Chickens will not reach their maximum development of flesh without special feeding. The farmer who sells his chickens without fattening them deprives himself of a large part of his possible profit, since the increased weight produced by an efficient method of fattening is produced at a low cost. The underfattened chicken loses a much greater percentage of its weight in dressing than the chicken which has been properly fed.

The gains which can be made by crate feeding depend upon the quality of the fowls and the skill of the feeder. Cocks may be expected to make a net increase of from 15 to 20 per cent, hens should gain from 20 to 30 per cent and broilers from 25 to 50 per cent in from eight to 15 days.

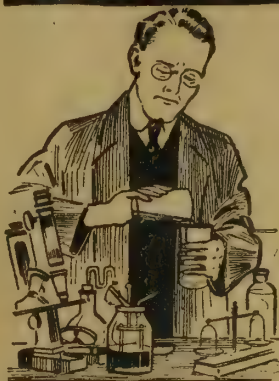
From 350 to 400 pounds of mash fed to good chickens should produce 100 pounds of poultry meat in from eight to 15 days.

### STATE FAIR AWARDS ON BRONZE TURKEYS

John G. Mee writes that the list of awards as printed in the Cultivator of September 22 was incorrect in regard to his winnings, which were as follows: Old hen, 1, 2, 3; yearling hen, 1, 2, 3; yearling tom, 2.

Not only should the hens be well treated, but the hen house—the home of the hen—should have a thorough housecleaning. Droppings should be removed at least once a week. The nests and roosts should be sprayed often with coal tar disinfectants to insure cleanliness.

## Science Says Buttermilk



Bulletin 162, just issued by the Department of Agriculture, states that Buttermilk is the only preventative of White Diarrhoea. It has been proven that many birds apparently in perfect health have these germs in their system and that they are transmittable to their progeny. Science has discovered that the Lactic Acid Bacilli of Buttermilk kills these poison germs. Write to Berkeley for this important bulletin, free.

The Dry Buttermilk in GLOBE A-1 BUTTERMILK MASH contains 10,000 live Lactic Acid Bacteria to the cubic centimeter.

Globe A-1 Buttermilk Mash is a high protein feed, free from any filler.

Globe A-1 Buttermilk Mash will prevent bowel troubles, keep your flock in glowing health, produce more eggs to market, better eggs to hatch.

Costs no more than non-buttermilk mash.

Satisfaction or Money Back.

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Write at once for valuable feeding information and sample, free.

## Buttermilk GLOBE A-1 Dry Mash

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Neither do all people write us who are making big hatches in different parts of the world in the

**PETALUMA INCUBATOR** but thousands have and we would like to tell you what they say. Present Models better than ever. You should know about *The Electrified Hen*. Write us. Just say "Send your big envelope of free literature. We Pay Freight."

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## DRY MASH



### The Best Feed on the Market

Has the highest protein at the lowest price \$2.80 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or

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## Would you plant your fruit trees in large tubs?

"Without the use of dynamite in tree-planting," says U. S. Bulletin No. 38, "the roots soon meet with the smooth and compacted sides of the hole, through which they have great difficulty in penetrating. The tree is in about the same situation as if it had been planted in a large tub."

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the trees will grow faster, develop deeper, stronger roots, and bear earlier. "When dynamite is used," continues the bulletin, "cracks are formed in the soil to distances of five or sometimes six feet on all sides. This makes the very best conditions for the continued growth of the tree. For tree planting dynamite is recommended confidently as the best method of preparing the soil."

In selecting explosives for your orchard work, be careful to get those that will crack, powder and loosen the soil, rather than pack it or throw it in the air. The proper explosives are the Giant Farm Powders. There are two of these—Eureka Stumping Powder and Giant Stumping Powder—both improved forms of dynamite, made especially to meet western agricultural conditions. They are sold by distributors everywhere. Ask your dealer for them.

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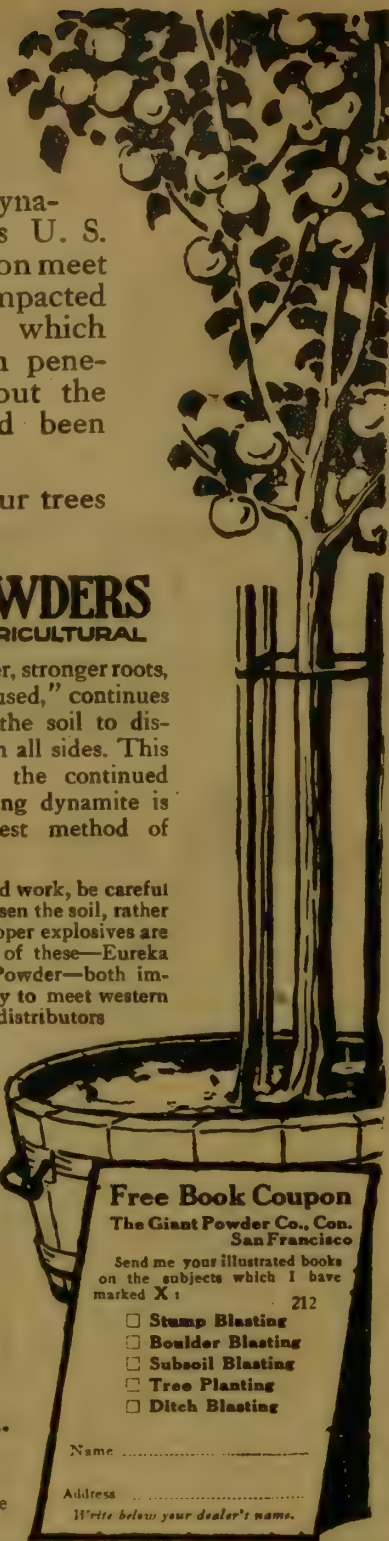
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## Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

#### Leg Weakness

One of my largest young turkey toms, (three months old) has recently lost the use of his legs. He does not seem sick otherwise—eats and drinks as usual. Can you tell me what ails him, and is there anything I can do to cure him?—Subscriber, Alta Loma.

It is difficult to prescribe for a turkey without knowing anything about his diet. These case of leg weakness sometimes are due to rheumatism, the result of running on wet alfalfa, but more often come from heavy feeding coupled with too little exercise. Sometimes, again, they are the result of a lack of bone making material in the ration. In either of these two latter cases the legs are simply not strong enough to carry the weight of a rapidly growing body, and the bird stops using them. If you will give this tom a mash containing bone meal twice a week (one part bone meal to five or six parts of bran will do) and put him on a ration of rolled oats chopped with onions and other greens and clabbered milk for a while, making him exercise as soon as he seems able to use his legs. I think he will soon be as lively as usual.—J. A. K.

#### Addresses of Agricultural Colleges

Many people order bulletins for which they have no use, simply because they are free. I have known men engaged in stock raising to send for bulletins put out by an Eastern state. Such bulletins, especially those on livestock feeding, while interesting and educational, usually do not apply to our conditions, because the feeds are so different, most of the rations mentioned containing corn which is used little in most parts of California as a feed for stock. While I believe in ordering bulletins, I also believe in being conservative and ordering those of most interest in our particular branch of work and those applicable to our conditions. I would suggest that you publish addresses of nearby agricultural colleges for the benefit of readers in ordering bulletins. Wishing to order some bulletins I was surprised to find that I knew the location of less than half of the agricultural colleges of western states.—Subscriber, Mt. Dome.

The agricultural colleges of the following states, with their locations, may be of interest to the subscriber: New Mexico, State College; Colorado, Fort Collins; Wyoming, Laramie; Montana, Bozeman; Arizona, Tucson; Idaho, Moscow; Utah, Logan; Nevada, Reno; Washington, Pullman; Oregon, Corvallis; California, Berkeley.

#### Spraying Apricots

What time during the winter is the best time to spray for black scale on apricots? What is the most effective spray for the purpose?—Subscriber, Watsonville.

Wait until the trees are entirely dormant, prune and spray with strong kerosene emulsion. The formula for crude oil emulsion, perhaps one of the cheapest and most effective, is as follows: Water, 175 gallons, liquid soap, three gallons, crude oil, 25 gallons. Fill the spray tank with the 175 gallons of water; add the liquid soap; agitate thoroughly for one minute, after which add the crude oil, continuing the agitation. If the liquid soap cannot be had, use 20 pounds whale oil soap dissolved in 10 gallons of boiling water, to which three pounds of lye have been added. During the spraying operation this mixture should be thoroughly agitated and great care taken to wet all of the twigs. From eight to 15 gallons should be used on a tree. The application should be made from November to February. The crude oil

emulsion is especially recommended for black scale, European fruit scale, European pear scale, cherry scale and other scales infesting deciduous fruit trees. It should be applied in the winter when the trees are dormant. To also kill moss or lichens on fruit trees add two pounds of lye to the formula of the stock solution.

#### Melilotus on Heavy and Alkali Soils

Please give information regarding melilotus alba or the white sweet clover. Is it adapted to heavy clay soils and will it grow on alkali soils? What are its moisture requirements?—Subscriber, Hanford.

This question was referred to Prof. R. S. Vaile of the citrus experiment station and he answers:

Melilotus alba, or the white sweet clover, grows well on a wide variety of soils. It will stand more either of acid or alkali conditions than most of our clover crops. While it is not recognized as an alkali loving plant, yet it will grow on land that gives decided alkali reaction. For example, it will probably flourish wherever land is suitable for the culture of sugar beets.



### Send for this Book!

—JUST OFF THE PRESS—

This Autumn Number of BARKER BROS. GOOD FURNITURE NEWS is planned and fashioned for the many families living away from Los Angeles—the thousands of people throughout this great Southwest who cannot come to Barker Bros. Great Home Furnishing Store, but who want and appreciate Barker Bros. Helpful Service in the matter of home beautification.

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We sell the Best roofing at the Least Price.  
One ply roofing \$1.50 a roll.  
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Laundry trays \$9 and up.	Five-foot bath tubs \$22.
Low tank toilets \$19.	Portable shower baths \$8.

#### SAVE ON HARDWARE

Special stove bargain. Durable sheet iron lined, air tight heating stoves.	Garbage cans (heavy galvanized) \$1.50.
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### TREES

**Avocado Budding**—Why keep worthless seedlings or unprofitable budded avocado trees? I will bud over such to the standard kinds and guarantee the buds to grow. From fifty cents to one dollar per bud. Sometimes large trees do not require more than one bud. No money asked until the buds begin to grow. Choice of the following: Lyon, Bartley, Fuerte, Sinaloa, Pueblo, Blakeman, Challenge, Taft, Dickenson, Sharpless, etc. I not only insert the bud but I tie and retie it. Top and retop the tree. Stub, shellac and whitewash the trunk and force the buds to grow. Budded Nursery Avocado trees ready for delivery. A. R. Rideout, Rideout Heights, Whittier, Cal.

**Here is Your Opportunity to Secure All citrus trees.** We offer several thousand 2-year-old lemons; Eureka and Villa Franca, also Washington navel; also several hundred Valencia on sweet root. We call these good trees and we know whereof we speak. **ALBERT JACKSON, Upland, Cal.**

**Avocado Budwood, Tree Performance Record, Leading Varieties.** The Fuerte at two years of age matured from 2 to 76 fruits per tree and has proved harder and highest in oil (30.72 per cent) of the thick skin varieties. J. T. Whedon, Yorba Linda, Cal.

**For Sale; Citrus Trees**—Choice stock, young and thrifty. Selected buds, Valencia and Washington Navel, Eureka and Rialto seedless lemon. Marsh seedless grapefruit; also young seedlings. W. W. Burns, 631 Security Bldg., F. 3110, Los Angeles.

**Pear Trees**—Offer several thousand Bartlett, 2 and 3 feet, heavy caliper at 9c each. French prunes. Trees of all kinds. No agents; we sell direct. Write for price list. Carlton Nursery Co., Carlton, Ore.

**By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator.** The cost is only 3 cents per word per issue, with a minimum of 35 cents.

**For Sale**—Valencia trees, extra fine yearlings, straight, thrifty, sour root, high buds, not fertilized, fine soil for balling. Will contract for spring planting. S. R. Coate, Anaheim, Cal.

**For Sale**—15,000 sour orange seedlings. One year, 3 to 20 inches. Nothing better. \$25.00 f. o. b. Randall Bros. Nursery Co., Whittier, Cal.

**Olive Trees**—Mission, Manzanillo, Ascolano. Propagated by me from trees of known bearing qualities. Guaranteed. L. T. Schwacofer, Hemet, Cal.

**Citrus Trees**—All kinds, any quantity. Butler's Morning Side Nursery, Laramanda Park, Cal.

**Citrus Nurseries, Murphy Oil Company, East Whittier, California.** Selected stock for sale; inspection invited.

### WANTED

**Wanted**—Man in each California county to represent established California company. Should have rig or auto to get around. Good pay and several weeks' work to right parties. Address J. H. Yetter, Sales Department, 822 Santa Marina Building, 112 Market St., San Francisco, Cal.

**Wanted**—By a Steady Experienced married man, age 37, a small ranch to care for within 8 or 10 miles of Los Angeles. T. Williams, care of 520 Central Ave., Tropic.

**Wanted**—Thirty-five Good White Leghorn males, suitable for mating this month. M. M. Kelly, R. F. D. No. 1, Escondido, Cal.

**Wanted**—From one hundred to five thousand avocado fruit or seeds. Will pay cash, trade budded trees or do budding for same. A. R. Rideout, Whittier, Cal.

**Wanted**—Practical farmer with tractor or some money as partner to put in wheat. Address Farmer, 332 South Bunker Hill, Los Angeles.

**We Buy Weed Seeds**—Mustard, rape, anise, bitter clover, etc. Send samples. Write us, stating quantity and price. Globe Mills, Los Angeles.

**One of the Most perplexing problems to farmers and ranchers is that of help. A small liner ad in California Cultivator is the quickest and easiest means of securing farm help.**

**Wanted to buy pipe, junk, sacks and newspapers.** Market price paid. Charles Ayala, 519½ Temple St., Los Angeles.

**Weeds Wanted**—Flowers, seeds, berries, leaves, barks, roots, 2c. to \$2.50 lb. National Drug Co., Yakima, Wash.

**Wanted**—Position as ranch superintendent after December. Address Box 368, Exeter, Cal.

**Wanted**—To hear from owner of farm or unimproved land for sale. O. K. Hawley, Baldwin, Wisconsin.

### HORTICULTURAL PRINTING

**Catalogues**—Good Printing. Specialists in preparing nursery, seed, poultry and live stock catalogues and all kinds of commercial printing. For prices and information address **WOLFER PRINTING CO.**, 424 Wall St., Los Angeles.

**Our Printing Will Get Results for You.** It will help to sell your goods and earn you profits. Send for samples and price list. G. C. Gallagher, 441 Sacramento St., San Francisco.

### LUMBER

**Lumber—Sash—Doors**—Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A. R. W. Shingles 50c per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.

### HOGS

**Registered Durocs**—We offer for sale a choice service boar out of a daughter of Mesto King and by a grandson of Burk's Good E Nuff; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col.; three young boars out of a great sow of Crimson Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. Derryfield Farm, L. O. O. F. Building, Sacramento, Cal.

**Chester Whites, the Billiken Brand**—The big winners at the California State Fair; Billiken was Grand Champion boar; a son was Reserve Grand Champion and a daughter was Grand Champion sow. Do you want some of this strain? Twenty gilts bred to farrow during October and November. Fifty Billiken pigs, both sexes—March and April farrow. Every animal is cholera immune. Write for prices and booklet on Chester Whites. C. B. Cunningham, Mills, Sacramento County, California.

**Grape-Wild Farm Berkshires**—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

**Large Yorkshires**—Choice spring boars, gilts and weaned pigs from champion sow P.P.I.E. or from breeding of champion boar and sow Sacramento, 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.

**Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed.** Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

**Wanted**—Farmers, orchardists, livestockmen to use classified liner advertisements like this. Thousands of people read every ad and the cost is only 3 cents per word per issue, minimum 35 cents. Extra lines of white space above and below cost only 16 cents per line.

**Duroc-Jersey Boars 1 Year Old**—For Sale—Sons of Burk's Good E Nuff, Grand Champion Illinois State Fair, 1914. Out of Queen Is Rite, Grand Champion California State Fair, 1916. A. A. Trueblood, P. O. Box 582, Sacramento.

**Bernstein Sells 20 head of choicest Poland-Chinas at the Big Sale October 19 at Hanford, Kings County. W. Bernstein.**

**Duroc-Jerseys**—See our Gold Models at Riverside, October 9th to 13th. Peters, Lamson & Walker, Devore, San Bernardino County.

**Rancho Rubio Durocs**—Nothing to sell at present. A fine bunch of gilts and a few extra good service boars for this fall. Elmer Lamb, Ceres, Cal.

**Big Type Durocs.** Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

**Most Money in Duroc-Jerseys.** Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

**Large Yorkshires**—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.

**Large Type Poland-Chinas** are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Calif.

**Large Type Poland-Chinas**—Very best stock. Prices reasonable. Weanlings my specialty. C. R. Hanna, Riverside, Cal.

**Durocs**—P. & L.'s Defender by Defender heads herd. Joseph Prendergast, Route 2, Box 87A, San Bernardino, Cal.

**Model Herd Berkshires** bred for size and quality. Weanlings and gilts. J. L. Gish, Laws, Calif.

**Carruthers' Farm Berkshire Hogs.** Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

**Poland-Chinas**—A few good breeding boars. S. F. Williams, Orland, Cal.

### LIVE STOCK

**Butte City Shorthorns, Shropshires, Berkshires and Ponies.** Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

**For Sale**—One Thoroughbred Toggenburg Buck four years old. One Thoroughbred Saanen Buck seven months old. R. Olson, Farley, Cal.

**Registered Shires**—Blackhawk Stock Ranch. Importers and Breeders, Easton & Ward, Burlingame, Cal.

**AUTOMOBILE STORAGE BATTERIES**  
Titian Batteries for Service, get our prices before buying or having an old battery repaired. Call or write, Olive Street Electrical Co., 910 South Olive St., Los Angeles, Cal.

### CATTLE

**For Sale**—Retail Dairy of twenty-four cows. Splendid trade at good prices. Everything up to date, and a fast growing business. Will sell all or half to one who will take full charge of the business. A splendid chance for the right man. Best of reasons for selling. L. R. Thompson, Sierra Madre, Cal.

**Pedigreed Bull Calves, Registered \$50.00, unregistered \$25.00.** Service bulls \$75 and up. Good individuals from producers. Cows with yearly records at a profit, tuberculin tested. Write or come and select. Horses. N. H. Locke Co., Lockeford, Cal.

**D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco.** Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.

**Venadera Jerseys,** the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

**Registered Holsteins out of ARO Dams.** Grandsons of Pieterje Maid Ormsby, 35.55 pounds average 5.31. Geo. Kounias, Modesto Farms, Modesto, Cal.

**Veramont Stock Farm Pure Bred Herefords.** Location Plumas County. Ideal for stamina and vigor. Bulls for sale. Address H. M. Barnegrove, San Jose, Cal.

**Registered Holstein Bulls** from high producing dams for sale at reasonable prices. Also a few choice females. McAllister Sons, Chino, Cal.

**Sunshine Farm Jerseys**—Bulls from officially tested dams for sale. E. E. Greenough, Merced.

**Dairy Cows Wanted**—Carloads or less by the Burr Creamery Co., Station C, Los Angeles, Cal.

**Young Holstein Bulls, bred right, grown right, priced right.** Creamcup Herd. M. Holdridge, Modesto, Calif.

**Registered Holstein Bulls** of various ages for sale. Millbrae Dairy, Millbrae, Cal.

**Registered Jerseys**—both sexes for sale. J. R. Carhart, Fullerton, Calif.

**Holstein Bulls** from record cows. Prices right. A. M. Bibens, Modesto, Calif.

### MACHINERY

**WHY BUY NEW? SAVE HALF**  
Material guaranteed. It's second-hand after used few times, but not worn out. Engine snaps: 6 Stearns, \$89; 10 h. Stearns same as new, \$145; 9 Foos, \$125; 18 Western, \$295; 34 Lambert, \$390. Many others.

**NEW, USED WOOD, GALV. TANKS**  
All sizes; galvanized wagon tank, \$48; 3500 swell corrugated galv. tank, \$72.50; 10,000 gal. redwood, \$75; 10,000 galvanized \$135; 16,000 corrugated galv., \$135; 5000 gal. redwood, \$48; 25,000 gal. redwood with stand, \$135; 8000 redwood and stand, \$75.

**WINDMILLS, SPECIALLY PRICED**  
8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel.

**PUMPS, CYLINDERS, PIPE**  
2½-in. two-stage hor. centrifugal pump, \$38; 2-in. rotary; 3 hor. cent., \$35; 5-in. two-stage B. J. hor. cent. pump, \$175; 8-in. hor. cent., \$150, pumps 200 in. water; deep well double-acting No. 2 Ames, \$130. Large Bulldozer jacks, \$68. Small Bulldozer, \$42.50. Plunger pumps 5x6 air compressor, \$29. Pipe fittings.

**RANCH MACHINERY**  
Walking and riding plows, harrows, cultivators, scrapers; brand new ¾-in. cable, 6c; water troughs, \$4; bone grinder; feed mill; sprayer; mowers, rakes, belting, sundries. Down town office **DEMMITT CO., UP-STAIRS, 120 N. Main, Yards, 816 Yale, Los Angeles.**

**Gasoline Engines, the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles.**

### SEEDS AND PLANTS

**Alfalfa Planters,** fill your fall requirements NOW with GREEN-GOLD seed. High quality because of personal field selection. Low price because of direct dealing. Send for samples and prices. Bomberger Seed Co., Modesto, Cal.

**\*\* ORDER YOUR SEEDS NOW \*\***  
If you are going to need any seed for next season now is the time to render your order. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbuckle, Cal.  
**\*\*ALFALFA SEED OUR SPECIALTY\*\***

**Alfalfa Seed**—Common variety, Hairy and Smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. E. F. Sanguinetti, Yuma, Arizona.

**Rhubarb**—\$1127.00 from one acre. A crop every month of the year. Write to me and I will tell you how you can do as well. J. M. Stone, Lodi, Cal., Route 4.

**Vetch Seed**—New crop clean seed, \$4.00 per 100 lbs., on car. Alsike, Red Clover. Price on application. Carlton Nursery Co., Carlton, Ore.

**20,000 Yellow Calla, Elliottiana; Pink Calla, Rhexannii, Spotted Leaf White Calla.** William Richard Nursery, Santa Cruz, Cal.

**For Sale** 50,000 Choice Banner Strawberry Plants—Hugh C. Newton, Castella, Cal.

**New Crop Alfalfa Seed** now ready. Not the lowest in price, but high in quality. Go Turner, Yuma, Arizona.

### MISCELLANEOUS

**Famous Hairy Peruvian Alfalfa Seed**—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.

**Slacked Lime**—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road Pasadena.

**To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue.** Smith's Cash Store, 112 Clay St., San Francisco.

### TURKEYS

**Our Geese and Turkeys Win Again**—Grand Champion Sweepstake Special, for best pair of birds in show. For size, vigor and quick maturity, our stock are best, East or West. Stock and eggs in season, also Collie pups. Correspondence solicited. John G. Mee, St. Helena, Cal.

### FARM LANDS FOR SALE

**For Sale**—Splendid opportunity for party with \$40,000 cash, 320-acre ranch in Tulare County, near town and state highway, actual gross income since March 1, 1917, over \$15,000 for sweet cream and hogs alone. Ranch is fenced and cross-fenced with hog tight fence; 160 acres alfalfa, 90 acres leveled for corn and barley, 70 acres summer fallow; all buildings and tools new, including tractor, alfalfa chopper and grinder, corn binder, manure spreader, feed grinder, milking machine, etc. Plenty of water, 2 complete pumping plants; stock consists of 20 head draft horses, fine herd of 90 tested Holstein cows, some registered, 30 head springing heifers, over 100 head young stock, 150 head hogs; stock and tools inventory over \$30,000. There is 30 tons of alfalfa hay ready to chop and blow into barn, 2 silos filled, plenty of feed to winter all stock. Address owner, 1420 E. Eighth St., Los Angeles.

**Choice Apple Orchard in Yucaipa Valley** for sale—One of the finest tracts in the famous Yucaipa Apple District. This choice property consisting of 90 acres can be sold as a whole or in tracts to suit. It is in the very best of condition—nothing better in the valley. This season's crop, now being picked, is grading 90 per cent "Fancy." The price is \$700 per acre. Easy terms can be arranged. This is an opportunity to secure a first-class orchard "Where the Big Red Apple Grows" in the Yucaipa Valley. The varieties are Rome Beauty, King David, Delicious and Winesap. This property must be seen to be appreciated. Dike & Logie, Sales Agents, Redlands, Cal.

**NO PAYMENT DOWN**  
**FARMERS ARE MAKING GOOD IN THE "PROJECT OF NO REGRETS" AT ORLAND, CAL. WATER FURNISHED BY UNCLE SAM WE SUPPLY THE LAND AND ASK NO PAYMENT UNTIL YOU CAN MAKE SAME FROM CROPS. NO BETTER SOIL FOR ALFALFA, ALMONDS, OLIVES, ORANGES, LEMONS, ETC. WRITE US FOR U. S. GOVERNMENT REPORT, AND BOOKLET "ORLAND FARMS."**  
F. D. BURR CO.

**253 RUSS BLDG., 235 MONTGOMERY STREET, SAN FRANCISCO.**

**Lake County, California**—Climate unexcelled. We have two 160 acre ranches; both have an abundance of running water, fruit, grain, wood and pasture land. Orchards of walnut, prunes, pears, peaches, apples, berries, etc. Three room cottage, five room house, barns and out buildings. Fenced and cross fenced. Three miles to good small town, one mile to school. Price \$7,000.00 and \$7,500.00. No exchange. Terms. Address Box 71, Kelseyville, Cal.

**YUCAIPA VALLEY**  
"Where the Big Red Apple Grows"  
We are offering some of the finest unimproved apple land in California at \$285 per acre. Pure mountain water is piped under pressure to the highest point on each tract. Rich deep soil adapted to apple culture. Altitude 2400 to 3000 feet, climatic conditions unsurpassed. Terms easy. Dike & Logie, Sales Agents, Redlands, Cal.

**Oregon, California Government Lands.** Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

### POULTRY

**Blue Andalusian Cockerels, Blue Orpington cockerels and Ancona cockerels.** Large vigorous birds, for the shows or breeding pens. Write for prices. J. R. Huddleston, 342 Edgeware Road, Los Angeles.

**Day Old Chix**—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Calif.

**Poultry Wanted**—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

**200-290 Egg Fall Chicks, Eggs, Stock, reasonable.** Rocks, Reds, Wyandottes, Anconas, Leghorns. C. Beeson, Pasadena, Cal.

**"Eastman's Bred-to-Lay" Barred Plymouth Rocks.** Fall chicks, eggs, cockerels. Fairmead Poultry Farm, Fairmead, Cal.

**For Sale**—Ringneck and golden pheasant females; \$1.50 each. A. R. Rideout, Whittier, Cal.

### TO LET

**To Let**—Ranch at Bakersfield for term of three to five years. Ideal for dairy; 160 acres (all level), 80 acres in alfalfa, balance in wild grass. Ample ditch water for irrigation always available. Good well for stock and domestic purposes. Good two story 8 room house, barns, shade and fruit trees, grapes, nuts and berries. Complete outfit of new farming implements, wagon and buggy. Rental (to tenant who will put in twenty additional acres of alfalfa each year), \$1200 first year, thereafter \$300 additional rental each year. Owner, 636 Wesley Roberts Building, Los Angeles.

### PATENT ATTORNEYS

**Patents that protect are secured through The PACIFIC COAST PATENT AGENCY, INC., Savings & Loan Building, Stockton, California; send for our little booklet on "PATENTS"**

**Patents**—Copyrights, trade marks and labels registered. Solicitor of American and foreign. James R. Townsend, 712 San Fernando Bldg., Los Angeles. Phones. Home A4619, Sunset Main 347.

Terra Bella is rejoicing over the arrival of water at the main reservoir of the Terra Bella Development Company's irrigation district. Much of this district will be irrigated through the use of pumps lifting to higher levels but it is stated that an abundant supply is secured for the 12,500 acres surrounding the Terra Bella section.



## Household Department

### THIS DAY

This day is yours; your work is yours.  
The odds are not who pays your hire;  
The thing accomplished—that endures.  
If it be what the days require.  
He who takes up his daily round,  
As one new armored for the fray,  
Tomorrow steps on solid ground.  
Make this a day.

The day is this; the time is now;  
No better hour was ever here—  
Who waits upon the when and how  
Remains forever in the rear.  
Though yesterday were wasted stuff,  
Your feet may still seek out the way.  
Make this a day. —Exch.

### SOME ANT EXPERIENCE

Written for California Cultivator  
By Marine Crawford



NE who considers the ways of the ever busy ant, or attempts to cope with its activity, becomes wise to the fact that human engineers, with much scientific knowledge and ingenious implements, can still be

outwitted by these small insects, some of whose methods they have doubtless imitated.

The ants' need of food for rapidly increasing numbers is so insistent that in five minutes after untiring scouts have located a supply that must look large to them, double columns of ants from a colony may be seen hastening eagerly to the rich lode and returning laden with a tiny morsel for the storehouse.

They must have locality and memory well developed to guide them back and forth, as well as marking the trail with a scent, nor do any rest from the toil while any food remains to exploit. With a community feeling they put one another on to a good thing the scouts have located as if assured of an unlimited supply for all, working together like trained soldiers with a common purpose. But if disturbed and their foraging checked by a barrier they are thrown into a panic, run over one another, each one acting for itself, giving no mutual help to escape the threatened peril, the stronger ones escaping and leaving the weaker to perish.

Their bodies, hard as sand grains, are charged with endurance, persistence and ingenuity out of proportion to their size, that no obstacles can daunt. Their life is brief and subject to many accidents against which even their wisdom cannot provide, while thousands animated by the same industrious spirit continue to pour out from the home colony to fill vacant ranks; so theirs must be a round of rapid reincarnations to afford each one experience to enable it to pass on to higher forms of life.

While respecting their ingenuity and constructive skill they were too many to share honey and sugar with even if prices of sweets were not soaring, so to preserve mine I filled a large soup plate with water strongly tintured with red pepper, set a can in the center, banded nearly to the water line with commercial paste, warranted to catch any insect and on the can was set an earthenware jar filled with sugar. This was covered with a cotton cloth pressed down with the satisfaction with which Darius Green surveyed his "flyin' machine" and said, "Now I have them."

All day scores of ants ran around the plate rim, testing the water and consulting over methods of assault. They must have smelled the sugar or they would not have wanted to cross to it. That night I slept well, free from sugar and honey worry. On entering the kitchen the next morning I looked at the moated sugar jar with satisfaction that quickly passed when I saw the cloth over the jar covered with tiny black specks moving busily, and, I fancied, humming sharply out of tune with my conception of the music of the spheres.

I looked at the band of paste around the jar and saw something so interesting that with the aid of a magnifying glass I sat down to study it. It reminded me of a thrilling description of the Turkish siege of Constantinople during which the besiegers passed over the water filled moats surrounding the city on bridges formed of the dead bodies of their hosts of fighters who perished for their religion.

The strong ant swimmers had crossed the water space only to get stuck, one by one, in the paste around the can. With a ruthless instinct, each swimmer pressing on, had run over the bodies of the stuck ones only to stick itself on the other side, thus extending a bridge of bodies across the paste band to the jar for the oncoming ones who must have regarded the previous swimming as good, even if hot, since they felt vigorous enough to tunnel through the cloth over the jar, load with sugar, pass back over the dead bridge, swim to the plate rim and hasten homeward as if their feat were common in ant annals.

### STOPPED TOO SOON

Last night's gale irresistibly calls to mind the Welsh farmer's lament in a letter to a friend: "Today we had the most awful storm. The wind blew everything off the farm except the mortgage." —London Evening Standard.

### FRUIT BUTTERS WITHOUT THE USE OF SUGAR

Written for California Cultivator  
By W. V. Cruess and J. R. Zion



WING to the high price of sugar, the making of jams from fruit becomes very expensive. It is possible, however, to make very palatable fruit jams or "butters" without the use of sugar. By utilizing surplus fruits in this way it is possible to conserve excess apples and peaches at the end of the season when the weather has become too damp and cold for successful drying in the sun. The sugar necessary for fruit butters is furnished either by grape juice or by apple cider. The grape juice or apple juice that is used should not be very sour, but should be made from very ripe fruit in order that it will have the maximum of sugar and the minimum of acid. If the fruit from which the juice is made is not thoroughly ripe the butter will be too sour to be palatable. To make a good apple butter or peach butter, etc., it is necessary to cook the product very slowly, usually taking four to six hours and also to stir the product continuously or very frequently.

The first step in the process is to concentrate the fruit juice down to about one-half its original volume. Then an equal volume of the fruit is added to the mixture and is cooked down to a heavy jam.

### Apple Butter

Boil four gallons of sweet cider down to two gallons. Peel and slice enough apples to make four gallons of sliced product. Mix the boiled cider and apples together and cook them down very slowly to a thick jam. During the cooking process about a half a teaspoon each of ground cinnamon, cloves and allspice are added to each gallon of the butter. When the butter has reached the desired consistency it should be packed boiling hot into hot sterilized jars or cans. To make sure that the product will keep the rubbers and caps should be placed on the jars and they should be set in boiling water for about ten minutes. This will sterilize them. The butter may also be kept by packing it hot into open cans or jars and sealing once with smoking hot paraffine. The product is improved if about one pound of sugar is added to each gallon of the butter, but if very sweet cider is used no sugar need be added.

Apple butter may also be made with grape juice instead of apple juice. Choose very ripe grapes. Press out the juice and concentrate to one-half the original volume by boiling. To each gallon of the concentrated juice add two gallons of sliced apples. Boil down with constant stirring to a thick jam and flavor with spices as directed above.

### "FIFTY-FIFTY BISCUITS."

Have you tried "fifty-fifty biscuits," Uncle Sam's latest idea for saving wheat flour in hot bread? You use two cups of corn meal, soy beans which can be home ground, finely crushed peanuts, or rice flour, to two cups of white flour. Or you can use one cup of corn meal and one cup of ground soy beans or crushed peanuts with the wheat product.

You can make "fifty-fifty" muffins with one and one-half cups of cooked and mashed sweet or Irish potato or cooked cereal, or ground soy beans, to an equal amount of flour. Then there are "fifty-fifty" recipes for wafers and for corn meal cookies.

How to make all these "fifty-fifties," as well as home methods for entire corn meal gems and yeast breads and rolls made in part of finely crushed peanuts, sweet or Irish potato, soy bean meal which can be made at home by grinding soy beans in a handmill, rice, corn meal or cooked cereals, are described in detail in United States Department of Agriculture Circular No. A 91, "Partial Substitutes for Wheat in Bread Making." Here is a simple recipe—the one for "fifty-fifty" biscuits:

"Fifty-Fifty Biscuits" — Two cups corn meal, ground soy beans or finely ground peanuts, rice flour or other substitute; two cups white flour, four teaspoons baking powder, two teaspoons salt, four tablespoons shortening; liquid sufficient to mix to proper

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consistency (one to one and one-half cups).

Sift together the flour, meal, salt and baking powder twice. Have the shortening as cold as possible and cut it into the mixture with a knife, finally rubbing it in with the hands. Mix quickly with the cold liquid (milk, skim milk or water), forming a fairly soft dough which can be rolled on the board. Turn onto a floured board; roll into a sheet not over one-half inch thick; cut into rounds; place these in lightly floured biscuit tins (or shallow pans) and bake ten to 12 minutes in a rather hot oven. If peanuts are used, the roasted and shelled nuts should be finely crushed with a rolling pin.

In making the flour and peanut biscuits the flour and other dry ingredients should be sifted together twice and then mixed thoroughly with the crushed peanuts.

## USE MORE SKIMMILK

Skimmilk is a waste product in many farm homes and it is not appreciated by people in cities and towns as a food. Two quarts of skimmilk contain about the same amount of energy as one quart of whole milk. At the same time this amount of skimmilk contains more than twice as much body building material as the quart of whole milk. When whole milk is selling for a given price per quart, about half that price will usually buy skimmilk.

Dr. Louise Stanley of the University of Missouri college of agriculture mentions a few of the uses which can be made of skimmilk in the home. Chocolate, on account of its high fat content, can be made very acceptably from skimmilk.

Cream soups are a valuable means of using skimmilk in the dietary. These are made by a combination of skimmilk with the liquor in which a vegetable has been boiled, thickened and seasoned. Since butter is used as a seasoning, it makes up for the lack of fat. The usual procedure is to strain the vegetable, rubbing as much of the pulp through as possible. Use equal amounts of juice and milk, or more milk if the vegetable extract is sufficiently well flavored to make this possible. To each cup of total liquid, add a tablespoon of flour and one of butter. A smaller proportion of flour may be used when starchy vegetable pulp is added. Celery, cauliflower, spinach, tomato, corn, and potato—in fact any vegetable may be used in these soups.

## RISEN CORNBREAD FOR SUPPER

The spoon breads are equally good for supper and always make a substantial dish with a meat stew. When company is coming or you want to surprise the family, try risen cornbread for supper. It is not advisable to attempt it for breakfast because meal ferments so rapidly with yeast that the product is likely to be sour by morning.

One cake compressed yeast, two cups sweet milk, scalded and cooled, two tablespoons brown sugar, two tablespoons lard, two and one-half cups white cornmeal, one cup sifted flour, one teaspoon salt, two eggs well beaten. Dissolve yeast and sugar in lukewarm milk and add melted fat. Stir in the cornmeal, flour, salt and add well beaten eggs. Beat thoroughly. Fill greased bowl two-thirds full. Set to rise in a warm place for about an hour. Be careful that it does not over rise. It should be baked as soon as light. The baking will require from 20 to 30 minutes, according to thickness of pone.—U. S. Food Administration.

## SUGGESTION

Mrs. J. W. Burch of Galt writes: "I would like to say that I learn a good deal from the household department. I tried drying sweet corn in the oven and like it very much. And here's a suggestion to the department:

"Don't waste fruit peelings but cook and drain them as for jelly. Peach and pear peelings will not jelly but by adding sugar, less than for jelly, and boiling to a syrup you have something good for the table, especially good for griddle cakes."

With men, as with pebbles, when you give 'em a flop, The big ones most usually come to th' top.



# The Instant Summons

"Instant, through copse and heath, arose  
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\*\*\*\*\*

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A subterranean host had given."

The whistled summons of Roderick Dhu, the hero of Scott's "Lady of the Lake," caused his Highland warriors literally to spring from the earth. Ere the echo died away, from behind bush and rock emerged the loyal and ready clansmen. In armed silence they awaited their chieftain's bidding and typified his might.

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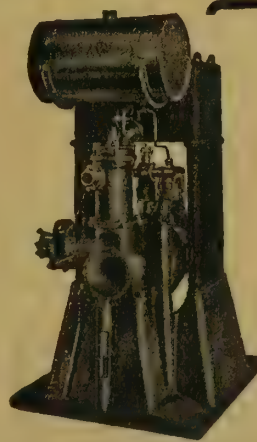
instantaneously set in motion all the vast machinery of warfare, munitions, transportation and food conservation.

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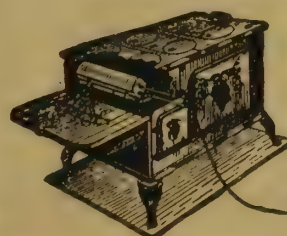
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## Los Angeles Market

Los Angeles, Oct. 10, 1917.

## BUTTER

Produce Exc. Quotations.	
Price to trade 4c higher.	
California extra creamery	47
Dairy Exch. prices past week:	
Oct. 3 4 5 6 7 8 9	
'17 ... 46 46 46 46 47 47	
Rcts. wk. ending Oct. 9, 289,400 lbs.	

## CHEESE

Brokers prices:	
California fresh, lb.	25
Oregon Longhorn	29
Tillamook Trip	28
Domestic Swiss	34

## EGGS

Exchange quotations. Prices include cases and fillers valued at 35c.	
Fresh extras	52
Case count	49
Pullet	42
Dairy Exch. prices past wk.	
Oct. 3 4 5 6 7 8 9	
'17 ... 51 51 51 51 52 52	
Rcts. wk. ending Oct. 9, 437 cases.	

## POULTRY

We quote to producers:	
Broilers, 1 1/2 lbs. and up, 29; small	30
Fryers, 2 1/2 lbs. and up	25
Hens—Leghorns	21
Roasters, 3 lbs. and up	23
Ducks, lb.	15@17
Squabs, doz.	2.00@3.00
Rooster, old	13
Geese	10

## LIVE STOCK

We quote cwt, f. o. b. L. A. Corrected Wednesday morning, Octo- ber 10, by the Cudahy Company.	
Cattle—	
Beef steers, av. 1000 to 1100 lbs.	8.50@9.00
Heifers, good	6.50@7.00
Cows, good	5.50@6.50
Canners	4.50@5.00
HOGS—	
Av. 125 lbs.	14.50
Av. 150 lbs.	15.50
Av. 175-200 lbs.	16.00
Rough, docked 20 lbs.; piggy sows, 40 bs., stage, 40 per cent.	
Prime wethers	9.50@10.00
Ewes	9.00@9.50
Lambs	13.50
Yearlings	10.00@10.50

## POTATOES

Wholesale selling price:	
Northern Burbanks, cwt.	2.30@2.50
Rurals	2.00@2.20
Sweet, cwt.	2.70@3.00

ONIONS	
Wholesale selling price:	
Brown, cwt., 2.50; white	2.50
Garlic	8
VEGETABLES	
Wholesale prices.	
Artichokes, doz.	1.10
Beans—Wax	6@6 1/2
Limas, lb.	8
Ky. Wonder	6@6 1/2
Beets, sk.	1.00
Cabbage, lb.	1 1/2
Carrots, doz.	40
Cauliflower, doz.	1.35
Celery, doz.	85
Corn, lug	70@75
Cucumbers, lug	1.00
Egg Plant, lb.	3@3 1/2
Horseradish, rt. lb.	15
Lettuce, doz.	40@45
Leeks	30
Mint	40
Onions, green, doz.	20
Okra, lb.	10@12
Peas, lb., Telephone	8 1/2@9
Peppers, Chili, lb., 3 1/2@4; Bell	3@3 1/2
Parsnips, doz.	40
Parsley, doz.	20
Pumpkins, lb.	2
Radishes, doz.	20
Rhubarb—Strawberry	1.10
Romaine, doz.	50
Spinach, doz.	25
Squash, Summer, cr.	85@90
Crookneck	70@75
Hubbard, lb.	2
Tomatoes, cr.	75
Turnips, doz.	35

## FRUITS

Wholesale prices:	
Apples—Skinners Seedling	1.50@1.75
Bellflowers	1.10@1.15
Jonathan and King David	1.75@2.00
Avocados, doz.	6.00@9.00
Bananas, lb.	4 1/2@5
Casabas, lb.	2
Figs, bx.	90@1.25
Grapes—Black	1.10
Malagas, lug	1.10@1.15
Muscad, lug	1.10@1.15
Tokays	1.50@1.65
Nectarines, lug	1.65
Pineapples, lb.	10
Peaches, lug	1.00@1.10
Pears, Bartlett, lug	1.50
Plums, lug	1.25@1.75
Quinces, lug	85
Watermelon, lb.	2

## DRIED FRUITS

Market on peaches quiet, sack prices  
f. o. b. Los Angeles running around 7 1/2  
and 8 1/2 cents. No quotations are made  
on peeled stock for the reason that so  
little is delivered and the quality varies  
so greatly that the market is not es-  
tablished. Prices made by wholesalers  
in 25-lb. boxes, faced, are, Choice, 12;  
fancy, 12 1/2.

## CITRUS

Lemons, 4.25@5.50; juice	2.25
Grapefruit	3.25@3.50
Limes, basket	1.00
Valencias	3.50

## HONEY

Wholesale prices:	
Extr. White, lb.	14@15
W. W. lb.	15@16
Comb, case, W.	3.75
W. W. case	4.25@4.50

## NUTS

Almonds—Almond Growers' Exch. an- nounces prices on 1917 nuts.	
Nonp.	21 1/2
I. K. L.	19 1/2
N. P. U.	18 1/2
Drakes	16
Peanuts, raw	12
Pine Nuts	20
Pecans	19
Walnuts—Cal. Walnut Growers' Associ- ation named prices Oct. 1:	
No. 1 Soft Shell, lb.	20
No. 2 Soft Shell, lb.	16
Budded, Diamond Brand	24
Budded, Standard Brand, (same size as No. 1 Soft Shell)	21
Prices delivered in East 1 1/2c higher.	

## RICE

Wholesale quotations:	
Cal.	6.25
Broken	4.75@5.60

## BEANS

Wholesale Prices:	
Lady Washington	15.00
Limas	15.00
Pinks	11.50
Manchurian Reds	10.50
Baby Mex.	9.00
Garbanzos	9.00@10.00
Small White	15.00
Blackeyes	10.50
Tevary	7.00
Lentils	18.00

## HAY

Quotations by Nichols-Loomis Com- pany. Wholesale prices to growers f.o.b. L. A. carlots.	
Tame Oat	21.00@23.00
Volunteer Oat	16.00@18.00
Wheat	17.00@20.00
Barley	18.00@21.00
Alfalfa	18.00@21.00
The Alfalfa Growers' Association of Southern California writes: "The Association is now asking \$23.50 for No. 1 cow hay f. o. b. cars Los An- geles and Southern California points. The later cuttings are short and we are experiencing a shortage in our crops. Hay is selling very readily and all buy- ers are offering high prices. We have heard nothing under \$20 per ton being offered the growers for alfalfa. That price offered is of course net to the grower. We find that little hay is stored for this winter's use and that there will undoubtedly be a shortage before spring."	
Straw	7.00
GRAIN AND FEEDSTUFFS	
Wholesale cwt. f.o.b. L. A.	
Alfalfa Meal	1.75
Alfalfa Molasses	1.80
Barley, Rolled	2.85
Barley, Re-cleaned, Whole	2.90
Barley, Hulled	3.45
Best Pulp	1.80
Bran, Heavy	2.25
Cocoanut Meal	2.50

Cottonseed Meal	.....
Corn, Yellow	.....
Corn, White	.....
Corn, Cracked	.....
Corn, Feed Meal	.....
Corn, Egyptian	.....
Middlings	.....
Milo	.....
Oat Chop	.....
Oats, White	.....
Oats, Rolled White	.....
Oats, Hulled	.....
Oats, Rolled Chicken Groats	.....
Oilcake Meal	.....
Wheat, No. 1	4.00@
Wheat, Cracked, No. 1	.....
Rye	.....
Blood Meal	5.10@
Bone, Green	2.85@
Bone, Dry	2.85@
Charcoal, 50-lb. sk.	2.70@
Clam Shell	.....
Grit, Granite	.....
Oyster Shell	1.25@
Sunflower Seed	4.10@
Soya Bean Meal	3.40@
Scratch Feed	3.70@
Grainless	3.90@
Rice Bran, ton	.....
Middlings, ton	.....
Rice Polish, ton	.....

## San Francisco Market

San Francisco, Oct. 9, 1917.

## BUTTER

Dairy Exchange quotations, lb.:	
Fresh extras	.....
Prime firsts	.....
Dairy Exch. quotations past wk.	
Oct. 2 3 4 5 6	
'17 ... 45 46 46 46 46	
'16 ... 32 32 1/2 32 1/2 33 1/2	
Rcts. wk. ending Oct. 8, 451,800 lbs.	

## CHEESE

Dairy Exchange quotations:	
Cal. Flats, 20 1/2 @ 22 Y. Am.	23
Ore. Young Am.	23
Jack Cheese, full cream	23

## EGGS

Dairy Exchange quotations:	
Extra	.....
Firsts	.....
Selected Pullets	.....
Firsts	.....
Dairy Exch. quotations past wk.	
Oct. 2 3 4 5 6	
'17 ... 49 49 1/2 49 1/2 49 1/2 50	
'16 ... 40 40 1/2 42 1/2 44 45	
Rcts. wk. ending Oct. 8, 9029 cases.	

## POULTRY

We quote from producers, lb.:	
Hens, large, 25@28; Leghorns	20
Small colored	23
Broilers	28
Roasters	29
Squabs, doz.	2.00@
Ducks	14
Geese	15
Belgian Hares, live, 14@17; dr.	21
Turkeys	22

## LIVE STOCK

Prices gross weight:	
Cattle: The following prices are grass fed stock. Hay fed bring 1/4 to more.	
Steers, lb. 6@9 1/2; cows and heif.	4@7 1/2; calves, 7@9 1/2.
Sheep: Wethers, 10 1/2 @ 11 1/2; ewes, 9	10; lambs, lb., 14 1/2 @ 15.
HOGS—Hard grain-fed, weighing to 150 lbs., 14 1/2 @ 14 1/2; 150 to 300 lbs., @ 16 1/2; 300 to 400 lbs., 15 1/2 @ 16c.	

## POTATOES

Wholesale selling prices at wharf:	
Cwt.	1.50@
Salinas Burbanks, cwt.	3.00@
Sweets, lb.	2 1/2@

## ONIONS

Wholesale selling price on wharf:	
Australian Brown, cwt.	2.10@
Yellow, cwt.	2.10@
Garlic, lb., new	15

## VEGETABLES

Wholesale selling price:	
Avocados, doz.	4.00@
Beets, sk.	1.00@
Beans, string, lb.	1.00@
Fy. Garden, 3@5; Lima	1.00@
Carrots, sk.	1.00@
Celery, doz.	85
Corn, Green, sk.	1.50@
Cucumbers, lug	1.00@
Pickling, lug	1.00@
Egg Plant, lug	90@
Okra, box	50
Onions, Pickling	1.00@
Peas, lb.	15
Peppers, Bell, lug, 50@75; Chili	1.00@
Rhubarb, bx.	1.00@
Squash—Marrowfat, sk.	60
Cream, lug	60
Hubbard, sk.	60
Tomatoes, lug	80
Turnips, sk	1.25@

## FRESH FRUITS

BERRIES—Strawberries 5.00@8.00 to trade; raspberries, 6.00@8.00; blue berries, 8.00@9.00; huckleberries, lb. @ 15c.	
PEACHES—Sm. bx., 65@85; large 1.00@1.25; Santa Clara peaches, sm. 65@90; large lug, 1.00@1.25; mount freestone, bx., yellow, 75@85; strawl freestone, 85@1.00; strawberry clings, 1.15@1.50.	
PLUMS AND PRUNES—German Grand Duke, cr., 1.25@1.50.	
FIGS—Black, double layer bx. 1.25.	
PEARS—Lake County Bartlett, 1.75@2.25; Oregon, bx., 1.00@1.50; An- ter Nells, 75@1.25; winter pears, 1.00.	
GRAPES—Malaga, cr., 60@75; sm. 60@75; Thompson seedless, sm. lug 60@1.00; cr. 75@1.00; big lug, 1.25@ Muscat, bx., 60@75; sm. lug, 75@90; 75@90; per big lug, 1.00@1.50; black, 40@60; lug, 75@1.00; Tokay, lug, 75@ Isabella, cr., 75@1.00; Gray, 1.25@ lug; lady finger, cr., 75@1.00; wine gra- Zinfandel, ton, 30.00@32.00.	
APPLES—Hk., Bellflower, 00@2 Spitzenberg, 4-ltr., 1.75@1.85; B. H. 1.15@1.25; Red Parnadun, 00@1.00; W. do, 4-ltr., 1.00@1.15; 3 1/2-ltr., 81 1.25; Smith elder, 4-ltr., 1.00@1.15;	

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85@1.00; Jonathans, \$1.35@1.65; dwin, 1.00@1.25; Wagner, \$1.15@1.25; over, 90@1.15; Newtown Pippins, 3/4-1.15@1.25; 4-tier, 1.00@1.15; 4 1/2-tier, 1.00.  
**ANTALOUPE**—Delta, lug, 1.00@1.25; lock, cr., standard, 1.50@1.75; ponies, @1.25; casabas, doz., 75@1.25; cr., (6), 75; Honey Dew, cr., 75@1.25; flats, 75.  
**LEMON FRUITS**—Bx.: Lemons, fancy, @6.00; choice, 4.00@5.00; lower grades, @3.50; lemons, 3.00@4.00; grapefruit, fancy, 2.75@3.00; choice, 2.00@2.50; lower grades, 1.50. Oranges, bx.: Valencia, fancy, 3.00; choice, 2.00@2.50; lower grades, 1.50@2.00.  
**ROPICAL FRUITS**—Bananas, Hawaiian, 5 lb., 1.25@2.00 bunch; Eastern, @5 lb.; red bannanas, 5 1/2 lb.; pineapple, 3.50@4.00 doz.; Hawaiian coconut, 10z.  
**OMEGRANATES**—Cr., 75@85.  
**ERSIMMONS**—Bx., 75@1.25, according to size and quality.  
**RANBERRIES**—Bx. of 33 1-3 lbs., @4.50.  
 anas, lb., .....5  
 apples, doz., .....2.50@3.50

**DRIED FRUITS**  
 Manager Niswander of the California Orchard Growers advises that a limited quantity of peeled peaches, either in assortments or carload lots, will be sold.  
**RAISINS**—The California Raisin Company announced on August 22, 1917 crop prices effective at once:  
 Muscats, Package Seeded, cs. of 48 lbs., 4.20; cs. 36 lbs. Sun-Maid and Fy. 5, Ch. 3.00; cs. of 45 lbs. Fy. 3.25, 3.10. Bulk Seeded, 25 lb. bx. Baker's-Maid \$1.75, Fy. \$1.90, Ch. \$1.75. Loose scats, 50 lb. cs. 1 cr. Recleaned and scatted, 4.15, 2 cr. \$3.40, 3 cr. \$3.65, 4 \$3.90. Layers and Clusters, 20 lb. bx. r. London Layer \$1.60, 4 cr. \$1.85, 6 Imperial Cluster \$2.70.  
 Thompson's Seedless, Package, cs. of 48 lbs., Sun-Maid Seedless \$4.65, cs. of 36 lbs. Recleaned, \$2.80, other brands, cs. 18 lbs., \$4.75, cs. of 50 lbs., \$4.00. Bulk cleaned Baker's, 50 lb. cs. \$4.90.  
 ultanas, Package, 48 lbs. \$4.75, 50 lbs. 0. Bulk Recleaned, 50 lb. cs. \$4.50.  
 leached Thompson Seedless, Northern, lb. cs. Ex. Fy. \$5.37-1/2, Fy. \$5.12-1/2, \$4.87-1/2, Soda Dipped, \$4.75; San Joaquin Ex. Fy. \$5.50; Fy. \$5.25, Ch. \$5.00.  
 Regular California dried fruit contract, ific coast rail shipping points prices all but bleached and dipped raisins, ranted against our decline (sales to ted States government excepted) to uary 1, 1918.  
 Muscatels, October-November, selloption; also November or December, er's option.  
 Thompsons and Sultanas, Septemberber, seller's option; also NovemberDecember, buyer's option.  
 rebate allowed on export sales.  
 prices subject to change without no-

**PRICOTS**—Lb., bulk basis: Standard, ch., 15; ext. ch., 15 1/2; fcy., 16 1/2; fy., 17 1/2; fy. Moorpark, 17 1/2; ext. fy., 18.  
**RUNES**—60s to 90s, 6 1/2 basis; 50s to 1/2c premium; 40s to 50s, 1 1/2 prem-  
**PPLES**—In 50-lb bx., lb.: Fancy, 13 1/2; choice, 12 1/2; choice, 12 1/2.  
**EAR**—Bulk basis, lb.: Fy., 11 1/2; exice, 9 1/2; choice, 8; standard, 6.  
**NUTS**  
 Almonds—Cal. Almond Growers' Exc., as prices: Nonpareils, 21 1/2c; I. K. L., c; Ne Plus, 18 1/2c; Drakes, 16c; hard ll, 11 1/2c.  
 ans .....16@18  
 e Nuts .....16@19  
**HONEY**  
 mb, W. W., lb., .....13@15  
 A. A., 11@12; A .....9@10  
 r. W., lb., 13; Lt. A. ....11  
 ewax, lb., .....38  
**BEANS**  
 obbers' prices, cwt., new crop, reained.  
 nas .....14.00@14.25  
 vous .....8.50@9.00  
 all Whites .....12.75@13.00  
 ican Red .....8.50@9.25  
 ge White .....12.50@12.75  
 ks .....9.75@10.00  
 ck Eyes .....8.75@9.00  
 nberry .....11.00@11.25  
**HOPS**  
 er lb: California crop of 1917, 35@40; contracts, spot, 1916 crop, 18@22; old, 15.  
**RICE**  
 alifornia new crop, cleaned, 100 lbs.: ad Rice, 6.95; brewers, 5.45; screenings, 5.  
**HAY**  
 nder date of Oct. 6, Scott Magner & er says:  
 receipts past week 1102 tons; last ck, 2136 tons, the preceeding week, 8 tons. Fields are practically aned up. City demand is light t as receipts are also light marion is well maintained. Choice wheat has 4 during the week as high as \$26 per b, other grades in proportion. Repts of alfalfa from river districts fairheavy, with good demand. Straw ofing from all sections, weaker.  
 Ve quote today wholesale prices in load lots as appear from dealers' nifers upon the hay market. For ces to consumers charges of cartage, mission and handling must be added ording to conditions.  
 ncy Wheat Hay (light 5 wire bale, ton .....23.00@24.00  
 1 Wheat or Wheat and Oat Hay .....20.00@22.00  
 2 Wheat or Wheat and Oat Hay .....17.00@19.00  
 oice Tame Oat Hay .....20.00@22.00  
 her Tame Oat Hay .....17.00@19.50  
 ld Oat Hay .....17.00@20.00  
 rley Hay .....17.00@20.00  
 alfalfa .....17.00@20.00  
 ck Hay .....15.00@17.50  
 1 Barley Straw, bale, .....50@90  
**GRAIN**  
 Brain Exchange prices, cti.  
 Wheat — Government price at San

Francisco, \$3.50 cwt., or \$2.10 bu., with 4 cents added for sacks on No. 1 (60 lbs.); No. 2 (58 to 60 lbs.), 3 cents discount; No. 3 (56 to 58 lbs.), 6 cents discount.  
 Corn, California Yellow .....4.00  
 Barley, Feed .....2.45@2.50  
 Shipping .....2.47 1/2@2.52 1/2  
 Oats, Red Feed, cwt. ....2.65@2.75  
 Oats, New Black .....3.25@3.50

**FEEDSTUFF**  
 Wholesale prices per ton:  
 Bran .....41.00@42.00  
 Cornmeal .....86.00@87.00  
 Cracked Corn .....86.00@87.00  
 Middlings .....50.00@55.00  
 Alfalfa Meal .....29.00@30.00  
 Coconut Meal .....40.00@41.00  
 Rolled Barley .....51.00@52.00  
 Shorts .....43.00@44.00

**SEEDS**  
 Prices in round lots, lb.:  
 Millet, recleaned .....4 1/2@5  
 Alfalfa .....20@21  
 Flax .....6@6 1/2

## Citrus Fruit Market

Los Angeles, October 10, 1917.  
 Valencias are selling in the New York market all the way from \$1.85 to \$6.80. Other markets average around \$3.00. Light shipments are now being sent forward as the groves are nearly cleaned up. Predictions of the coming year's orange crop range from 4000 to 5500 cars. Tulare districts expect to begin picking early navel about the 20th of November. Shipments of navels for the Thanksgiving market will probably be very light and Valencia growers are hoping to capture most of that trade.

Lemons are bringing remarkably good prices, averaging close to \$6.00 and all offerings are taken quickly. Owing to the rest given to the lemon trees by the removal of fruit in the June hot wave growers are expecting heaviest spring and summer pickings ever known.

## WEEKLY WEATHER AND CROP REPORT

October 9, 1917.—During the forepart of the week unusually high temperatures prevailed. They averaged from 10 degrees to 11 degrees above normal in Sacramento and San Joaquin Valleys, and from five degrees to eight degrees above normal in the San Francisco Bay counties and in the Santa Clara and Salinas Valleys. In Southern California and in the coast counties north of Point Arena the temperatures averaged only slightly above normal. The highest October temperature on record occurred on the 3d, as follows: San Francisco, 96 degrees; Red Bluff, 102 degrees; San Jose, 98 degrees; San Luis Obispo, 102 degrees. At Sacramento the thermometer registered 100 degrees on the 7th, which is also the highest October temperature for that city. At Fresno maxima of 99 degrees on the 3d and 4th, which is within one degree of a record-breaking temperature. No rain fell in the principal agricultural sections.

The high temperatures and ample sunshine were very favorable for drying fruit and by the close of the week the major portion of the Muscat raisin crop in the Fresno district was safe in stack and deliveries are now being made. Some raisin grapes are still out in Kings, Tulare and other counties; but they will soon be safely secured. The hot weather was unfavorable for wine grapes, apples and tomatoes. It shrivelled the grapes and made fermentation difficult. Some apples burned on the trees and dropped before they were ripe, and tomatoes matured too rapidly. The wine grape harvest is about half finished; the apple harvest is well advanced and the canning of a fine crop of tomatoes is under good headway. Walnut and almond picking has become general and both crops are turning out if anything a little better than expected. Oranges and lemons have made normal progress.

A large crop of beans is being harvested under excellent drying conditions. The rice harvest has become general and the crop is the largest and best ever raised in California. Late potatoes have matured nicely in the northern counties and the crop will be dug within a week or two. The September rains in the north were insufficient to start much new grass and the pastures and ranges are dry. Some cattle men in Humboldt County are selling their stock as rapidly as possible because of this shortage of feed. A good crop of corn is being put into silos and the weather was very favorable for this work. The sugar beet harvest is progressing rather slowly.

Cotton picking is in full progress and the crop is turning out better than expected. The irrigation ditches in Imperial County are now running full for the first time in two months and irrigation for the next crop of barley has just begun. Labor is still scarce in several localities; but the shortage is not so acute as it was a few weeks ago. The season on the whole has been very successful for deciduous fruit, hops, cotton, beans, sugar beets, potatoes and grains of all kinds. The hot weather in June severely damaged citrus fruit; but the recovery from this damage has been better than expected.

Note — This is the last weekly bulletin of the season. Reports will be issued monthly hereafter until spring, when the weekly reports will be resumed.—E. A. Beals, district forecaster, U. S. Weather Bureau, San Francisco.


## WEATHER CONDITION

San Francisco, Cal., Oct. 6, 1917					
Rainfall—					
	Wk.	Season.	Norm.	Temp.	Min.
Eureka	.00	.68	1.83	82	48
Red Bluff	.00	.80	1.08	102	62
Sacramento	.00	.51	.52	96	54
San Francisco	.00	.02	.42	86	52
San Jose	.00	.01	.50	98	46
Fresno	.00	.00	.42	98	50
San Luis Obispo	.00	.01	.61	102	52
Los Angeles	.00	.00	.12	98	60
San Diego	.00	.00	.12	76	60



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# SPLITDORF

## SPARK PLUGS

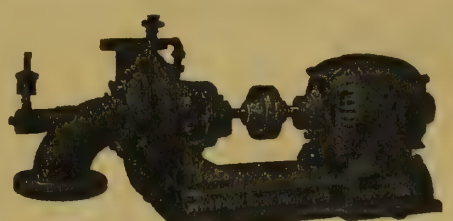


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## The Only Real Non-Skid Tires



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IT'S the tread! And this is the period of the year when your safety and peace of mind must be assured by tires that *actually* prevent side slipping.

Fisk Non-Skid Tires give this surety on all roads.

They hold fast on hard, wet, slippery surfaces, and take a firm grip for the pull ahead on softer road beds. They are the ideal all-year-round tire.

When you buy a Fisk Non-Skid you are getting more than temporary anti-skid protection. The buttons wear—they preserve the non-skid character of the tire through month after month of usage.

There is an extraordinary amount of mileage in the buttons alone, and throughout their entire long life you

have the perfect protection which makes Fisk the safest non-skid tire you can buy.

#### Examine this illustration

The basic principle of Fisk Non-Skid protection is perfectly simple. When you understand it you will realize why the Fisk Non-Skid Tires are the only auto tires that furnish such complete protection.



Fig. 1 is the outside rib that makes an uninterrupted counter against direct side slipping or skidding—Fig. 5 is the same protection on the other side of the tread.

Fig. 2 is the outside row of buttons, connected by a second rib of solid rubber. The buttons which are slightly higher than the connecting rib, offer perfect resistance against skidding and because they grip the road so firmly, make the pull forward in soft ground ever so much more positive and certain—Fig. 4 has these identical qualities, but from the opposite directions.

Fig. 3 is the master button around which the Fisk Non-Skid tread is constructed. It supplies resistance against slipping in any direction—no matter which way there is a tendency to skid there is always a flat resisting surface to prevent that skidding, and to assist the sure forward movement of the wheel.

The Company behind the tire, its ability and eagerness to make the best product it knows how to build, the Fisk policy of insisting that users shall have full satisfaction and the product itself which embodies and justifies the policy—these explain why Fisk is the best dollar-for-dollar tire value now for the motorist.

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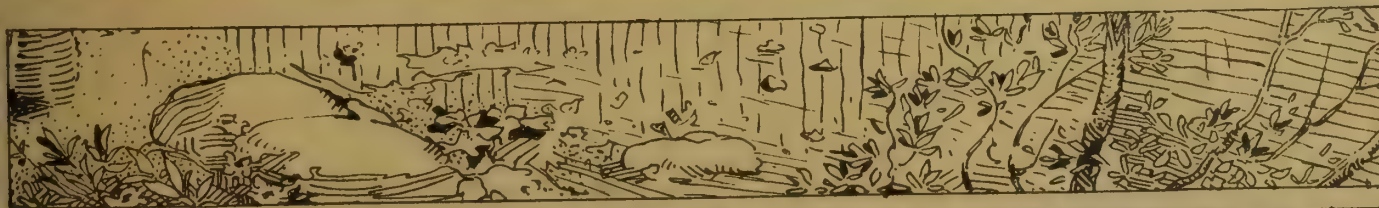
*THE LIVESTOCK* *Combined* *CALIFORNIA*  
*and DAIRY JOURNAL* *with* *CULTIVATOR*

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

October 20, 1917

SAN FRANCISCO



Hilgard Hall Dedicated



# Actual Service Gives Leadership To Firestone SUPER CORD TIRES

**W**ITH numerous makes of cord tires contesting, the past year has witnessed the sharpest rivalry for Tire Supremacy that motordom has ever known.

In this contest the Firestone Super Cord rightly came into its acknowledged leadership, rightly because of the construction which is designed to produce strength, durability and flexible action.

The body of the Firestone Super Cord Tire is built of walls of stout cord, each cord imbedded in pure gum, no two cords ever touching to cause friction. The cushion (which is under the tread to absorb shocks and protect the inner body) is a thick layer of pure gum; the tread is tough and thick. The beads which hold the tire in the rim are specially reinforced. The sidewall is also reinforced, giving extra strength against rim-cut and raising the bending point of the tire safely high. More mileage at less cost. Users of Firestone Cord Tires are getting the highest average mileage enjoyed by car owners.

That motorists find extra values in Firestone Tires is proved by the fact that our sales increased 72 per cent this year up to September 1. Our total business this year will exceed \$60,000,000.

## New Fabric Tire Features Suggested By Success Of CORD CONSTRUCTION



### Firestone FABRIC TIRES

have benefited by every feature of cord tire construction which can be used to advantage. THICK, TOUGH TREAD gives longer surface wear. MORE RUBBER BETWEEN LAYERS. Added protection against internal friction and greater resiliency. THICK CUSHION STOCK. Still more resiliency, protection against tread separation and stone bruise. REINFORCEMENT IN SIDE WALL. Greater strength at the bead. Firestone dealers will show you a cross section of the newest output of FIRESTONE FABRIC TIRES, explaining the features that add more miles to Most Miles per Dollar.

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Branches and Dealers Everywhere







# Fruit Trees

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## Every Horticulturist in the State

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## Teaching by Doing



ITH the declaration of war and the appeal to every farmer in America to make his land produce to the limit agricultural colleges of every state in the Union joined in the campaign and gave the services of

graduate school of tropical agriculture and citrus experiment station. About 200 acres of this 470 are able. The other 270 are on the sides and of little value except grazing or forestry. Of the 200 acres 65 have been planted to citrus



Main Building, Graduate School of Tropical Agriculture, Riverside

their experts so far as possible. California was no exception, and farm advisers and soil and crop experts were sent into the fields to give every possible encouragement to the effort. Not content with this, lands in possession of the University of California were

ten to deciduous fruit trees, this the purpose of conducting a series of experiments in soil tillage, fertilization, pruning and a thousand and other problems which confront horticulturists in semi-arid America. The state is not cultivating this tract



Intensive Culture on Experiment Station Grounds

In the Citrus Tree Plot at lower right hand corner of engraving is shown one of the trees and method of protecting the trunk with tree wrap. Along in same row with the citrus trees is planted milo, the heads of which are to be harvested and the stalks used in protecting citrus trees from frost injury. Between rows are a half dozen rows of blackeye beans which are producing sufficient to far more than cover the cost of care of the orange trees.

utilized to the fullest extent. Photographs on this and other pages give a slight idea of this line of effort in one plot of ground recently purchased by the university.

This is the 470-acre tract at Riverside secured for the grounds of the

ground with the object of securing direct returns but with the changed conditions incidental to war it was decided wise to make use of this rich tract. To this end the 65 acres of newly planted citrus orchards were later planted with Blackeye and other



Fumigation Experiments

A. F. Swain, assistant in entomology, demonstrating to Prof. R. S. Valle, assistant professor of orchard management, method of fumigation with liquid gas. The large box or chamber is airtight and various experiments with hydrocyanic acid gas, both when generated within the chamber and when used in the form of liquid gas, as well as experiments with carbon bisulphide, are performed.



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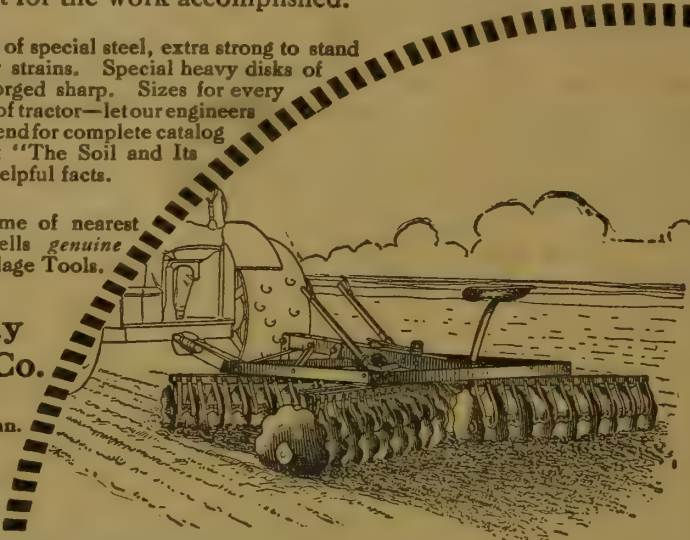
Once over is enough—no packing from the tractor wheels. Because of the rigid frame it thoroughly pulverizes and levels the land. Compare the work of the rear disks with those of any other type and see why the CUTAWAY (CLARK) Tractor Harrows lead in popularity. They have made good not only at tractor demonstrations, but in actual farm use under the most difficult conditions for a dozen years. Entirely successful on work in every section of the country. Two types, light and heavy. Hitch is adjustable to fit any drawbar. The draft is light for the work accomplished.

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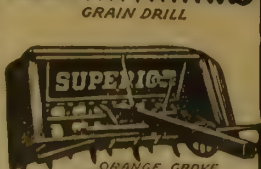
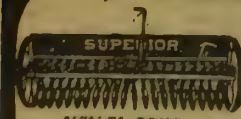
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chased and an administration and laboratory buildings erected.

Even after it was determined to secure the larger tract of land the problems presenting themselves for immediate solution were so many that Director Webber secured a lease on an orchard planted in 1891 at Arlington. This lease was secured in 1915. The orchard was badly "run down;" it was almost non-productive and considered by many not worth saving, especially in view of its quarter of a century of

the management will be enough to make this great institution of value to every department of culture which may call for its services.

In planting the citrus plot it is the idea of conducting a series of experiments. In the 65 acres of citrus trees there are alternating rows of Washington Navel, with grapefruit and Valencia—more than 140 varieties of the citrus—these so set every experimental plot will have check plot so that experiments in



Citrus Experiment Station Farm

Plot not yet planted. Administration building and laboratory at right. Only small portion of the building is shown. Barns, stables and shops in distance at left of center. Dean Webber's residence is only a step from where the camera stood in taking this picture.

service and lack of care. This orchard was divided into 48 plots, on which some 20 different experimental treatments were tried. In one plot alfalfa was planted, and this has been allowed to grow since. On others straw mulches, coarse manure mulches, different methods of irrigation, commercial fertilizer tests and other tests were made. These experiments are still being prosecuted and a full report will be made on them at the proper time.

Primarily the new station will have to deal with questions pertaining to citrus and semi-tropical fruits but, as shown in the planting of beans, potatoes and other crops, in time of need

tilization, pruning, soil improvement, plant physiology, pathology, insect control, irrigation, etc. may be conducted, with opportunity of keeping complete and perfect records. The trees for this planting were grown on the Rubidoux grounds from buds collected by A. D. Shamel of the department of agriculture.

The staff of the graduate school at the experiment station is made up of the following: Herbert J. Webber, dean; J. T. Barrett, W. P. Kelley, J. Quayle, H. S. Reed, H. S. Fawcett, L. D. Batchelor, R. S. Valle, H. Young, C. O. Smith, E. E. Thomas, W. M. Mertz, H. B. Frost, O. F. Berger, A. F. Swain.

### NURSERYMEN IN ANNUAL SESSION

Account of the gathering of the seventh annual convention of the California Association of Nurserymen held in San Jose last week is in hand, together with some of the valuable suggestions there made. Owing to a crowded paper some of the best matter must be eliminated or its publication deferred until next week. It's too good to lose. It will appear in next issue.

### FOOD SITUATION IN FRANCE

Continued from Page 395

customers, nor could the bakers and restaurants choose the mills they would buy from. Lists were made out, telling each miller to whom he could sell. This was in order that one section should not be able to eat up the stock of flour belonging to another section or one baker deprive the customers of another, when all were short.

### Wheat Situation

Let me give you the official figures on the wheat situation in France so that there can be no question.

It is estimated that there will be a deficit of approximately 5,000,000 tons of wheat in France over the period from September 7, 1917 to September 1, 1918.

The normal annual consumption of wheat in France is from 9,200,000 tons to 9,400,000 tons. France has always been an importer of wheat, her average production for several years before the war being 9,000,000 tons, or slightly less than the consumption. Since the beginning of the war her production has fallen off radically. In 1914 it was 7,700,000 tons, in 1915, 6,085,000 tons and in 1916, 5,840,000 tons, while for this year the crop is estimated at 4,000,000 tons with a possibility of rising to 4,500,000 tons, leaving for the period from September, 1917 to September, 1918 a deficit of nearly 5,000,000 tons, which must be made up by imports.

### Wheat Must Come from America

Where can those imports come from except from America? Italy by reason of her position in the Mediterranean takes the first toll from the wheat of the Far East, while England, whom the Far Eastern wheat producing countries are colonies, takes the remainder. France can get a little from South Africa. Argentina has stopped the exportation of wheat. The



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It's loose fit and "good feel" put you at ease on any job that turns up.

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country is the only resource left to France.

I have spoken of the scarcity of flour, resulting from the shortage in wheat. Let us try to see what this means to France. In the first place it must be realized that there bread is the staple article of food. It is the base of all meals, especially among the working population. Breakfast consists of coffee or chocolate and bread. Luncheon is bread, soup, coffee and often, though not always, some meat or fish and a vegetable. The big dish is bread. Bread is again the base of dinner or supper, however the meal may be called. Bread and cheese will make an entire meal for a French peasant, with a glass of wine to wash down.

### Bread Allowance and "Bread Cards"

The French soldier's allowance of bread was a trifle over a pound and a half a day. On account of the shortage of wheat it has been necessary to cut this ration to a pound and a third a day. And it is not necessary to say that only dire necessity will countenance the cutting of the soldier's ration.

Another thing that has happened is "bread cards" in some localities. There is no national "bread card" in France as there is a "sugar card," but in some parts of the country it has been necessary to restrict the use of bread by local regulations. I have in hand several letters from my friends among the peasants of Brittany, telling of the privations they were enduring because their bread was cut down so much. Remember that bread is the chief article of diet among those people.

### France Suffers in Silence

Do not think they complained. There is no finer souled, stronger or braver people in the world than the French peasants. They are heroes among a nation of heroes. No trial at justice and right could demand and wring a complaint from Josephine Herve, one of the grandest women among a grand race. That simple peasant woman can neither read nor write, but without a word of bitterness she gave her husband to her country, and she is schooling her five sons and raising them for her country. The oldest goes to the army with the next class that is called out. When the Charlot, next to the youngest of her boys, writes for her and tells what they are enduring, there is no complaint, no bitterness. It is a simple statement of facts in plain and homely language, the story of a peasant cottage told to the child she nursed and reared.

And one cannot help her. One can lend her money, but it is not money she needs but bread.

## Legal Queries

Postmaster:

Is it lawful for a married woman to hold a post office position, be entitled to assistant post-master and Miss?—Subscriber.

No law preventing the holding of such position is known to the writer; the appellation of "Miss," "Mrs.," or "Mr." is purely one of courtesy and custom.

### Wife's Bank Deposit

What becomes of the cash a wife has in the bank at her death? There are no children.—Subscriber.

If the cash is community property, that it acquired through the earnings and savings of the husband and wife, either of them subsequent to marriage, it belongs to the husband without administration. If it is separate property of the wife, that is owned by her, or the product of property owned by her, before marriage, or acquired by gift, bequest, or devise after marriage in the above stated case, one-half goes to the husband and the other half to the parents of the wife. In the case of cash in bank under \$1000 it is unnecessary to take administration upon the estate to get the money from the bank upon receiving an affidavit stating that the depositor is dead, that the affiant is the surviving husband or wife of the decedent, that the whole amount the decedent left on deposit in any and all banks of deposit in this state does not exceed \$1000, and then pay to the affiant any deposit of the decedent not exceeding that,

and the receipt of the affiant is a sufficient acquittance to the bank for the deposit.

### SQUIRREL CAMPAIGNS

Squirrel campaigns have been started in nearly all the counties. Yolo County has just started a drive on the noxious pests and Sacramento County is making preparations. Commissioner G. H. Hecke is in receipt of a letter from W. C. Jacobsen, United States biological survey, in which he tells of the work of squirrel control. He adds: "At present we are assisting Commissioner Knowlton of Kern County and Farm Adviser Kreutzer. Next month we shall be with Commissioner Sharp of Riverside and Farm Adviser Parker. Mr. Garlough has been assisting Commissioner Van Dyke of Mendocino in the matter of gopher control."

### NURSERY LICENSES

State Horticultural Commissioner Hecke writes: "Practically every nurseryman in the state of California has received notice from the state commission of horticulture and should have secured license numbers. Out of 1200 who have received notices only 200 have so far responded. County commissioners should now notify their inspectors to hold up all shipments which do not conform to the law."

Tool sheds haven't risen in price nearly so fast as farm machinery.

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Simple, Reliable, Efficient

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# satisfaction

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Yuba Ball Tread Tractors are pluggers—always on the job—day or night—in any kind of soil or weather—their evenly distributed weight does not sink, or pack the soil—their force and power shows up best at the draw bar.

### Tracover Plan Book

Build a suitable home for your Tractor. Protect it from the weather. Have a place for tools and repair work.

The Tracover Plan Book has blueprints and material list for the building. Send for a free copy.

Mechanical perfection is the other name for the Yuba Ball Tread Tractors. Built like a ho-witzer, for heavy work; they are as efficient as machine guns at lighter jobs.

Like any other machine the Yuba requires care; the more you know about mechanics the better, of course, but you'll find there are fewer break-downs, or stops, due to need for repairs, than is the case with most farm machinery. That's because the Yubas are made right in the first place.

Yuba Manufacturing Company Dept. B-7  
433 California St., San Francisco, California  
Gentlemen: Kindly send me catalog and prices on the Yuba Ball Tread Tractor.

I am interested in Model 12-20 \_\_\_\_\_ Model 20-35 \_\_\_\_\_

Name \_\_\_\_\_

Town \_\_\_\_\_ State \_\_\_\_\_

P. O. Box \_\_\_\_\_ Size of farm \_\_\_\_\_

( Check main crop raised )

\_\_\_\_\_ Fruit \_\_\_\_\_ Rice \_\_\_\_\_ Grain

\_\_\_\_\_ Grapes \_\_\_\_\_ Hops \_\_\_\_\_ Alfalfa

The Yuba Pump Catalogue will be promptly sent on request.

## Yuba Manufacturing Company

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The 3 and 6 H. P. successfully operate on

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The 1½ H. P. uses gasoline only.

Same power from a gallon of kerosene as from a gallon of gasoline.

More work in less time at a low cost is true economy. That's the thought thousands of farmers had in mind when they bought their "Z"s.

You'll buy a "Z" when you do as they did—check it point by point with all other engines—especially those that are high in quality and price.

These are strong statements, doubly so, when you consider the responsibility back of the name plate.

See this sturdy engine in operation, and you'll soon have one working for you.

Buy  
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Your  
Dealer

He sells the type "Z" engine and carries it in stock. Go to his store and ask him to demonstrate it to you. He will show you more quickly than we can tell you the things you want to know about it. He'll prove that it meets your idea of a real farm engine. When you buy it he'll be constantly on the alert to see that you get continuous engine service and satisfaction.

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3 H.P.  
\$89.00  
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1½ H.P. (Gasoline) \$48.50  
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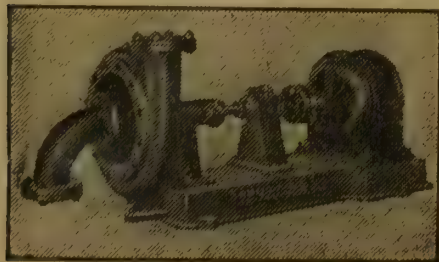
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# The Sugar Beet Situation



Is the sugar beet grower getting a fair deal? If not, isn't it time that Hoover or some of the rest of us were discussing the problem as to how it can be brought about that he may? We note an article in the Artesia News written by Clarence Dougherty, a practical sugar beet farmer. From it we quote some points regarding costs of production and returns to the farmer and returns, as the farmer sees it, to the sugar factory:

The sugar beet is the king of vegetables. It is one-fifth sugar in Southern California. The part that is not sugar produces much fat when fed to dairy cattle and steers in the form of pulp, syrup and beet tops. How the cattle men are rushing the steers into the beet growing sections to finish them off! What would our dairymen do without beet pulp? California fruit growers need more sugar to promote their fruit canning and preserving. The soldiers need jams and preserves. France is begging for more sugar.

Think what an acre of sugar beets means. The average yield per acre is 14,000 pounds. The average test is 20 per cent, or one-fifth sugar. One acre of sugar beets means:

Twenty-five hundred pounds of sugar worth \$181.25.

Two hundred pounds of butter worth \$100.

Two hundred pounds of beef from the tops and syrup, \$40.

Total, \$321.25.

This year in the beet growing section and in Southern California we are short of feed and need these by-products and without them there would be just that much less of meat and fats produced. Reducing the sugar beet acreage would cripple the fruit industry by 2500 pounds of sugar for each acre of beets. An acre of wheat does not compare with an acre of beets in increasing the food supply. In actual weight an acre of wheat produces only one-third as much wheat as an acre of beets does of sugar.

To increase the acreage of beets would not affect the wheat supply as beet land is not wheat land. The beet acreage could be increased 50 per cent this year and Southern California could do no greater service than to boost the beet planting.

Now why not? The factories are getting eight or ten dollars more out of each ton of beets than before the war. Yet 30 per cent of the beet farmers will quit raising beets this year and turn to crops not one third

as efficient in feeding the war. Now what is the matter?

Here it is. Out of that eight dollars increase in the value of ton of beets the farmer receives \$1.75 and the hot dry weather has him hard. He takes 90 per cent the risks of the sugar business, why this small increase? He wishes two-thirds of the capital in the business. A thousand beet factory costs from \$600,000 million dollars as variously estimated. To keep this going for 100 days requires from 1200 to 1400 acres of land that cannot be bought for less than three hundred dollars per acre on the average or some four million dollars in the aggregate.

Three hundred men are employed daily to harvest the beets, and bring them to the factory require service of from four to five hundred horses. The aggregate wages of men have been increased as much in the factory. The cost of maintaining the horses, wagons and equipment has increased 50 per cent. After the factory has closed these or five hundred horses and four of hundred men must labor for 150 more to plant and plow and thin the hoe before the crop is laid by. Why should the farmer, contributing two-thirds of the capital and receive so small a share of the increase?

The price of wheat has been set at a minimum of \$2.00 per bushel, a fair method of grading provided, should not a minimum price on sugar beets be set and a fair method be provided by the government for the beets. The men who control the sugar business have not always failed to their desire to increase the production of sugar. They have more interested in maintaining a margin of profit. If the farmer had encouragement to promote the growth of this great industry, why not give him? The division of profits should be left to the judgment of disinterested parties.

The sugar crop in Europe has increased the production of other crops by its fertilizing value and merit as a rotation crop, yet this industry, marvelous as it is, has not grown in this country as it should.

The sugar beet is the greatest crop where it can be grown. Wheat or corn will not compare with it. It should be encouraged, not starved in the dark.

The sugar refiners will cut a good melon this fall or in the new year, but the farmers will not participate.

## Preliminary Estimate of Lettuce in Southern California



URING the shipping season of 1916-1917 the shipments of lettuce from Southern California were double those of the previous season. The most notable increase was from the Imperial Valley which shipped 27 cars in the first part of the year 1916 and 413 cars in the first part of the year 1917, with prospects of another big increase in the first part of the year 1918. On account of the freezes which did so much damage to lettuce in Florida, Texas, and the Eastern shipping sections, the Eastern markets were opened to California lettuce as never before. Lettuce was thus made for the first time the leading winter vegetable in point of quantity to move from the southern part of California. Stimulated by the big prices received last season growers are preparing to have a still larger output.

At present lettuce is shipping from Inglewood and early points around Los Angeles principally in mixed cars. The weather is warm and the shipments have been limited by a temporary shortage of solid heads. As soon as the weather develops a larger supply of good solid heads, shipments will begin to be heavy and it is expected that the Los Angeles County movements will continue to be big until the Imperial Valley product is ready. Growers are planting both in Los Angeles and Imperial sections and have already signed contracts for

delivery of a large portion of the acreage in the valley.

A preliminary estimate of acreage by districts follows. As some sections are planted to a second crop with conditions are favorable it is impossible to give acreages exactly. There is no time of year when all of the acreage is growing in the fields, but the area is continually changing. The first figure shows acreage in 1916:

### Los Angeles County

Newmark 225, 330; San Gabriel 125, 250; Tropic and Glendale 300; Santa Fe Springs 85, 120; West Adams Street 75, 75; Sawtelle 185, 2; Venice 5, 100; Inglewood 225, 3; West 48th street 90, 120; Lomita 160; Wilmington 25, 75; South Pasadena and Watts 150, 250; Eagle Rock 75; El Monte and Arcadia 50, 2; Irvingdale 2, 30; Lamanda Park 1; Pasadena 100, 150; Burnett 40, 1; Vegala 15, 75; Gardena and Montebello 45, 100; Compton 0, 50; Puente 0, 2; total 1762, 3205.

### Orange County

Fullerton 50, 300; Tustin and San Ana 3, 40.

### Packages

Lettuce is usually shipped in the pony lettuce crate, which weighs 10 pounds gross. About 310 crates are loaded per car. The average is given as 4½ to five dozen heads from Los Angeles County; 3½ to five dozen heads from Imperial Valley.



## Arlimart Corn Contest

ARLIMART, Tulare County, will hold a corn contest on Saturday, October 27. Prizes are offered for best exhibits of milo, kafir and feterita. The object of the contest as announced by the management is:

To get pointers on how to raise grain and more of it to the acre especially to gain information to the grower in making selection of corn. General informal discussion in regard to the raising of the different varieties above mentioned will be the order of the day.

Some growers say two pounds of seed per acre is enough. What do you say?

Some of the growers say 'Plow the ground and use the planter,' others, 'Use the lister.' What is your experience?

When should seed be planted? Some plant in March, some in April, some in June or July. Which is the best?

Which variety takes the least water? Which produces the most per acre? Which has the greatest feed value? Which can be harvested at the least expense? Which kind stands up the longest after it is ripe,

feeding commences at 10 a. m. Coffee will be served at noon.

## PRODUCTION OF LIMA BEANS

From reports of voluntary reporters and special inquiries concerning the crop, the bureau of crop estimates, United States department of agriculture, estimates the production of lima beans in California this year at 552,000 sacks of 80 pounds each, equivalent to 2,069,000 bushels, the standard of measure in general use by the growers.

Figured by counties, Los Angeles county is given credit for 198,000 sacks, Orange County 270,000 sacks, Diego County 60,000 sacks, Santa Clara County 72,000 sacks and Ventura County 952,000 sacks. These figures indicate a decrease in the production of lima beans compared to last year, although a slightly larger acreage was planted in 1917. The decrease in average yield per acre of lima beans is generally attributed to the late cooling, which prevented the crop being planted under the best possible conditions, thus causing a poor root development early in the season, although the extremely high temperatures prevailing in the lima bean growing sections about the middle of the season probably affected the crop to some extent.—E. E. Kaufman, bureau of crop estimates, California field station for beans, fruits and nuts.

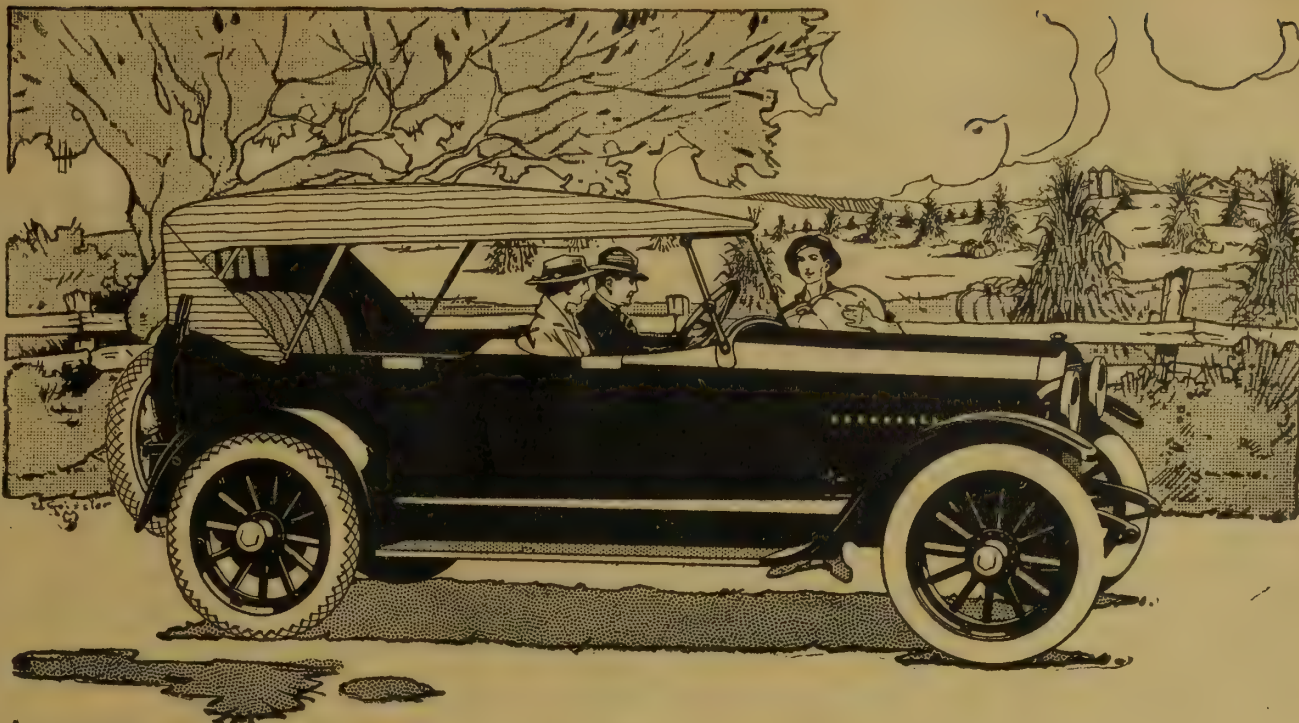
## AULIFLOWER IN SOUTHERN CALIFORNIA

Approximately 1200 cars of cauliflower were shipped from Los Angeles during the season of 1916-17. This represented an increase of about 50 per cent over the shipments of the previous winter, according to report of G. R. Risser, assistant truck crop specialist, bureau of crop estimates. It is estimated that there are 3500 acres in the county this year. Of this 1310 acres are grown by Chinamen. The principal shipping point is Long Beach which will have about 1600 cars.

About 70 per cent of the plants have been set in the field and are growing. Shipments started in 1916 on October 25 and the heaviest movements were in November, December, January and February. This year the shipments will begin about November 15 and will begin to be heavy about December 1.

The normal yield is 400 pony crates per acre having a capacity of one dozen standard heads each and weighing 10 pounds gross. These crates are packed 500 to the car; 600 dozen crates are used per acre, hence 600 crates of this kind would be a per-acre crop or maximum yield. A car to an acre is considered heavy production and 400 crates is the quantity figured on. It is believed that if accurate records were available they would show the average crop to be considerably less than 400 crates.

Some growers pay to be suspicious whenever they find a sick hog in the herd. Pork prices are too high to take chances on hog cholera.



# PAIGE

*The Most Beautiful Car in America*

## The True Meaning of Economy

Webster defines Economy as the "wise, careful administration of our affairs."

Please note that word, wise. Also note that there is no reference to cheapness or frugality.

In this definition, you will find proof that Webster was not merely a master of the English language, but a philosopher as well.

The cheap expenditures are never the wise ones. The near-wool clothing, the "marked down" shoes and the cut price harvesting machinery cost less to be sure—in the beginning.

But cheap clothing shrinks to boy's size in the first spring shower. The cheap shoes "wear out" after a few months of service and the cheap harvesting machinery fails you at the critical moments. So—in the long run—your cheap purchases become shockingly expensive.

And so it is with a motor car.

There are many cars that sell for less money than the Paige. We could readily build them ourselves if we considered that policy the best one. But we don't.

We firmly believe that Self-Respect, Comfort and Enduring Satisfaction have an actual market value. So we build those things into our product.

We take just a little more time—just a little more care in selecting materials—just a little more pride in our work. And the result is a real motor car—not a makeshift or compromise.

Unless we are greatly mistaken, the Paige "Six-39" is just the kind of car that you want. It costs \$1330 and it is worth every penny of the price.

If you are truly Economical—truly wise and careful—it will be the car of your choice.

Essex "Six-55" 7-passenger \$1775; Brooklands 4-passenger \$1795; Linwood "Six-39" 5-passenger \$1330; Glendale "Six-39" Chummy Roadster \$1330; Dartmoor "Six-39" 2 or 3-passenger \$1330. All Prices f. o. b. Detroit. No handsomer line of enclosed vehicles can be found on the market.

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**The California Cultivator**

A Journal of Horticulture, Agriculture and Live Stock

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 Combined with California Cultivator 1914.  
 Livestock and Dairy Journal, Established  
 1901, Combined with California  
 Cultivator 1916

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Saturday, Oct. 20, 1917

## OUR ADVERTISERS RELIABLE

We guarantee our subscribers against loss through dishonesty of any advertiser in the Cultivator. We do not attempt, however, to adjust trifling differences between subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within 30 days from date of the transaction, and the subscriber must have mentioned the Cultivator when writing the advertiser.

## THIS WEEK'S COVER

A milestone in California's agricultural history was passed last Saturday when the new structure, Hilgard Hall, was dedicated "To Rescue for Human Society the Native Values of Rural Life." It was a notable occasion calling together some of California's brightest and best people. The Cultivator camera was brought into action as Hon. W. M. Newhall, president of the Stanford University trustees, was making the opening address. The setting in the grove of magnificent eucalyptus trees, with Hilgard Hall and Agricultural Hall in the background, made it a scene long to be remembered. The new building far more than doubles the housing facilities of the agricultural college of the university, and, excepting that the attendance at the college has been much decreased by the demands of war, the coming year of the agricultural department promises greatest value to California.

## NURSERYMEN'S CONVENTION

We were at the convention of nurserymen. There was a fund of information developed which is of interest to orchardists as well. We have the information ready to pass on to our readers but find at the last moment that it must be greatly reduced or held over until another week. It is too valuable to eliminate. We hope our readers will pardon this delay in its appearance in the Cultivator for it will be equally good a week later.

## GOING UP

Publishers are laboring with the question of the H. C. of L. as few others. To be personal, it is some problem with the Cultivator these

days, but this is not to speak of that, but of one of the most valuable books which has to do with the livestock industry, "Feeds and Feeding" published by Henry and Morrison, regarding which they write that they have held prices down as long as possible and now find it necessary to raise from the old \$2.25 price to \$2.50. The Cultivator will receive orders at the advanced price.

## MORE HONORS

Less than a year ago California live stock people were highly elated over the winnings of the division of animal husbandry of the University of California at the great International Livestock Show at Chicago. California Favorite and Jock sent back word as to the honors they had carried away under the direction of Prof. Gordon H. True. Both proved champions which attracted the attention of the world. Now comes from the National Swine Show at Omaha news which appears on page 410, with photos of two Californians, Rookwood

ly a higher price than this is being made, that is 21½ cents f. o. b. Eastern points—this because of certain freight complications which induced the shippers to hold the nuts entirely under their own control until delivery to the consumer.

The crop will be large, though it has been materially lessened from expectations of the earlier season. The hot weather of mid-June, with occasional mild attacks of blight, has resulted in this reduced production, and in larger percentage of small sizes. It is estimated that the walnut crop will bring to California about \$6,000,000. The crop of France, our principal competitor, will be 40 per cent below normal.

## PRODUCING MORE

The article on third page of this issue makes most graphic the situation confronting the people of France. If not actually suffering from hunger, at least it is shown in this article and two others to follow that the French people are having little of the luxur-

## SECOND LIBERTY LOAN

The first liberty loan was offered May 14, 1917. It consisted of \$2,000,000,000, three and a half per cent United States bonds maturing in 30 years. The second liberty loan was offered October 1. It consisted of \$3,000,000,000, four per cent United States bonds maturing in 25 years. The first offering was oversubscribed 50 per cent. The second should be supported with equal enthusiasm.

This is not in any sense a contribution or donation to the government; it is an investment in the best security in the world, paying four per cent interest to the investor.

Have you done your part? The three billions if apportioned equally to every man, woman and child in the United States would average \$30. Let every American do his share. All Europe, especially central Europe, is watching the American people. Germany knows we are a people of varied opinions. We should show that we are united in this one thing, at least, the support of the American armies in the great war. Germany should not be permitted to count on our apathy to help her win.

Lady and Baron Duke who have been declared grand champions. These animals are both from the herd of F. A. Brush. Prof. J. I. Thompson who was present at the show writes the article.

California has been a world beater in fruits; now come great honors to her animal industry.

## MORE SUGAR

With guaranteed price for wheat and some other products of the earth the question has been propounded as to whether it is not a good idea to encourage greater sugar production by giving to sugar beet growers some guarantee or assurance of what they may receive. The beet growers are in no very pleasant frame of mind as the harvest season ends, notwithstanding many statements which have been given to the press as to what the factories were willing to pay this year. The published price has been, as a rule, fairly good, but when the grower takes his load of beets to the factory—which analysis by agricultural chemists has shown contain about 20 per cent sugar—and is paid on a 12½ cent basis, he naturally feels peeved. Herein is opportunity for federal or state aid. In lieu of that the one hope for the producer is cooperation and competent inspection of his own.

## HIGHEST EVER

Carload lots of the best brand of budded walnuts cannot be purchased today for less than 24 cents per pound. This is the highest price ever made on California walnuts and was fixed October 1 by the California Walnut Growers' Association. It is considerably more than double the price of three or four years ago. Number 1 Softshells will sell on a basis of 20 cents, f. o. b. Los Angeles, but real-

ies of life and are even suffering for need of some staples. These articles should aid California producers to appreciate the situation and the necessity for exerting themselves to the utmost.

It was our pleasure recently to have conversation with H. B. Humphrey, cereal pathologist of the bureau of plant industry of the department of agriculture, when he referred to his mission in California, which is to induce Californians to prevent some of the losses which now occur because of lack of attention to diseases of grains which are easily preventable. From one disease, preventable smut, the country is losing in excess of \$20,000,000 yearly. Besides, there is a dockage loss in millers' prices which probably exceeds \$10,000,000. This is an especially serious loss in California and yet wheat and barley producers go on growing smut because of unwillingness to spend four cents per acre to treat the seed, which would prevent practically all of the smut infection.

In a word, the treatment consists in dipping a sack only half filled with the grain, tied at the top, lifting the sack so that it may be worked back and fourth in the solution of one pound of formaldehyde to 40 gallons of water, leaving the grain in the dip for ten minutes, occasionally shifting as noted above. The sack may be hung up until the grain dries, or the grain may be dried in piles on the floor, at intervals shoveling to permit all the grain to dry out. So simple is this treatment and the expense so near to nothing that it is a wonder grain growers do not dip every bit of grain sown.

California's 6,000,000 bushels of wheat looks exceedingly small beside Kansas' 123,000,000 bushels, and this never will be a grain state in the sense that it will be much of a factor in the wheat supply, but as far as possible at this time California grain growers should produce to the limit.

## Agricultural News Notes

Parcel post service to Greece has been discontinued owing to war conditions.

As a part of our war tax letters now carry three cents postage; cards, one cent.

All shipments of coal to California from lake ports have been forbidden by Fuel Administrator Garfield.

The transportation situation is so serious and the bureau of markets urging heavier loading of grain cars.

Sweden has passed a law regulating all supplies of milk. Hereafter will be sold only on coupons issued by the government.

Under the provisions of the war income tax bill tax is levied on incomes over \$2000 for married sons, over \$1000 for unmarried.

The present English law allows government to take possession of farm land that is not being cultivated so as to increase, so far as practicable, the food supply.

The food administration has named the coming week Food Pledge Week and all housekeepers in the United States will be asked to sign the pledge making them members of the food administration.

Liberty bonds of the second issue are now on sale. They bear four per cent interest and are exempt from local and state taxes and all federal taxes except to those whose incomes are over \$5000 yearly.

The post office department expects that congress will soon be asked to turn over to the delivery service the post office department all military air planes and motor trucks which found unsuitable for army use.

Food Administrator Hoover is making experiments in Philadelphia in production of a five cent loaf of bread. It is proposed to establish a standard war loaf which will effect a saving in sugar, lard and milk and yet be wholesome.

A guaranteed minimum price for hogs to stimulate production was offered on the government as the strongest safeguard against a meat famine next year at the meeting of swine breeders of six states recently held at Waterloo, Iowa.

Food price manipulators and profiteers will have the trained men and resources of the secret service to combat them. Herbert Hoover, the food administrator, has asked President Wilson for the service of the corps, and it has been granted.

October 26 is Arbor Day in Pennsylvania. The state highway commissioner urges all people of the state to plant trees along the highway on that day. Cherry and apple trees are the favored varieties for this highway planting.

The policy of the government is now to encourage visitors to the national forests in the belief that the building of trails and use of the forests will do much to protect them from fire. During the past season it is estimated that a million travelers, campers and sportsmen visited the national forests in California.

M. H. Houser, federal grain commissioner for the Northwest, announced that he has received confirmation of reports that large quantities of Australian wheat are being shipped here. "The Australian wheat," Mr. Houser said, "will be available for milling here, and this will release a corresponding amount of Northwest wheat for shipment overland to Chicago."



# Agricultural News Notes of the Pacific Coast

## Northern California

Yuba grape buyers are paying a ton.

The almond crop of Sutter County is exceptionally light this year.

Yarysville has been selected as the distributing post office for all Yuba county mail.

Creameries of Mendocino County are sending exhibits to the land show in San Francisco.

M. Gates of Vacaville has been appointed horticultural commissioner of Solano County.

Farmers of Anderson Valley, Shasta county, met at Anderson October 6 to organize a local farm bureau.

Preparations are being made for the fruit growers convention to be held at Sacramento, November 21-24.

A meeting of Jersey breeders was held at Lockeford, October 7 for the purpose of bringing new members into the Milk Producers' Association.

A county farm bureau campaign has been started in Sutter County and a committee has been appointed to carry on local organization work.

The Sebastopol Berry Growers have secured for its growers \$142 a ton for sweet berries. The association shipped 16,627 crates of berries to Eastern markets.

Wheat growers of the Greenville section of Plumas County report one of the largest crops in years. Oats are giving a good crop and are of high quality.

The war department has requisitioned 250 carloads of prunes from the California Prune Growers' Association. These will be shipped to France for use of our soldiers.

There was an exceptionally fine exhibit of agricultural products at the Yolo County fair at Woodland last week. The exhibits were in charge of the Yolo County farm bureau.

A campaign against gophers has been started among farmers of the Arena district of Mendocino County at the instigation of County Horticultural Commissioner Van Dyke.

At the suggestion of the state fish and game commission the geese and ducks which ravage the rice fields are being fought with gas bombs night and morning for three days, when the marauders give up and don't come back.

An experiment is being made on a ranch near Chico, Butte County, in the growing of Korean winter rice. It is stated that this rice has been seen growing through one-fourth of an inch of ice. It is planted in late fall and harvested in July.

## Central California

The recent warm weather has colored up the oranges in the Lindsay district.

T. C. Mayhew, farm adviser of Madera County, has been granted a leave of absence of one year.

The Peach Growers' Association has completed its warehouse at Kingsburg at a cost of \$21,000.

Over 90 per cent of the dairymen in the Fresno district have joined the San Joaquin Valley Milk Producers' Association.

September price of butterfat at the Danish creameries in Fresno County was fixed at 52 cents. This eclipses all previous prices.

J. M. Bomberger of Modesto has been appointed a member of the agricultural production board, a branch of the food administration commission.

The Merced County council of defense passed a resolution offering assistance to drafted men in the settlement of business and harvesting of crops.

Visalia has determined not to hold a citrus fair this year. General conditions caused by the war and in addition the torn up highways are given as the reasons.

California's biggest raisin crop, 150,000 tons valued at \$15,000,000, is being hauled to packing sheds and some shipments have already gone forward to Eastern markets.

The agricultural club of the Kernan high school sold \$2200 worth of registered Poland-Chinas and Duroc-Jerseys at an auction sale held Saturday, October 6. The highest price paid for a brood sow was \$90.

The Ahwahnee farm loan association which was formed nine months ago has just secured checks from the bank at Berkeley for three loans. These are said to be the first loans granted by the bank in Madera County.

Dairymen of San Joaquin County have organized the San Joaquin Valley Milk Producers' Association, affiliating with the California State Association of Dairymen. The newly formed association proposes to market products of its members, eliminating speculators.

Dr. Chas. Keane, state veterinarian, is warning farmers against a gang of fake veterinarians who have been conducting operations under the guise of deputy state veterinarians, securing fees for so-called tests of tuberculosis, whereas the state veterinarian does this work free of charge.

## Southern California

Five dead is the toll of the Sespe forest fire.

Egyptian cotton is quoted at one dollar a pound.

Yucaipa will hold its Southern California Apple Show November 1-4.

The Riverside Fair, "biggest south of Tehachapi," is drawing big crowds this week.

Practically all of Southern California's walnut crop has been disposed of at the biggest price ever.

A public market is to be opened at Camp Kearny near San Diego, where farmers may take their produce.

A meeting was held at San Bernardino, October 19, to take further steps toward organizing the citrus growers of that county.

Yucaipa apple growers are getting remarkably good crops considering the damage done by extremely hot weather of early summer.

Bean growers of Ventura County have been favored with the best of harvesting weather. Most of the crop is safe in the warehouses.

El Cajon Valley, San Diego County, has sent out its record shipment of green grapes this year, 109 carloads in all. This does not include express and truck shipments.

The annual meeting of the stockholders of the San Fernando Fruit Growers' Association showed a total business for the year of 212,000. Directors for the coming year reelected are: B. F. Wolff, F. D. Parker, V. H. Craig, Mrs. E. M. Craig, H. E. Fox, G. W. Vaughan, A. H. Dexter.

Orange County producers find themselves in need of a harbor and shipping facilities of their own, and in order to secure one various chambers of commerce are petitioning the board of supervisors to call a bond election to secure a fund for the improvement of Newport harbor.

The farm adviser of San Bernardino County announces schedule of meetings for the remainder of October: 22, San Bernardino; 24, Daggett at Barstow; 26, Apple Valley and Lucerne Valley at Apple Valley; 29, Colton; 31, Bloomington.

Chino had a mass meeting and unanimously resolved "that all persons contemplating the giving of expensive Christmas presents to their loved ones at home, be earnestly requested to use the money, so intended to be spent, in the purchase of Liberty Bonds, to the end that those most in need, our government and our soldiers, be better provided for."

## The Coast

Apple waste from vinegar factories is to be converted into stock feed.

Apple buyers from Australia and Cuba are in the Wenatchee district of Washington.

The cannery at Lynden, Washington, handled 300,000 pounds of raspberries this season.

A particular feature of the Arizona state fair at Phoenix is the large attention paid to work of boys and girls clubs.

The Pacific International Livestock Show will be held in Portland, November 19-24. Fat stock only will be shown.

The Polk County Cooperative Warehouse Company, composed chiefly of farmers, has opened a warehouse at Dallas, Oregon.

Pasturage in Tillamook County has been severely cut down by the dry summer. It also affected the potato and bean crops.

There will be extensive exhibits of farm crops and dairy products at the Manufacturers and Land Products' Show held in Portland, November 3-24.

Examinations for forest rangers will be held on October 29 at all forest headquarters in New Mexico and Arizona. A large new force of foresters is needed.

Over \$25,000 in cash prizes will be paid to prize winners at the Arizona state fair to be held at Phoenix, November 12-17.

The federal farm loan bank at Spokane, which serves the Northwestern states, has already placed in the hands of the farmers a little more than \$2,550,000.

County Agent J. L. Smith of Coos County, Oregon, has been appointed by the war department to take a survey of the food and implement resources of that county.

In the recent motorcade trips made by farmers of Cochise County, Arizona, more than 1000 farmers participated. Visits were made to bean, melon and other ranches where successful methods of culture were pointed out by the county agent who was conducting the trips.

Announcement made in Salt Lake by Directors of the Utah-Idaho Sugar Company that the company will offer a profit-sharing contract for 1918 crop is expected to result in doubling the beet acreage in the Yakima Valley next year. Under the terms of the offer growers will get \$7.00 a ton for beets containing 15 per cent of sugar and share in profits over a certain amount.



Putting Their Heads Together

Two young Durocs, junior champion sow and boar at Riverside fair, owned by Alford Farm. They were sired by Peters, Lamson and Walker's grand champion boar, Grand Golden Model.



Junior and Grand Champion Riverside Fair

Dictor Spofford Korndyke Lad 5th, owned by George Junior Republic



# Bridgford Holsteins

Suit Any Judge

Shown  
at

## California State Fair

**Grand and Junior Champion Bull:**

**"King Segis Alcartra Prilly"**

**Grand and Senior Champion Cow:**

**"Miss Korndyke Mercedes"**

**Seven Firsts—Seventeen Awards**

**Stanislaus County Fair:**

Reserve Grand and Junior  
Champion Bull: King Segis Al-  
cartra De Kol Pledge.

Grand and Junior Champion Cow:  
Princess Inka Butter Girl.

Reserve and Senior Champion  
Cow: Spring Farm Canary Pontiac.

Six firsts. Seven other awards.

**Fresno District Fair:**

Grand and Junior Champion  
Bull: King Segis Alcartra Prilly.

Grand and Senior Champion Cow:  
Miss Korndyke Mercedes.

Reserve Grand and Junior Champ-  
ion Cow: Princess Inka Butter  
Girl.

First Herd, best 10 Holsteins.

Seven firsts. Five other awards.

**Fifteen Entries**

**Sixteen Championships Selected from Same  
Herd by Three Different Judges**

**Our Consignment to the Sale to be Held at**

**SACRAMENTO OCTOBER 30-31**

**Consists of Ten Females and Two Males, Including:**

A four year old cow with 28 pound three year record sired  
by a 36 pound son of Rag Apple Korndyke.

A 23.6 pound cow, whose dam is a 30 pound cow. Due to  
freshen November 30 to King Segis Alcartra Abbekerk.

A yearling daughter of King Walker 5th, from a 29 pound  
dam. In calf to King Segis Alcartra Prilly.

Seven other highly bred heifers all in calf to our herd sires.

A bull from a 30 pound dam; another bull from 25 pound  
dam, whose sire is King Segis Alcartra Abbekerk.

## Bridgford Company

**Knightsen, Contra Costa County, California**



### Santa Anita Rancho

Anoakia Breeding Farm



**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by Imported Stallion Ibn  
are the choicest thoroughbred mares on Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahruss, world renowned import-  
ed desert saddle stallion, and Don Castano, a five-gaited Kentucky  
saddle stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months  
old. Sired by famous  
Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird,  
Grandson's Duke and Fashion's Longfellow 5th. The dams are from the best blood lines. Most all  
these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted  
Princess Gelsche Walker, and bulls from one World Record sow and two Cali-  
fornia State Record Cows. Write for details.

Correspondence Invited

**Anita M. Baldwin**

**W. H. TAYLOR, Superintendent**

**Santa Anita, Cal.**

## "Speed Up" Your Stock

Turn the "blacklers" into workers. Help the producers to do still better. Turn out lots  
of animal products at high prices. Cut feed costs and increase profits. Put your horses,  
cattle, sheep and swine in perfect physical condition with

### Pratts Animal Regulator

*the original guaranteed Stock Tonic and Conditioner*

Producers and workers must be vigorous and healthy. Pratts Animal Regulator makes  
them so. Not a food, but a combination of tonics and conditioners mixed with the  
regular feed, which sharpens the appetite—assists digestion—regulates the bowels  
—purifies the blood—tones up the entire system—prevents waste of feed—  
insures health. Give Pratts a fair trial at our risk under these terms:

Our dealer in your town has instructions to supply you with Pratts Prepa-  
rations under our square-deal guarantee—"Your money back if  
YOU are not satisfied"—the guarantee that has stood for  
nearly 50 years.

Write for 96 page book on the  
Care of Live Stock and Poultry, Free.

**PRATT FOOD COMPANY**

Philadelphia Chicago Toronto

**pratts**

## Breed Leaders

Every breed of livestock has its outstanding character the same as the huma  
kind. A great dairy cow has proved her ability to produce anywhere up to 15 tons  
milk annually; the trotting horse has secured his record around two minutes; th  
beefmaker has shown his ability to make the least amount of feed into the great  
amount of food; swine, sheep and others of the livestock family have shown the  
selves great characters. In addition—and here is where their worth is proven—the  
animals can transmit their productive power to their offspring.

Beginning with the issue of August 4 the Cultivator gave an account of Pietert  
Bloom of the university farm dairy herd. Some things she has done and more the  
her daughters have done were chronicled. She was a most worthy leader in th  
series of articles. Others of her kind follow. More of the "handsome is as handsom  
does" type of animals will be given in the columns of the Cultivator during the nex  
few months.

Written for California Cultivator By C. B. Cunningham

### BILLIKEN



**BILLIKEN**, 37567, was far-  
rowed September 2, 1915.  
His sire was Wm. A., 26-  
161; his dam, Elmo's Pride,  
62496. If ancestry counts  
for anything, if the individual merits  
of ancestors are of any value; if blood  
will tell; then Billiken is entitled to  
everything claimed for him.

His sire, Wm. A., was grand cham-  
pion boar at the National Swine Show

of Wonder, Combination, Chickasaw  
Chief, St. Elmo, Juanita and Lenor  
mean much to the Chester breeder  
who know their families.

Billiken is a great individual; first  
shown at the 1916 state fair, he wa  
easily first as a senior pig. In th  
showing at the 1917 state fair, he wa  
first in his class as a senior yearling;  
senior champion and grand champion.  
A son was junior champion and re-  
serve grand champion, while a daugh-



"Billiken" 37567

held at Omaha in 1916. He also won  
first on get of sire, and a son of Wm.  
A. was junior champion and reserve  
grand champion. Wm. A. was also  
grand champion boar at the various  
state fairs where he was shown. He  
traces directly back to the old Won-  
der, the most famous boar of the  
Chester breed. His dam, Elmo's  
Pride was a two times grand cham-  
pion at the Sioux City, Interstate  
Fairs. She traces back to Chickasaw  
Chief on the sire's side and to St.  
Elmo on the dam's side. The names

ter was junior champion and gran  
champion. Billiken also was first o  
get of sire. He certainly is transmi  
ting his good qualities to his offsprin  
and I feel assured that he will leav  
his mark of quality on the Chester  
White breed in this state. With th  
ancestry back of him, each one po  
singing the merit and quality th  
made them the best at their respec  
tive periods of life, it makes him th  
animal that he is and gives the a  
surance that he will transmit h  
good qualities to his get

## Southern California Duroc-Jersey Breeders Hold Enthusiastic Meeting at Riverside

Written for California Cultivator



**S**OUNDING the keynote of co-  
operation in the advance-  
ment of the breed in this  
section of the state, discus-  
ing the selling, breeding  
and advertising features of the busi-  
ness, the recently formed Duroc-Jer-  
sey Breeders' Association held a most  
interesting meeting at the Reynolds  
Hotel, Riverside during the fair, Wed-  
nesday, October 11.

J. S. Prendergast was elected presi-  
dent, H. S. White, vice-president, and  
R. K. Walker, secretary.

Fifteen enthusiastic young breed-  
ers talked over these important mat-  
ters for five hours and accomplished  
a great deal in that short space of  
time.

Walter Gatton spoke on the subject  
of type and the desirable points of  
the show hog.

Dr. L. M. Hurt made an interesting  
talk on the importance of immuniza-  
tion of hogs for the prevention of chol-  
era. Dozens of questions were fired  
at the expert, and he supplied a fund  
of valuable information which stamps  
him as one who knows what he is  
talking about. He advocated the  
serum alone treatment for pigs up to  
50 pounds weight, and the double  
treatment when they reached 80  
pounds. The cost per pig for both  
treatments approximates \$1.25, sure-  
ly a small item of insurance.


Mr. Peters, president of the firm  
of Peters, Lamson and Walker, read  
a fine paper on the methods practiced

on their ranch in the feeding and  
breeding of pure breeds from birth  
maturity. He laid particular stress  
on the necessity of instructing pu-  
chasers of breeding animals as to th  
proper method of feeding to attain  
maximum growth. Space does not  
permit going into detail about th  
many valuable questions discusse  
The meeting was an inspiration to th  
young breeders present, and if th  
carry out the plan of holding his  
class consignment sales, exhibit the  
herds collectively at the differ  
shows ever year, and push the bree  
along the lines laid out success  
bound to come.

At the close of the meeting a p  
per from the pen of J. I. Thompson  
formerly of the animal husbandry d  
partment at Davis, but now located  
Kansas experiment station, was read  
and it contains so much matter o  
value to every hog breeder in Califor-  
nia that we print it word for word.  
It shows that Professor Thompson r  
tains an active interest in Californ  
hog matters, and the breeders fe  
that they are indeed fortunate i  
having a man of his ability and cha-  
acter located in the Middle West  
where he can and has been doing  
them a world of good. A vote o  
thanks was sent him by telegram. Th  
paper and contents follow:

"Will give you, in brief, some of th  
things I have noted while I have bee  
in this region. I attended the low  
state fair where 882 Durocs were





**Blacklegoids**

NO DOSE TO MEASURE.  
NO LIQUID TO SPILL.  
NO STING TO BLOT.

BLACKLEGGOIDS are small pills. Each pill is an accurate dose of blackleg vaccine.

BLACKLEGGOIDS are easily administered—simply inject them under the skin with a vaccine injector.

**TAKE NO CHANCES.**

Don't wait until your calves become infected. This means certain loss—there is no cure for blackleg. Vaccinate now—before the deadly disease shows itself.

**THE COST IS SMALL.**

BLACKLEGGOIDS are economical. The expense is trifling compared with the loss you are liable to sustain if you do not use them.

ORDER THROUGH YOUR VETERINARIAN OR DRUGGIST.

\*Write for free booklets on Blackleg, with full information about Blacklegoids.

**PARKE, DAVIS & CO.**  
Dept. Animal Industry.      DETROIT, MICH.

**Holstein Bulls**

Well bred, vigorous, registered Holstein bulls of good type for sale. Steady sales have moved all our bulls of service age, but we have a few unusually good calves to offer at moderate prices.

**The McCloud River Lumber Company**  
McCloud, California

**SHORTHORNS**

PAICINES RANCH COMPANY

offers for summer and fall delivery both registered and unregistered weanling bull and heifer calves. For prices and particulars apply to Paicines Ranch Co. Telephone and Telegraphic address Hollister, Cal.

Post Office Address: Paicines, Cal. Railroad Terminal: Tres Pinos, Cal.

or

**DAVID J. STOLLERY**  
820 Sharon Bldg., San Francisco, Cal.

**HOLSTEIN-FRIESIAN CATTLE**

Registered young bulls from best families. Some of serviceable age.

**REGISTERED BERKSHIRE PIGS**

Masterpiece, Longfellow and Robin Hood Strains. Fine individuals of both sexes—we pay registration fee.

Careful attention given to mail orders.

**Whittier State School**  
WHITTIER, CALIFORNIA

**Bemmerly Herefords**

Perfection and Beau Donald breeding. Noted for their size, bone and quality. Now booking orders for service bulls for future delivery. Visitors always welcome.

**W. J. BEMMERLY, Woodland, Cal.**

Better service is assured by the advertiser if when writing you mention the California Cultivator.

shown, and it was a wonderful show. To me one of the most interesting features was the regularity with which new, relatively small breeders slipped into the prize list. The second prize junior yearling boar was bred by a farmer and sold to Waltmeyer's for the small sum of \$2500. Duroc breeders here are laying unusual emphasis on size; they must be big in order to win. Allow me to suggest, however, that your association take special pains to see that this 'size' business is not overdone. Size is important in all classes of livestock, but it alone is not sufficient. A hog must still be a hog, even though he is big. Unusually heavy lumpy ears, coarse shoulders, a low back, slack heart girth, droopy rump, crooked legs and weak feet and pasterns are not to be overlooked simply because an animal happens to be big.

"There is probably no better way to learn more about Durocs and the Duroc business than to study the other breeds. You all know that the Poland-China here in the Corn Belt is admittedly the biggest breed, referring to size of hog only. Last week at auction in an honest to goodness, on the square sale, a boar sold for \$6600. Here are the two interesting features about him: First: He was bred by a small farmer who has not more than eight or nine brood sows. Second: He is not the biggest boar of the breed by a good deal, but is a real hog, with abundance of quality for his size, and a real, wide, deep meaty chap. That is the type that the Duroc men will want and must have to hold the territory already acquired and expand into new fields as they should.

"I attended a number of Duroc sales and the interest shown was a surprise to me. In all cases the bidding was lively and prices ran as high as \$1500. One sale averaged \$187. One thing that would probably surprise many of you is that most of the more prominent breeders do not keep over 30 brood sows and many of the very best breeders keep only 12 or 15 sows, but they are good ones. Each year, perhaps one, two or three gilts are kept to replace as many older sows that have passed their usefulness, but I noticed two or three men that had one or two sows six and seven years old that could not be bought at any price. Feed has been very high here, higher even than in California, but the good breeders do not seem to hesitate. They are breeding their regular number of sows and do not seem to be concerned about the high priced feed, evidently convinced beyond a doubt that their hogs will return them as much or more for the grain as the market offers.

"Breeding stock is unusually high. I recently paid \$250 for a Duroc boar for the University of California, that I could have readily bought last year for \$125. But, understand that it is the good ones, the real tops that sell high, at \$187 averages; the ordinary ones go to the butcher.

"I hope to see auction sales, square, reliable auction sales, become more numerous in California. Several of the best breeders here will not sell you a single hog at private sale. All of the best ones are sold at auction, the rest go to market. And these same breeders' sales are models. No by-bidding, no unfair jockeying; just plain, square, honest selling, the hogs backed by a guarantee that is a real guarantee. That they are the kind of sales that they should be is evidenced by the fact that a number of the same buyers return each year to acquire what they want. This, it seems to me is one of the things your association can encourage. When one man has too few hogs for a sale, two or more can combine or the association can handle them. I know that it may be missionary work for awhile but it's bound to come.

"Devise means to reach the new breeders if possible and encourage them to buy one or two good pure bred sows. By all means do not let them start with too many. If the association can help them to dispose of their first surplus stock it will be doing a wonderful work, for simply raising good pure breeds is only half the business; they must be well sold in order to make the proposition worth while. Study the breeding of the more prominent hogs, especially the boars. When one or more members need a new cross, if the other members do not have what he needs, and if such blood is not to be found in the

# A Guaranty Consignment

At the California Breeders' Holstein Sale at Sacramento, October 30-31. We are making a "guaranty" consignment consisting of 16 heifers—12 of them are in calf to our herd bulls; 9 of these heifers are in calf to our own famous sire "It," the "Premier Sire of the West." The young bull we are consigning is a grandson of King Korndyke Sadie Vale out of a 29 pound three year old daughter of King Segis Pontiac, her next dam is a 28 pound daughter of King of the Pontiacs. You can't beat this breeding.

**WE GUARANTEE VALUE RECEIVED**

because we offer to buy every calf sired by our famous herd sire "It" at five months of age at the price the dam brings in the sale. This is an extraordinary offer but we are glad to do so to demonstrate our unlimited confidence in the future of "It." We will make money on calves we are lucky enough to buy on these terms.

**The Calves Sired by "IT" will be Worth more than their Dams will sell for at this Sale.**


**WE GUARANTEE HEALTH**

We guarantee every animal over six months of age to be free from tuberculosis and not to react to the tuberculin test within 60 days after the day of the sale—subject to the conditions covering the same guarantee of the Holstein Breeders' Guaranty Sale, December 5. This is the most liberal guarantee we have ever seen and one which should be appreciated by the buyer. We offer to you at the

**Sacramento Sale, October 30, 31**

quality—sound cattle and value received and more—a great speculation. Be there and buy!

**McAlister & Sons**  
CHINO - - CALIFORNIA



## Elliott-Brant Rancho Guernseys Are Persistent Producers

The results of our first two years of official testing show our herd to average 10,172.28 Pounds of Milk and 507.97 Pounds of Fat. One half of these cows were heifers with first calf who averaged 8,670.24 Pounds of Milk and 436.01 Pounds of Fat (only seven pounds under the average of all A. R. records). Our mature cows averaged 12,710.5 Pounds of Milk and 621.52 Pounds of Fat (120 pounds over the average of the mature cows of the breed).

A bull from these cows will increase the production of almost any herd.

**Elliott-Brant Rancho, - Owensmouth, Cal.**

## Hauser's Digester Tankage

GIVES GREATEST VALUE FOR LEAST MONEY.  
IT MAKES THEM FAT.

**Hauser Packing Co.      Los Angeles**

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state, you will know better where to go to get what you want.

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"The National Swine Show comes next week at Omaha. I wish each and every one of you could be there. If I return to California next year, one of the things I am going to ask of your association is, "how many round trip

tickets do you want for Omaha at \$60 each.

"The university will run a "Bacon Special" train in November, carrying pigs from an experiment designed to throw some light on how much grain to feed in conjunction with alfalfa at present high prices. If you think the results would interest your association, write the Animal Husbandry Division at Davis, telling them where you would like to have the train stop in your territory. You have my best wishes for the continued success of your association."

## Riverside Has Best Fair and Livestock Show on Record

Written for California Cultivator By F. F. Stonerod

**A**DVERTISED as a real old fashioned county fair the Riverside show this year surprised the visitors by being right up to the minute in its high class amusement features, and best of all the number and quality of its livestock.

If exhibitors of other years were unable to be present their places were taken by new showmen, and with few

year. He won first in his class and then captured grand champion honors. He is long and deep, a beautiful head and top line, exceptional rudimentaries well placed and handles nicely considering that he had very little care previous to the fair.

Stalder won first and senior champion bull on King Pontiac Netherland Segis 3rd and senior and grand champion cow on Meadow Holland Nudine,



First Junior Yearling and Grand Champion Duroc Sow  
Model Defender Lady, owned by Peters, Lamson and Walker

exceptions the stalls were occupied by a splendid array of cattle, horses, sheep, goats and swine.

The crowds marveled and admired the Shorthorn exhibit of T. T. Miller and F. L. Hall. Miller's entry just came down the circuit loaded down with blue and purple ribbons, and as his herd is a hard one to beat in any company this year Mr. Hall had reason to be proud of the prizes he won. He was particularly strong in the young stuff, graded herds, and got in the money in the aged classes occasionally.

Brandsby's Jinny, the great import-

a cow of outstanding merit and one of great promise as a producer. This cow should have been shown at the state fair. She had a close competitor for the big prize in another Stalder female, the beautiful junior calf, Abbekerk Pontiac, one of the sweetest things in the entire show. This heifer won first in class and junior champion. Most of the herds and the bulk of the firsts went to the Rosamines entry.

There were but three Jersey exhibitors but they brought out some high class stock. J. E. Wherrel carried off the lion's share of the prizes, includ-



Winner of Blue and Junior Grand Champion  
Abbekerk Pontiac 371114, calved April, 1917, owned by Stalder Bros.

ed cow, came into her own at last by winning the grand championship. White Mayflower was an easy winner again although she was not looking as smooth as at Sacramento. The rigors of the California fair circuit are commencing to tell on the animals.

Rosamines Rancho made a crackerjack exhibit of Holsteins. This herd is owned by Stalder Bros., and their string reached half way down the long barn. Delta Farm and Live Stock Company and the George Junior Republic were new exhibitors. In Dictor Spofford Korndyke Lad 5th this school has one of the best junior yearling bulls in the show yards this

ing grand champion bull and female. W. P. McClasky and Geo. W. Thomas and Son had some nice ones out. Mr. Wherrel's champion cow was Beauty of Walnut Park, a solid fawn type individual with great capacity and quality. The bull is an Oxford bred dark Ireland type sire named Rloter of Willowood. Most of these Jerseys are from the shipment brought out last year by "Jersey" Roberts, and Southern California certainly got a nice lot of cattle and distributed them among the right kind of breeders when this shipment arrived.

The swine division was probably the biggest single feature of the show

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## Large Yorkshires

Have large litters. Service boars of exceptional quality, in best breeding condition. They are strong, active, long, deep fellows, with big bone and splendid heart girth. Come and see them, or write to

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## Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count Glory 426982, grand champion at the California State Fair, 1916. Berkshire herd won Premier Exhibitor's banner at P. P. L. E.

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Do you consider the dam's production?  
Do you value transmitting ability?  
Do you care if the bull's dam tests high in fat per cent?  
Do you like mostly white colored animals?  
Do you want something choice at a reasonable price?

If so, communicate with me at once, or visit my ranch and be satisfied.

Herd sire: PRINCE RIVERSIDE WALKER, son of Prince Gelsche Walker, the greatest proven sire in the West, and whose dam made 808.82 pounds butter in one year and whose half sister made 1095.1 pounds butter in one year.

W. J. HIGDON

Tulare, California

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TOM W. LAW, Assistant Manager  
A. F. MOLINA, Chief Clerk

Farmers of the Boise Valley, Idaho, are rapidly becoming converted to the silo. Fifty new ones were erected in time to house this fall's corn.

### ROSAMAINES HOLSTEINS



King Pontiac Netherland Segis 3rd  
CHOICE BREEDING STOCK FOR SALE  
A. R. O. Records up to 34 lbs. Butter in 7 Days  
**ROSAMAINES RANCHO**  
Stalder Bros. RIVERSIDE, CAL.

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because there was keener competition, especially in Duroc-Jerseys. Berkshires, Hampshires, Tamworths, and Poland-Chinas were shown, but competition in these breeds was very limited except in the Berkshires. If the pace set by the energetic body of Duroc breeders in this section is continued the other breeders will have to hustle to keep in the van. There were seven exhibitors in the Duroc class, and right here be it said that the junior yearling and grand champion sow, the junior champion sow and boar will compare favorably with any competitor we have seen at any of this fall's shows. The breeders in this section have fortunately gotten into a strain of big type smooth stuff that carries enormous scale and carries it easily. Peters, Lamson and Walker, and Falfadale Farms fought it out in most of the classes although they did not have things entirely to themselves. Jos. S. Prendergast showed a dandy aged boar and some classy young stuff. Delta Farm and Live Stock Company had a few nice ones on deck. W. M. Taylor, a young breeder of great promise, brought down some nice ones from his ranch in San Bernardino County. The Fontana Land Company had a nice young herd although this big concern is more in the market hog business than in the show class, that is they have not maintained a regular show herd.

P. L. and W. Company has a Waltmeyer bred junior yearling sow that is a dream. Smooth as an apple all over, carries out uniformly from shoulder to hain, of great depth and length. Her hams running clear to the hock bone, she scales full 600 pounds and has had a fine litter of nine pigs and raised them all. She is Gold Model bred on both sides and is championship timber in any show yard in the country. She has a litter sister that is about 99 per cent as good as she is—the pair certainly make a picture.

The Falfadale entry shown by B. H. Wilkinson was strictly high class. He won eight firsts, three seconds, one third and two championships, and this was Mr. Wilkinson's first show. Young herd, get of sire, produce of dam, and breeders young herd all went into the Falfadale maw. The under six months boar pig, G. and W's. Grand Model, and the same age sow pig, Bonnie Jean, both sired by Peters, Lamson and Walker's grand champion boar, Golden Model, won first in their class and then got the coveted purple in the junior championships. Peters, Lamson and Walker also won the silver trophy offered by the Duroc-Jersey Association for the best litter farrowed after March 1, 1917.

Fontana got first on under year boar and third on junior yearling sow. Taylor won second on young herd, third on produce of dam, third on get, and third on young herd. The other exhibitors had only a few head entered as they are just starting in the business. Enthusiasm ran high and it is safe to say that all these 1917 exhibitors will be out next year and will bring some new ones with them.

Llano Vista showed their world's champion herd of Hampshires, and the exhibit attracted wide attention. Sioux Queen, the sow who won grand champion at San Francisco, was returned a winner again. This remarkable sow has farrowed three litters since the exposition, the last one of 13 pigs, and she raised 12 of these. At four years of age she is a rare example of the combination of a great breeding animal and a show sow. Roy Dawson of Gardena had the best senior yearling boar, winning junior champion as well as first in class.

Hollow Hill Farm and F. L. Hall showed a nice bunch of Berkshires. The Hall stuff runs strong in the Ames Rival breeding and contains a toppy lot of sows. Mr. Hall was awarded junior champion boar on Favorite's Rival by Ames Rival 115, a boar who has given a number of prize winners of both sexes.

Hollow Hill's Otto's Rancho carried off senior and grand championship in the boar class and this herd was also strong in the under six months lot.

J. D. McKay had a few fine Toggenberg milch goats and one pen of Hampshire sheep with no competition.

Rancho El Rincon exhibited a full herd of Tamworths with no competition, but there were several outstanding individuals in the bunch that showed the top bacon qualities for which the breed is famous.

## Public Demand for Holsteins Grows

Never before in the history of California have registered Holstein cattle been in such great demand as at the present time, and every indication points to a still keener demand for years to come.

Fewer cattle will be offered in the fall public sales in this State than have been offered in the fall sales for several years past, and the ones that are to be sold are of higher average quality than in previous years. Breeders are making an honest effort to select and develop their sale cattle more carefully, and from every angle of present conditions, where the drawbacks and difficulties of dairying are to a large extent being brought under control, no season has appeared more favorable for the purchase of good registered Holsteins. It is the common opinion of Holstein breeders and dairymen that demand has already brought about a sharp advance in cattle prices, but that present advances are small compared with the advances that seem sure to come quickly, and that the buyer who is fortunate enough to secure cattle this fall will have a big advantage over next year's prices.

The foregoing is not an empty introduction to a sale advertisement. It is a deliberate statement made after a visit to a large proportion of the leading breeding farms and dairy sections of California, and we are firmly convinced that the man who stocks up with registered Holsteins this fall is going to have a substantial advantage when the great scramble for cattle sets in within the next six months.

And there will be no better place to secure high values in registered Holsteins than in the

### Third Sacramento Sale 125 REGISTERED HOLSTEIN COWS, HEIFERS AND BULLS State Fair Grounds, Sacramento, October 30 and 31, 1917

EVERY ANIMAL OVER SIX MONTHS HAS INDIVIDUAL TUBERCULIN TEST CERTIFICATE AND IS SOLD SUBJECT TO RETEST BY THE PURCHASER

And we go on record with the statements that the cattle in this sale are

- the highest average offering in breeding;
- the highest average lot in individuality;
- sold under the best health requirements;
- bred to the highest class bulls

of any Holsteins yet offered at public sale in the State of California.

Judge for Yourself the Opportunities in a Sale Which Contains Such Outstanding Animals as These:

- A beautiful 27 pound, 4 year old daughter of a 36 pound sire and out of a 26 pound dam.
- FOUR GRANDDAUGHTERS OF KING KORNDYKE SADIE VALE.
- A daughter of a 38 pound sire out of a 24 pound dam.
- A daughter of a 37 pound sire bred to a 30 pound show bull.
- A daughter of a 29.50 pound cow bred to Sir Skylark Ormsby Hengerveld, who has three daughters above 31 pounds.
- A granddaughter of Aralla De Kol out of a 29 pound daughter of De Kol Burke.
- A daughter of King Walker 5th out of a 29.53 pound dam.
- FOUR GRANDDAUGHTERS OF TILLY ALCARTRA, the world's greatest dairy cow.
- Several daughters of 33 pound sires, out of good dams.
- A daughter of Segis De Kol Pontiac Burke.

- A daughter of Prince Gelsche Walker Korndyke out of a splendidly bred dam.
- FOUR GRANDDAUGHTERS OF PRINCE GELSCHÉ WALKER.
- Two daughters of a 31 pound sire, bred to It, whose dam is the first 37 pound cow and the first cow to make 1200 pounds butter in one year.
- A granddaughter of Sir Veeman Hengerveld.
- A granddaughter of Pontiac Korndyke.
- A granddaughter of Colantha Johanna Lad.
- A daughter of a 26 pound cow.
- A daughter of King Morco Alcartra out of a daughter of Prince Gelsche Walker.
- A daughter of King Korndyke Pontiac out of a daughter of Prince Gelsche Walker.

#### BULLS FOR THE BREEDER AND DAIRYMAN

The enormous records for both milk and butter production behind the young bulls in this sale will no doubt be fully appreciated by breeders in search of a high-class herd header and by the dairyman who wants to place a bull of proven blood at the head of his herd. The bulls in this sale are not only very richly bred, they are great individuals as well. Among them are:

- A son of a great 30 pound cow that made 612 pounds milk in 7 days. This calf is a beautiful individual, winning first prize at 1917 California State Fair.
- A son of Prince Gelsche Walker out of a 29 pound dam.
- A grandson of King Korndyke Sadie Vale out of a 29.39 pound 3 year old daughter of King Segis Pontiac.
- A son of King Segis Alcartra Abbecker out of a splendid heifer that made 25.06 pounds butter in 7 days with second calf.

- A son of Prince Gelsche Walker Korndyke out of a 27 pound dam.
- A son of King Mead of Riverside out of a dam that made 24.75 pounds butter in 7 days and 29,545 pounds milk and 1077.75 pounds butter in one year.
- Two sons of King Mead of Riverside out of a 27 pound dam.
- A son of Prince Gelsche Walker out of a 24 pound dam that made over 800 pounds butter in one year.

#### GREAT BULLS TO WHICH FEMALES IN SALE ARE BRED

Earlier in this announcement we made a statement concerning the bulls to which cows and heifers in this sale are bred, and the following list of reference sires is among them:

##### PRINCE GELSCHÉ WALKER

Sire of the 36 pound junior 3 year old Miss Valley Mead De Kol Walker, and a list of daughters that have held 15 California records during the past two years. His sons and daughters are in great demand at high price levels.

##### IT

The great young son of Pontiac Clothilde De Kol 2nd, the first cow to make over 37 pounds butter in 7 days and over 1200 pounds in one year. Many of his daughters have sold above \$1000 each at public auction in the East, indicating the favor in which they are held by breeders.

##### KING MEAD OF RIVERSIDE

Sire of the great Aaggie Acme of Riverside 2nd, 35.36 pounds butter in 7 days and now making a yearly record that promises to exceed 1300 pounds butter. He is remarkable for the excellent type of his sons and daughters, the splendid short time and yearly records of his daughters, and the fact that all of his daughters on yearly test have averaged over 4 per cent butter fat throughout their year's work. The demand for his daughters is especially keen, and none have ever yet been sold either at public or private sale.

##### SIR SKYLARK ORMSBY HENGERVELD

The great sire that has the distinction of being the only sire on the Pacific Coast that has three 30 pound daughters, and the only sire on the Pacific Coast that has two daughters and a granddaughter with records above 30 pounds, all under mature age.

The outstanding breeding represented in this sale, coupled with pleasing type throughout, and backed up by the strongest health restrictions yet attempted in a California Holstein sale, make this sale unusually attractive to the buyer seeking high-class breeding stock.

#### CONTRIBUTORS:

A. W. MORRIS & SONS, Woodland.  
McALISTER & SONS, Chino.  
SANTA ANITA RANCHO, Santa Anita.

FRANK HATCH, Modesto.  
FRED W. KIESEL, Sacramento.  
UNIVERSITY FARM, Davis.

BRIDGFORD COMPANY, Knightsen

Catalogs will not be available until close to sale date. Write for one now and it will be mailed at the earliest possible moment.

#### SALE UNDER MANAGEMENT OF

### California Breeders Sales and Pedigree Company

J. M. HENDERSON, Jr., President C. L. HUGHES, Sales Mgr.

Sacramento, California

AUCTIONEERS: COL. BEN A. RHOADES, HAROLD B. RHOADES

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FOR CONTAGIOUS ABORTION  
Most valuable in controlling abortion, bringing after-birth and treating barren cows. B-K kills the infecting germs, heals the uterus, removes the slime and acid—no odor—no straining. More effective than Iodo, Lugol's solution, carbolic and creosols—much safer. Send for our Bulletin 52, "Contagious Abortion," and testimony from leading breeders. For sale at your druggists. General Laboratories—Madison, Wis.  
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Junior Champion boar.  
First prize Senior Yearling boar.  
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First and second prize on Senior boar pig.  
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Senior and Grand Champion sow.  
First on Senior Yearling sow.  
First and second on Junior Yearling sow.  
First and second on Senior sow pig.  
First and third under six months sow pig.

1917 Riverside Fair

Can be Purchased at Low Price for Quick Delivery.

(See Classified Column)

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**AYRSHIRES**The Economical Breeds  
when Feed is High**CHESTERS**A Few Would Give You  
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YOUR COWS MADE PROMPT, REGULAR BREEDERS BY**STERILOID**

STOP LOSING CALVES

**TREATMENT:** If STERILOID is used at the first sign of abortion the cow will go her full time and have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for FREE BOOK. It explains the causes and symptoms of Abortion and tells how to cure Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

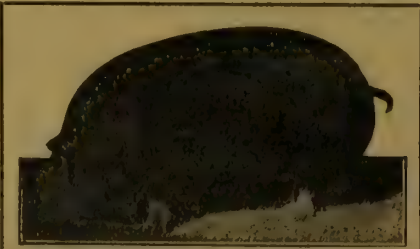
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Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain; 12 firsts, Junior Champion and Reserve Grand Champion Boar, Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

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Hanford, Kings County, Cal.

**BERKSHIRES**

Forest Grove Duchess 5th

Booking orders for a few bred sows, in service to Maplewoode Duke and Highwood Standard 91st.

**MAPLEWOODE RANCH**

Callstoga, Cal.

E. M. HOLJE,  
OwnerHOMER HEWINS, Jr.,  
Manager**WASCO FAT STOCK AUCTION**Written for California Cultivator  
By Col. O. S. Grant

The Wasco Farm Bureau Fat Stock Auction is getting to be one of the big events in the county. At the sale held Saturday, October 6, the top car of hogs fed by Mr. Hull sold for \$16.60, next car for \$16.35, and the third car \$16.00. A mixed car sold at \$15.00. Stock hogs sold for \$10.35 to \$12.50.

The grade of fat hogs in this community has improved greatly since these sales started less than a year ago. These sales give the small rancher with his three or four hogs the same selling chances that the big man with his full carload has. All four cars of hogs went to Los Angeles buyers.

Other articles were sold: one bull, several cows, wagons, chickens, in fact anything the farmers wish to dispose of.

**FIELD NOTES**

M. Bassett recently sold 20 fine young boars to the Kern County Land and Cattle Company.

Butte City Ranch reports the recent sale of 14 Berkshires, two Shorthorn bulls, one Shropshire ram and two ponies. The interest in pure bred livestock in Northern California is rapidly increasing.

The big Poland-China consignment sale at Hanford, Friday, October 18, promises to be the best yet. A large number of prize winners are cataloged, animals from some of the leading herds in the state. Copies of catalog can be secured by writing Fred D. Ross, Secretary, Hanford.

Frank Guerin writes that Lady Leola, his 28 pound Holstein mortgage lifter, has just completed a seven day test in the eight months after calving class. She made better than 13 pounds of butter. This splendid cow, and also Gaiety Girl 2nd, are listed in the big Sacramento guarantee sale in December.

Tagus Ranch is planning an addition of 20 more registered Angus bulls to their herd and also some registered cows. In all probability they will have a show herd of Angus cattle out next year. The California fairs certainly missed the Tagus show herds this year, but H. C. Merritt Jr., manager of the big ranch, says it was absolutely impossible to show this year.

Minor and Thornton's herd bull, Admiral Burke, is getting some wonderfully smooth straight backed calves. He puts remarkably fine handling qualities in his get too, and his heifers are all high testers.

Alexander and Kellogg sold a number of nicely bred bulls during the fair at Bakersfield. Dr. Little in charge of the herd says he could have sold a carload of yearlings if he had them on hand.

Tehachapi Cattle Company brought over 250 head of Hereford bulls from the mountain range to lower pasture last week. To see that number of registered bulls in one large alfalfa field is a sight not soon forgotten. There is many an individual in the bunch which would be one, two, three in the show ring with special fitting. This concern buys the best bulls obtainable for their purposes and the results are seen in the splendid calves.

Rancho El Rincon, Riverside County, exhibited Tamworth swine at the Riverside fair for the first time this fall. They secured their foundation from Joe Sefton, the San Diego capitalist who has a large herd of high class bacon types. Messrs. Remington and Milster are the owners of the herd and will exhibit at the fairs next year.

An average daily gain of 1.70 pounds per hog is the record made by the Tehachapi Cattle Company on over 800 head of shotes. This is a very creditable gain on a small bunch in the feed lot and is extraordinary for such a large bunch. Alfalfa and Sudan grass pasture, tankage, grain, pure water, and sanitary methods tell the story.

The name Hartsook is a familiar one in the field of photography on this Coast. The man who established this big photography business has caught the livestock fever and purchased a number of pure bred animals for his two large ranches in Southern California. He bought some choice Shorthorn bulls from the Jack London Ranch and his foundation of Poland-Chinas from Hale I. Marsh, Model Major breeding.

**THE BEST LINIMENT**

OR PAIN KILLER FOR THE HUMAN BODY

Gombault's

**Caustic Balsam**

IT HAS NO EQUAL

For — It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils, Corns and Bunions. **Human Body.** CAUSTIC BALSAM has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

A Perfectly Safe and Reliable Remedy for  
**Sore Throat  
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and all Ailments of the Joints**

REMOVES THE SORROW—STRENGTHENS MUSCLES  
Cernhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than \$120.00 paid in doctor's bills."  
OTTO A. SEYER.  
Price \$1.50 per bottle. Sold by druggists, or sent by express prepaid. Write for Booklet B.  
The LAWRENCE-WILLIAMS COMPANY, Cleveland, O.

**CUTTER'S  
BLACKLEG PILLS**"California's Favorite"  
for nearly 20 yearsFor the Prevention of Blackleg  
in calves and young cattle

Their superiority is due to nearly 20 years of specializing in "Vaccines and Serums only."

Year in and Year Out they give better satisfaction than any other vaccine made, and the cost of a few cents per dose is cheap insurance against a disease that always takes the fattest and best.

Single Pills may be used for ordinary and range stock.

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Use any Injector, but Cutter's simplest and strongest.

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Insist on Cutter's. If unobtainable, order direct.

Write for new booklet, "The Control of Blackleg." It tells about Anti-Blackleg Serum which cures Blackleg and may be used simultaneously with vaccine to combat outbreaks and safely protect valuable stock.

The Cutter Laboratory, Berkeley, Calif.

The Cutter Laboratory of Illinois, Chicago  
Eastern Agent**Shorthorns**Bred for Range Purposes and of  
Pure Scotch Blood Lines.Show Herd won highest honors  
in 1917.Visitors welcome — information  
cheerfully given.**T. T. Miller**

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**El Dorado Holsteins**

Headed by

SEGIS PONTIAC DE KOL BURKE  
LUIT.

Out of a 32.76-pound 4-year-old. His sire is a son of Riverside Sadie De Kol Burke, 32.29 pounds butter in seven days.

Herd officially tested for seven and 30 days.

**Alex Whaley, Tulare, Cal.**

When writing advertisers, mention The Cultivator.



## Egg Laying Contest at Mountain Grove

By C. T. Patterson, Director Missouri Experiment Station

**G**RIT and lime, not grit or lime, should be supplied to hens which are producing eggs. It will be observed that the first expression, "grit and lime," includes both, while the last expression, "grit or lime," means one at a time. The same expressions might be applied to feed and water. If we give hens feed or water instead of feed and water, it would mean failure.

Grit is some sharp, hard substance used by the fowl to grind the food in the gizzard. The most common form of grit is a silicate, the common flint being used more than any other. This, however, contains no lime, and although the hens may be furnished an abundance of grit, would not get lime from it to make the egg shells, or they

enough to dissolve readily, it is too soft for grit to grind the food.

Grit and lime are supplied at all times to pens which make a high egg producing record. The hens in the egg laying contest are furnished grit in the form of crushed flint rock thrown into the yard, and lime is furnished in the form of crushed oyster shell supplied in hoppers.

### The Contest

The hens in the contest laid 3339 eggs during September, or an average of 11.5 eggs each. The 290 hens in the contest have laid 49,069 eggs, or an average of 169.2 eggs each during the 11 months.

The pens occupying the five highest places for September are: R. C. Reds, Missouri, 98 eggs; W. P. Rocks, Mis-



Various Kinds of Grit

The above illustration shows six ounces of grit and oystershell passed from 365 hens during one night in 39 pounds of droppings. No. 1 is coarse grit worn smooth. No. 2 is fine grit worn smooth. No. 3 is oystershell worn smooth. Oystershell should be crushed fine and fed for lime and not for grit.—Photo by University of Missouri.

may be furnished an abundance of lime, yet not have any grit to grind the food. Lime may be supplied by giving the hens crushed lime rock, oyster shell, clam shell, or by giving a mortar made of lime and sand such as our ancestors used in the cracks of log houses, or a plaster made of lime and sand.

One mistake often made is to try to supply grit and lime in the same substance. The trouble is if the material is hard enough for grit it is too hard to dissolve enough to make enough egg shells for high egg production, and if the material is soft

souri, 98; W. P. Rocks, Idaho, 97; R. C. Reds, Missouri, 89; W. Wyandottes, Missouri, 84; W. Wyandottes, Missouri, 84; S. C. R. I. Whites, Illinois, 83; R. C. R. I. Whites, New Jersey, 83.

The five highest hens are running a close race, there being a difference of only eight eggs between the first and fifth hen. The five highest hens to date are: W. Wyandotte, Missouri, 256 eggs; S. C. W. Leghorn, Missouri, 251; W. Wyandotte, Missouri, 250; W. Wyandotte, Missouri, 249; R. G. R. I. White, New Jersey, 248.

## Storrs Egg Laying Contest

Storrs, Connecticut, October 5, 1917. Report for forty-eighth week ending October 2.

Although the average production of

birds all over the country is gradually falling off at the present time, there were six individuals in the laying contest at Storrs that laid seven eggs during the forty-eighth week and 79 birds that laid six eggs each. The total production for all pens amounted to 2930 which is a drop of 209 eggs from the preceding week but 419 eggs more than for the same week last year.

The three best pens in each of the principal varieties are as follows:

### Barred Plymouth Rocks

Applecock Farm, 1997; Merritt M. Clark, 1842; Michigan Agricultural College, 1739.

### White Wyandottes

Merrythought Farm, 1731; Grant Buler & Son, 1681; Obed G. Knight, 1678.

### Rhode Island Reds

Allan's Hard to Beat Reds, 1861; Pequot Poultry Farm, 1739; Hillview Poultry Farm, 1714.

### White Leghorns

A. P. Robinson, 2058; Windsweep Farm, 1922; J. O. LeFevre, 1909.

### Miscellaneous

Cloyes & Sullivan, (Buff Wyandottes, 1805; Holliston Hill P. Farm (White Rocks) 1718; Obed G. Knight, (White Orpingtons) 1612.

While we are talking about substitutions, let's replace the squirrels with livestock.

Get Your Hens  
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Strong Winter  
Laying



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The moulting season is on. It's the most trying time of all the year for poultry. You know it takes a good deal of extra strength to grow all those new feathers. Pan-a-ce-a is a great help to your moulting hens because it enriches the blood, gives better appetite, aids the digestion, which gives them the extra strength required to force out the old quills and grow the new feathers.

Then, when the moult is over, you want your hens to start in promptly to laying again. There is a dealer in your town that will supply you with Dr. Hess Poultry Pan-a-ce-a for your flock. It's to help your poultry through the moult—it's to start your pullets and moulted hens to laying, otherwise he will refund your money.

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Ashland, Ohio

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will help your hens through the molt and make it possible for you to stay in the business. SOLD by our agent in each town or inquire of GLOBE MILLS, LOS ANGELES, Southern Wholesale Distributors, or TRI-STATE POULTRYMEN'S COOPERATIVE ASS'N., Headquarters, Fresno, California.

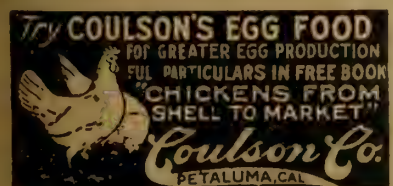
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**The Globe Mills, Los Angeles**





# The Second National Swine Show

Written for California Cultivator By Prof. J. I. Thompson

**T**HE battle ground of champions is the National Swine Show. At the various state and interstate fairs grand champion honors have been awarded to a boar and a sow of each breed. Wherever hog men congregate you may hear questions similar to the following: Is the Pacific Coast champion equal to the one from Massachusetts? Is the Hawkeye winner superior to the champion Jayhawker? There are two ways of deciding this. One way is for the partisans to thrash it out around the stove this winter while Jack Frost reigns supreme outside. This method has one advantage. Each side may win. One other way is to collect the various wearers of the purple at some central point and leave this momentous decision to some competent judge.

This is about what happens at the National Swine Show. Of course, exhibitors knowing that they have the best, provided they show in tip-top form, keep theirs at home while the others are risking their fame at the state fairs. Some few other exhibitors, knowing that they have won at a state fair much higher honors, than they could hope to win in a national contest leave their exhibits at home and content themselves by discussing

with their friends how far up the line they "might have been."

The result is that several hundred hogs are gathered together at Omaha, and there are more real tops than can be found at any other show and fewer culls. All breeds are represented but Durocs, Polands, Hampshires, Chester Whites and Berkshires make up the greater per cent of the show and ranged in numbers as listed above. A new feature this year, and one that it seems to the writer should be adopted by state fairs, was the official weighing of every animal. The result was a shrinking in the number of 1000 pound hogs, yet several individuals exceeded that weight, the heaviest one I noticed, a Poland-China boar, being 1115 pounds. It is quite possible that there were at least two heavier ones whose weights I failed to get.

The chief interest from a California viewpoint, of course, would center in the Berkshire show here because of the presence of the herd of Frank A. Brush of Santa Rosa under the very able management of C. E. Barrows. The Associated Press has already announced that both championships went to this herd, Baron Duke 201st, 200001 winning first in the aged boar class and later senior and grand championship. Rookwood Lady 100,

207887 won corresponding honors in the sow class. Mayfield Laurel XV, the senior sow pig that defeated Rookwood Lady 100 for championship honors at the California state fair, was too heavy in pig to show to advan-



Winners at the National Swine Show

Baron Duke 201st, grand champion Berkshire boar, and Rookwood Lady 100th, champion sow, at the great National Swine Show just closed at Omaha. These prize winners are the property of a Californian, F. A. Brush of Sonoma County.

tage so had to be content with fifth place.

However, the thing that struck me most forcibly was not the ability of those two individuals to win cham-

pionships but the fact that while this firm had two entries in all of the other classes but one, only once were they outside the money. Most of these younger animals were bred by the exhibitor and all of the youngsters were bred in California. When you recall too that these hogs came 1800 miles and were showing against the three strongest herds that are out this year, namely, Corsa, Iowa Farms, and Hood Farm, and finished in the classes inside the money every time but one, and with both championships, the possibilities open to California hog men seem limitless. The fact should not be overlooked that these hogs were handled by a very experienced fitter and they showed in excellent condition.

When will other exhibitors of this and other breeds venture over this same long trail to do what they can for the advancement of the swine industry in California and incidentally their own interests?

## The Land Show

The Land Show which San Francisco says is the biggest the earth has ever seen is now on at Eighth and Market Streets. The opening night and following Sunday called out immense crowds. The exhibits in the large structure and the tents near the entrance are of the usual land show character, that is, various counties make exhibits of products, one of the strongest features of which is the display of fruits and vegetables in large glass jars.

A new feature, however, is the live stock which occupies a separate tent the first week being given over to dairy animals; beef and other live stock will come later.

The Petaluma poultry people have asked for a special poultry day and on that day every attendant is to receive a carton with two eggs guaranteed to have been laid within the 24 hours preceding delivery to the customer.

Manager Brown in his opening address said:

"The San Francisco Real Estate Board deserves congratulation for its untiring efforts in bringing about the assembling of all California and the displaying of California's most wonderful products in the 1917 California Land Show.

"The counties of California and the industries participating are the ones, however, which are wholly responsible for the wonderful success in the installing of the various exhibits, and without their efforts this, our show would be very ordinary. In each and every instance the participants have used their best material, have watched the details in an unprecedented manner, and they are therefore the real makers of this show, which in itself shows California and her unparalleled resources in an unusual manner."

Mr. Stonerod is on the ground and will give the story of the livestock exhibits to Cultivator readers.

## Avocado Growers to Meet

The California Avocado Growers Association will hold its next annual meeting in the music room of Mission Inn, Riverside, October 26, 27.

The first evening's session will be largely given up to a lecture and lantern slide exhibition based upon the fruits and other exhibits. The sessions of the day and evening of the 27th will be filled with discussions. That of the forenoon will be a symposium led by F. O. Popenoe who will discuss the matter of injury caused by the hot weather of mid-June and of lessons as to most resistant varieties or methods of culture which will reduce loss in the future. Some seven or eight other growers will join in this discussion.

Another symposium later in the day will be led by Dr. Keller of Yuba Linda. This will have to do with irrigation, its effect upon quality and quantity of fruit. This also will be joined in by other growers.

Points of interest to avocado growers will also be brought out in the address to be made by the president Thomas H. Shelden of Monrovia.

Forward looking farmers are making necessary repairs on their machinery before putting it away for the winter.

## It's Construction That Insures Lasting "Caterpillar" Tractor Service

Expert knowledge of materials, coupled with thirty-five years of experience in farm machinery designing and building, has enabled Holt Engineers to make the "Caterpillar" Tractor a machine of exceptional service and efficiency.

It is that knowledge which has taught them to make certain parts of the "Caterpillar" Tractor steel, certain parts of special alloys, some surfaces chilled and some surfaces case-hardened.

Expert knowledge and choice of materials and solid construction insure lasting service—a feature of this tractor that puts bigger profits into the hands of "Caterpillar" Tractor owners. The experience of the thousands of satisfied "Caterpillar" Tractor owners is a safe guide for you to follow.

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Pear Trees — Offer several thousand Bartlett, 2 and 3 feet, heavy caliper at 9c each. French prunes. Trees of all kinds. No agents; we sell direct. Write for price list. Carlton Nursery Co., Carlton, Ore.

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For Sale—Valencia trees, extra fine yearlings, straight, thrifty, sour root, high buds, not fertilized, fine soil for balling. Will contract for spring planting. S. R. Coate, Anaheim, Cal.

For Sale—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. Randall Bros. Nursery Co., Whittier, Cal.

Olive Trees — Mission, Manzanillo, Ascolano. Propagated by me from trees of known bearing qualities. Guaranteed. L. T. Schwacofer, Hemet, Cal.

Citrus Trees — All kinds, any quantity. Butler's Morning Side Nursery, Lamanda Park, Cal.

Citrus Nurseries, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

## WANTED

Wanted by a man of experience and ability a position on first class dairy ranch. Expert in handling and care of high grade milk cows and farm crops. Will rent equipped dairy if first class proposition is offered. Address Stock, Care California Cultivator.

Wanted—1000 turkeys and chickens for Santa Barbara, also 10 cars of hay and potatoes. Owing to scarcity will buy o. b. any depot in California for cash. And we sell nuts delivered anywhere at 2½c per pound. Pacific Produce Company, Santa Barbara, Cal.

Wanted—Thirty-five Good White Leghorn males, suitable for mating this month. M. M. Kelly, R. F. D. No. 1, Escondido, Cal.

This May Get Your Goats—Want goats to run on shares. Plenty feed. Will devote entire time to good herd. Gladly answer inquiries. Address Ken, Care of Cultivator.

Wanted—Hogs of all sizes, weights or colors, large and small lots considered. What have you? Phone, write or call Durbin & Forbes, 722 San Fernando Building, Los Angeles.

Ranch Manager wants to change position first of January. Competent agriculturist and business man. University graduate. Excellent references. Address Rancher, Care California Cultivator.

We Buy Weed Seeds—Mustard, rape, anise, bitter clover, etc. Send samples. Write us, stating quantity and price. Globe Mills, Los Angeles.

Wanted—Man experienced in general housework and wife to cook for one to three men. Carl Meiners, Nordhoff, (Ojai) Ventura County, Cal.

Have Ideal Location for "Highway Store" and Gasoline Station. Like to hear from lady or gent able to finance same. Address Ray, Care Cultivator.

Wanted—To hear from owner of farm or unimproved land for sale. O. K. Hawley, Baldwin, Wisconsin.

## MISCELLANEOUS

Famous Hairy Peruvian Alfalfa Seed—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.

May Go To War—Half section mountain range, comfortable cabin, some stock. Good climate, auto road, etc. Anyone desiring place in mountains, kindly write. This is not a real estate ad. Address Mac, Care Cultivator.

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## DOGS

For Sale—Pure Bred Airedale pups ready for shipment November 10. Females \$5.00, males \$10. Pedigrees \$1.00 extra. Fine stock. Ben F. Thorne, C. A. Canfield Ranches, Bonsall, California.

## PATENT ATTORNEYS

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## HOGS

Registered Durocs—We offer for sale a choice service boar out of a daughter of M desto King and by a grandson of Burk's Good E Nuff; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col.; three young boars out of a great sow of Crimson Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. Derryfield Farm, L. O. O. F. Building, Sacramento, Cal.

Chester Whites, the Billiken Brand—The big winners at the California State Fair; Billiken was Grand Champion boar; a son was Reserve Grand Champion and a daughter was Grand Champion sow. Do you want some of this strain? Twenty gilts bred to farrow during October and November. Fifty Billiken pigs, both sexes—March and April farrow. Every animal is cholera immune. Write for prices and booklet on Chester Whites. C. B. Cunningham, Mills, Sacramento County, California.

Grape-Wild Farm Berkshires — World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

Large Yorkshires — Choice spring boars, gilts and weaned pigs from champion sow P. P. L. E. or from breeding of champion boar and sow Sacramento 1916. If you see them grow you will like them. Riverside Farms, Paradise Road, Modesto, Cal.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

Berkshires—First prize junior boar; first and second senior boar pigs including junior champion; fifteen spring and fall open gilts sired by Ames Rival 115, champion boar; and two junior yearling bred sows priced cheap for immediate sale. F. D. Hall, Perris, Cal.

Duroc-Jersey Boars 1 Year Old—For Sale — Sons of Burk's Good-E-Nuff, Grand Champion Illinois State Fair, 1914. Out of Queen Is Rite, Grand Champion California State Fair, 1916. A. A. Trueblood, P. O. Box 582, Sacramento.

Rancho Rubio Durocs—Some extra good gilts sired by Orion Model and California Keen 5th and out of my best sows. Write for prices bred or open. Weaned pigs either sex. Elmer Lamb, Ceres, Cal.

Bernstein Sells 20 head of choicest Poland-Chinas at the Big Sale October 19 at Hanford, Kings County. W. Bernstein.

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Duroc-Jersey Spring Boar — Sire, dam, dam's dam, and three litter mates of dam were 1916 Riverside winners. A high class boar priced to sell. H. C. Withers, Palo Cedro, Cal.

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Most Money in Duroc-Jerseys — Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

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Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

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Pedigreed Bull Calves, Registered \$50.00, unregistered \$25.00. Service bulls \$75 and up. Good individuals from producers. Cows with yearly records at a profit, tuberculin tested. Write or come and select. Horses. N. H. Locke Co., Lockeford, Cal.

For Sale—As we are going into registered Holsteins exclusively, will sell or trade for steers 50 head grade Holsteins and Jerseys. All bred to registered bulls. An excellent opportunity to pick up a top string. Terms. Agee Bros., Brawley, Cal.

Registered Holsteins out of A.R.O. Dams. Grandsons of King Korndyke Hengerveld Ormsby who has 20 A.R.O. daughters with records of over 29 pounds. Look up this sire. Geo. Kounias, Modesto Farms, Modesto, Cal.

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D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.

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Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Calif.

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RANCH MACHINERY Walking and riding plows, harrows, cultivators, scrapers; brand new ¾-in. cable, 6c; water troughs, 4c; bone grinder; feed mill; sprayer; mowers, rakes, beaters; sundries. Down town office DEMMITT CO., UP-STAIRS, 120 N. Main, Yards, 816 Yale, Los Angeles.

Gasoline Engines, the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles

For Sale Caterpillar Holt 30—Used two seasons on small ranch, \$2000. Also 1000 ft. seven-inch irrigating pipe at 40c per foot. H. N. Vaughn, Artesia, Cal.

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\*\* ORDER YOUR SEEDS NOW \*\* If you are going to need any seed for next season now is the time to render your order. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbuckle, Cal.

\*\*ALFALFA SEED OUR SPECIALTY\*\* Alfalfa Seed—Common variety, Hairy and Smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. E. F. Sanguinetti, Yuma, Arizona.

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20,000 Yellow Calla, Elliottiana; Pink Calla, Rhemannii. Spotted Leaf White Calla. William Richard Nursery, Santa Cruz, Cal.

New Crop Alfalfa Seed now ready. Not the lowest in price, but high in quality. Leo Turner, Yuma, Arizona.

## TO LET

To Let—Ranch at Bakersfield for term of three to five years, or will sell. Price \$30,000, terms one third cash, balance five years, interest 6 per cent annum with privilege of paying on account at any time. Ideal for dairy; 160 acres (all level), 80 acres in alfalfa, balance in wild grass. Ample ditch water for irrigation always available. Good well for stock and domestic purposes. Good two story 8-room house, barns, shade and fruit trees, grapes, nuts and berries. Complete outfit of new farming implements, wagon and buggy. Rental (to tenant who will put in twenty additional acres of alfalfa each year), \$1200 first year, thereafter \$300 additional rental each year. Owner, 636 Wesley Roberts Building, Los Angeles.

## IMPERIAL VALLEY FARM LANDS

For Sale—Your Golden OPPORTUNITY to purchase a FARM in our Golden State, in the most fertile valley in America, "THE GREAT IMPERIAL VALLEY," which is "Richer than the Valley of the Nile."

This valley has PRODUCED the largest average yield per acre and the BEST NET RETURNS per acre of any farming country in America.

Why not buy a FARM where you can raise diversified crops such as Cotton, Alfalfa, Kafir-corn, Milo Maze, Barley, Wheat and all kinds of Garden Truck.

The CLIMATIC CONDITIONS are unsurpassed for raising Cattle, Hogs, Sheep and Horses.

The RETURNS of the productions of this valley this year were as follows: Barley \$2.77½ per cwt., Corn \$2.50 per cwt., Alfalfa \$20.00 per ton and Cotton 22½c per pound.

We have sold since the first day of October 2170 acres of these lands, which will be put in immediate cultivation.

If you intend or contemplate purchasing a FARM, no matter how small or large, and on VERY EASY TERMS call or address, WALTER K. BOWKER, 501 Bryson Bldg., or Herbert L. Cornish, 1110 Van Nuys Bldg., Los Angeles, California, or H. H. Clark, Calipatria, California.

## FARM LANDS FOR SALE

For Sale—Splendid opportunity for party with \$40,000 cash, 320-acre ranch in Tulare County, near town and state highway, actual gross income since March 1, 1917, over \$15,000 for sweet cream and hogs alone. Ranch is fenced and cross-fenced with hog tight fence; 160 acres alfalfa, 90 acres leveled for corn and barley, 70 acres summer fallow; all buildings and tools new, including tractor, alfalfa chopper and grinder, corn binder, manure spreader, feed grinder, milking machine, etc. Plenty of water, 2 complete pumping plants; stock consists of 20 head draft horses, fine herd of 90 tested Holstein cows, some registered, 30 head springing heifers, over 100 head young stock, 150 head hogs; stock and tools inventory over \$30,000. There is 300 tons of alfalfa hay ready to chop and blow into barn, 2 silos filled, plenty of feed to winter all stock. Address owner, 1420 E. Eighth St., Los Angeles.

Choice Apple Orchard in Yucaipa Valley for sale—One of the finest tracts in the famous Yucaipa Apple District. This choice property consisting of 90 acres can be sold as a whole or in tracts to suit. It is in the very best of condition—nothing better in the valley. This season's crop, now being picked, is grading 90 per cent "Fancy." The price is \$700 per acre. Easy terms can be arranged. This is an opportunity to secure a first-class orchard "Where the Big Red Apple Grows" in the Yucaipa Valley. The varieties are Rome Beauty, King David, Delicious and Winesap. This property must be seen to be appreciated. Dike & Logie, Sales Agents, Redlands, Cal.

NO PAYMENT DOWN FARMERS ARE MAKING GOOD IN THE "PROJECT OF NO REGRETS" AT ORLAND, CAL. WATER FURNISHED BY UNCLE SAM. WE SUPPLY THE LAND AND ASK NO PAYMENT UNTIL YOU CAN MAKE SAME FROM CROPS. NO BETTER SOIL FOR ALFALFA, ALMONDS, OLIVES, ORANGES, LEMONS, ETC. WRITE US FOR U. S. GOVERNMENT REPORT AND BOOKLET "ORLAND FARMS." F. D. BURR CO. 253 RUSS BLDG., 235 MONTGOMERY STREET, SAN FRANCISCO.

Lake County, California—Climate unexcelled. We have two 160 acre ranches; both have an abundance of running water, fruit, grain, wood and pasture land. Orchards of walnut, prunes, pears, peaches, apples, berries, etc. Three room cottage, five room house, barns and out buildings. Fenced and cross fenced. Three miles to good small town, one mile to school. Price \$7,000.00 and \$7,500.00. No exchange. Terms. Address Box 71, Kelseyville, Cal.

YUCAIPA VALLEY. "Where the Big Red Apple Grows" We are offering some of the finest unimproved apple land in California at \$285 per acre. Pure mountain water is piped under pressure to the highest point on each tract. Rich deep soil adapted to apple culture. Altitude 2400 to 3000 feet, climatic conditions unsurpassed. Terms easy. Dike & Logie, Sales Agents, Redlands, Cal.

Oregon, California Government Lands. Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

## POULTRY

Blue Andalusian Cockerels, Blue Orpington cockerels and Ancona cockerels. Large vigorous birds, for the shows or breeding pens. Write for prices. J. R. Huddleston, 342 Edgeware Road, Los Angeles.

Day Old Chix — Banded Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Cal.

Poultry Wanted — We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

200-290 Egg Fall Chicks, Eggs, Stock, reasonable. Rocks, Reds, Wyandottes, Anconas, Leghorns, C. Beeson, Pasadena, Cal.

"Eastman's Bred-to-Lay" Banded Plymouth Rocks. Fall chicks, eggs, cockerels. Fairmead Poultry Farm, Fairmead, Cal.

## TURKEYS

Our Geese and Turkeys Win Again—Grand Champion Sweepstake Special, for best pair of birds in show. For size, vigor and quick maturity, our stock are best, East or West. Stock and eggs in season, also Collie pups. Correspondence solicited. John G. Mee, St. Helena, Cal.



## The Most Amazing Underwear Bargain in America

People don't just see how we can make this splendid winter-weight underwear in war times to sell at a popular price. It sure opens your eyes to see all the extra values. Just get this: Hanes Union Suits have a tailored Collar-ette which snugles around the neck and keeps out the cold; Elastic Shoulders with Improved Lap Seams that "give" with every motion; Comfortable Closed Crotch that stays closed; Wrist and Ankle Cuffs that hold shape and keep out winds. Every button is good pearl, sewed on for keeps.

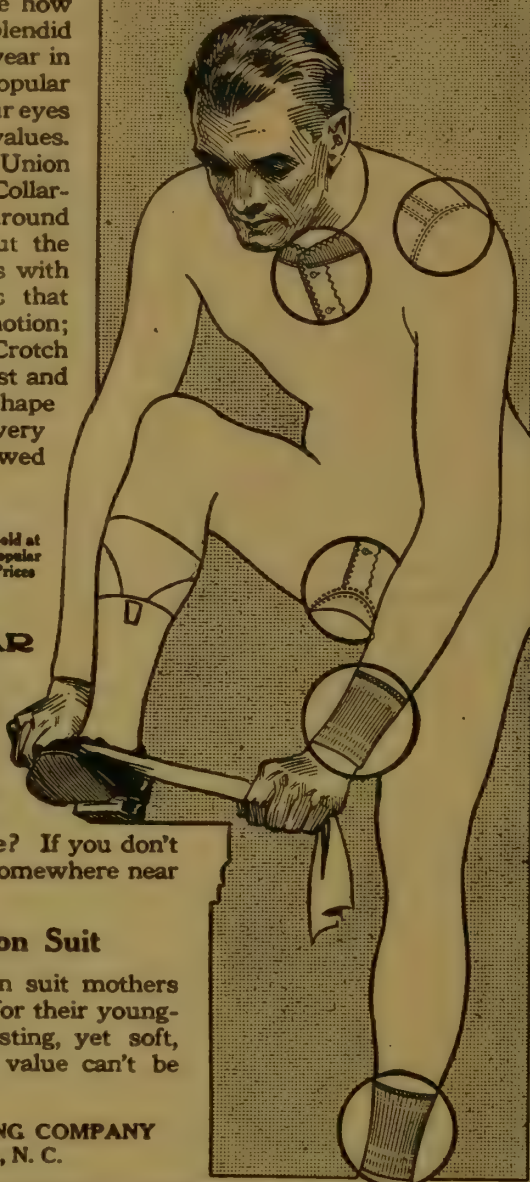
Greatest Winter Underwear **HANES** Sold at Popular Prices  
ELASTIC KNIT UNDERWEAR

Is it any sort of wonder that all these suits are sold mighty early every year? And isn't that a mighty big hint for you to lay in your stock before it's too late? If you don't know a Hanes dealer somewhere near you, write us.

### A Boy's Union Suit

Here it is—the union suit mothers have always wanted for their youngsters. Strong, long-lasting, yet soft, cozy and warm—its value can't be duplicated.

P. H. HANES KNITTING COMPANY  
Winston-Salem, N. C.



## Household Department

### THE SONG OF THE DEFENDERS

We march to the music of bugle and drum,  
We push through the perilous sea,  
With thunder of wings through the zenith we come,  
Where the cloud and the tempest go free;  
We have heard the great throb of the nation's advance,  
We have yielded our blood and our breath;  
Where the stately blades glance, in the trenches of France,  
We meet the wild glory of death.

For Freedom, for Freedom!  
For man's undying right!  
For the hope that God gave to the just and the brave—  
The dream of peace and light!

The ravagers blaze through their pathway of shame,  
With ruin and woe in their track;  
The hearts in our bodies are ramparts of flame,  
Our thunders shall harry them back,  
For we know the straight road of the free and the strong;  
We press to a goal that is far;  
Though the strife may be long we shall follow with song  
The gleam of the ultimate star.

For Freedom, for Freedom!  
For man's undying right!  
There is only one way to the great coming day—  
The reign of peace and light.  
—Marion Couthouy Smith in New York Times.

### OUR PART

OUR boys are going to the front to fight. Our government is working day and night to equip and safeguard them and to safeguard us who stay at home. New conditions, new exigencies everywhere confront us. What is our part?

The answer to that question is still



Food Pledge Emblem

largely a matter of personal decision. But, surely, first of all it is to send our boys, not as sacrificial lambs to the slaughter, but knowing in our hearts that they are men going to fight the good fight, and in our hearts proud that ours are among the chosen, worthy a place at the battle front. For all the heartache, we would not have them less.

Of the smaller things is the chance in our every day work to answer the call of Food Administrator Hoover to work with his commission. The coming week, October 21-28, has been named National Food Pledge Week. The purpose of this "Week" is explained in the following communication from the food commission:

Under the direction of the federal food administration, a national food pledge campaign is planned for the week of October 21 to 28. This will be an intensive drive to enroll all American families as members of the food administration.

A million and a quarter signatures were secured to the pledge cards during the summer by the woman's committee of national defense. This was a great achievement, for the handicaps were many, but the goal of this new campaign is to secure pledges from the rest of the twenty-two million American families. It will be worked as a sharp campaign to cement all America into one great fighting family.

Every man or woman who signs the pledge card becomes voluntarily a member of the United States food administration, and promises to carry out its directions and advice on food economy as far as possible. Thus America seeks to accomplish what Europe has wrought by stern legal enactment.

The plans of the campaign were mapped out in Washington, September 12, at a conference of the federal food administrators with the United States food administration heads.

In his address to the state officials, Food Administrator Hoover explained the psychology of the pledge-card. "We need," he said, "some sort of a moral, definite attachment to every household in the country to national service that will form a binding link, that will maintain the constancy of reaction in the household over the entire period of the war."

The state campaigns will be worked through state executive committees. The federal administrators have complete lists of families by counties, and the campaign workers are prepared to reach every family from the most crowded city tenement to the remotest farm home.

All existing organizations will be utilized in reaching these. It will be a man and woman proposition, calling for the voluntary services of enthusiastic community leaders. Their work will be backed up by the publicity furnished by newspapers, moving pictures and terse posters that carry the story. The fact that the campaign will be carried on by communities and states will doubtless inject into it a large element of competition. The results will be communicated each day from the county committees to state headquarters, and from there wired to Washington. Each town and county is expected to try for a 100 per cent record and the food administrators count on a final tally of all America.

This means that in the windows of every American home will hang the emblem that pledges that family, man and wife, young and old, to food conservation, and to an open declaration of allegiance to the government.

When washing small articles have at hand a bag made of cheesecloth, into which handkerchiefs, collars, etc., may be put during the boiling process. They will be much easier to handle if the work is done in this way.

The person who wastes food during war time is helping the enemy.

### FOOD PLEDGE CARD

#### TO THE FOOD ADMINISTRATOR:

I am glad to join you in the service of food conservation for our nation and I hereby accept membership in the United States Food Administration, pledging myself to carry out the directions and advice of the Food Administrator in my home, insofar as my circumstances permit.

NAME .....

STREET .....

CITY ..... STATE .....

There are no fees or dues to be paid. The Food Administration wishes to have as members all of those actually handling food in the home.

Anyone may have the Home Card of Instruction, but only those signing pledges are entitled to Membership Window Card, which will be delivered upon receipt of the signed pledge.

Cut out this slip, sign and mail to Food Administration, Washington D. C.

**Comfort at lower cost**

Less furnace heat needed—fewer grate and coal-stove fires. Portable Fuel consumed only when heat is needed—no waste. No smoke or odor.

**HEAT WITH PEARL OIL**

**STANDARD OIL COMPANY (CALIFORNIA)**

## PERFECTION OIL HEATER



# The Cultivator Patterns



8524—Children's Dress. Cut in sizes 2, 4, 6 and 8 years. The dress is cut in one piece.

8268—Ladies' Waist. Cut in sizes 36 to 42 inches bust measure. Long or short sleeves may be used.

8543—Ladies' Waist. Cut in sizes 34 to 44 inches bust measure. The shoulder edges of back extend over front in yoke effect.

8541—Ladies' House Dress. Cut in sizes 36 to 42 inches bust measure. The dress is cut in one piece.

8302—Ladies' Apron. Cut in sizes 36, 40 and 44 inches bust measure. The sleeves may be made with or without the cuffs.

8540—Misses' Skirt. Cut in sizes 16, 18 and 20 years. The skirt is cut in two gores and has a slightly raised waistline.

8352—Children's Dress. Cut in sizes 2, 4 and 6 years. The dress is cut in one piece.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

## HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send 10 cents in coin or (1 or 2 c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department  
California Cultivator  
Los Angeles

## CHRISTMAS MAIL FOR OUR BOYS IN FRANCE

**C**HRISTMAS packages for our boys in France should be in the mails by November 15. The time is approaching to give thought to bringing Christmas cheer to the American soldiers and sailors abroad.

Arrangements have been perfected whereby the Christmas mail to the American expeditionary forces in Europe is to be delivered by Christmas morning. Without the fullest cooperation on the part of the public it will be impossible to accomplish this result.

The three essential respects in which the public can aid in assuring a happy Christmas at the front are mail early, address intelligently, and pack securely. For this reason it is urgently requested that all persons having Christmas mail for the soldiers and sailors and the civilian units attached to the army in Europe observe closely the following directions:

### Directions for Mailing

Mails to reach the soldiers in France by Christmas morning must be posted not later than November 15.

Every package must bear conspicuously the words "Christmas mail," the complete address of the person for whom it is intended, and in the upper left-hand corner the name and address of the sender.

Every parcel must be packed and wrapped so as to admit of easy inspection by the postmaster. No parcel will be dispatched to France which has not the postmaster's certificate that it contains no prohibited articles.

The time of sailing of transports and regular liners, the examination of parcels on this side so as to obviate their having to be examined by censors, and the uncertainty of land transportation on the other side has to be allowed for. It is essential also that the packages should contain nothing that is unmailable under the parcel post regulations of this country; and that the parcels shall be securely wrapped, but may be readily opened by the postmaster to determine the character of their contents.

Measures have been taken to have packages received in France, which are marked for Christmas delivery, delivered on Christmas morning. Parcels so marked will be held at convenient stations for delivery on that day. This will insure a real Christmas to our boys in France if parcels are mailed here promptly, and prevent the Christmas character of the parcels being destroyed by too early delivery.

The rate of postage on parcels to members of the American expeditionary forces in France is 12 cents per pound from any place within the United States.

## THANKSGIVING OFFERING FOR THE FRENCH

Once a generous hearted Frenchman came to the aid of the American colonies, and at Yorktown the French soldiers outnumbered the Americans. Today the land of Lafayette is asking of America 100,000 tons of sugar, to relieve her distress. We can but share our abundance with our Allies of yesterday and today.

Americans consume sugar at the rate of seven and a half pounds a month per person. The French have been on an allowance of less than two pounds a month, and must soon go without any unless we can help.

Less candy, less sweet drinks, less sugar on oatmeal, less cake and pie for the next two months—then we can make a worthy Thanksgiving offering from America to the people of Lafayette.

## TO MIX CAKES CONTAINING BUTTER

Cream the butter, beating till light. Gradually add the sugar, beating till light and creamy. Add the yolks of eggs beaten till light, then the flavoring. Beat in alternately the liquid and flour, the latter mixed with salt and baking powder. Lastly, add the beaten whites, and fruit, if used.—Sperry Cook Book.

## NOTHING EASIER

"Don't you find it hard these times to meet expenses?"

"Hard? Man alive! I meet expenses at every turn."—Boston Transcript.

**A COMPACT 'ELECTRIC LIGHT AND POWER PLANT FOR YOUR FARM OR COUNTRY HOME**

**SELF CRANKING AIR COOLED THICK PLATE LONG-LIVED BATTERY BALL BEARINGS NO BELTS BURNS KEROSENE**

## Over 40,000 Satisfied Users Endorse DELCO-LIGHT

Over 40,000 owners of farms, country homes and stores, throughout the world, representatives of over sixty different lines of business are finding DELCO-LIGHT to be a dependable and trustworthy electric light and power plant.

Here is just one of the thousands of testimonial letters on file:

I purchased Delco-Light on account of its simplicity and ease of operation and I am satisfied with the results it is giving. There are 36 lights in the house, barns and milk-houses. Operating expense one year \$15.00.

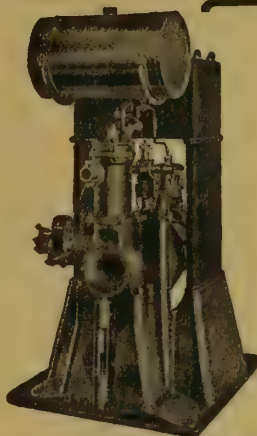
FRANK W. CONNELL, R. F. D. No. 1, Hillsboro, Oreg.

Price \$350 and \$420 f. o. b. Dayton, Ohio, except Western U. S. and Canada

Write for descriptive booklet

**THE DOMESTIC ENGINEERING COMPANY DAYTON, OHIO**

MODERN APPLIANCE CO., E. H. Epperson, Pres., No. 606 Mission Street San Francisco, Calif.  
MODERN APPLIANCE CO., E. H. Epperson, Pres., No. 314 East Pike Street Seattle, Wash.



## MORE BETTER LIGHT

Install a PRIVATE GENERATING PLANT and have ELECTRICITY FOR LIGHT AND POWER. The Uni-Lectric system generates the standard 110-volt direct current, which will operate from 1 to 50 lights. It will run your sewing machine, electric iron, vacuum cleaner, churn, washing machine, etc.

### NO BATTERIES—NO SWITCHBOARD

High speed gasoline motor, generator and automatic governor, all complete. Uses standard lamps and fixtures. Can be used for one or more houses.

WRITE FOR ILLUSTRATED CATALOGUE TO

**KARL A. HEDBERG**

104-106 Clay St.

San Francisco, Cal.

## Oil is Cheaper than Wood or Coal

Besides being cheaper, it is cleaner, more convenient.

Put one of these Blue Flame Burners in your own cook stove or heater and make your own gas from oil. Not an experiment, but an actual success for more than seven years.

Write us, mentioning California Cultivator.

**BLUE FLAME DISTILLATE BURNER CO.**

MAIL ADDRESS, P. O. BOX 202 330 Mountain View Ave. PASADENA, CALIFORNIA

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**FREE TRIAL**

The new DIAMOND POINT PHONOGRAPH MR. EDISON'S Latest with your favorite records. Sent anywhere—No money down—No expense—No obligation—\$1 a week if you decide to buy. Simple and Easy

WRITE TO-DAY for new Book "B" with illustrations—list of music—Free Trial Plan

Address—**FRANK J. HART**  
**Southern California Music Co.**  
332-34 S. Broadway (DEPT C) Los Angeles

Everywhere **Giant Sweet Peas** Special 35c. oz. 20c. oz.  
Orchid Flowering Spencer—Enough for One Rod  
Plant now and you will have a gorgeous crop of bloom this winter. We want to get acquainted with you. Our catalog for the asking. We are constantly offering BARGAINS. You ought to be one to share them.

**Pomona Floral & Nursery Co.**  
1238 No. Garey Ave., Pomona, Cal.

Headquarters for **IRRIGATION** SUPPLIES  
PUMPS, ENGINES, SPRAYERS, HOISTS ETC.  
Catalog FREE on Request  
**Smith-Booth-Usher Co.**  
LOS ANGELES.

**MACHINERY**  
OF EVERY DESCRIPTION  
**BOUGHT and SOLD**  
**BUTTRESS & McCLELLAN**  
205-7 N. Los Angeles St. A-5473 Bdy. 8098



## Los Angeles Market

Los Angeles, Oct. 17, 1917.

## BUTTER

Produce Exch. Quotations.					
Price to trade 4c higher.					
California extra creamery					
Dairy Exch. prices past week.					
Oct.	10	11	12	13	15
17	47	47	47	47	47
Rets. wk. ending Oct. 16, 231,800 lbs.					

## CHEESE

Brokers prices:	
California fresh, lb.	25
Oregon Longhorn	29
Tillamook Trip	28
Domestic Swiss	34

## EGGS

Exchange quotations. Prices include cases and fillers valued at 35c.					
Fresh extras					
Case count					
Pullet					
Dairy Exch. prices past wk.					
Oct.	10	11	12	13	15
17	52	54	54	55	56
Rets. wk. ending Oct. 16, 475 cases.					

## POULTRY

We quote to producers:	
Broilers	32
Fryers, 2½ lbs., and up	26
Hens—Leghorns	21
Roasters, 3 lbs. and up	26
Ducks, lb.	16@17
Squabs, doz.	3.00@4.00
Rooster, old	13

## LIVE STOCK

We quote cwt, f. o. b. L. A.  
Corrected Wednesday morning, October 10, by the Cudahy Company.

Cattle—	
Beef steers, av. 1000 to 1100 lbs.	8.50@9.00
Heifers, good	6.50@7.00
Cows, good	5.50@6.50
Canners	4.50@5.00

HOGS—	
Av. 125 lbs.	15.00
Av. 150 lbs.	16.00
Av. 175-200 lbs.	16.50
Rough, docked 20 lbs.; piggy sows, 40 lbs., stags, 40 per cent.	
Prime wethers	9.50@10.00
Ewes	9.00@9.50
Lambs	13.50
Yearlings	10.00@10.50

## FERTILIZER

We can make prompt deliveries of  
Steam Bone Meal  
Fish Scrap  
Whale Tankage  
and Packing House Tankage  
Contract Early Before  
Prices Advance  
Rogers Brown & Co.  
1307 Baker-Detwiler Bldg., Los Angeles, Cal.

## IRON WAGON WHEELS

We supply any height wheel to fit any kind of an axle. Guaranteed to fit or money back. Put a set on that old gear. Write today for list and measurement blank.  
ARNOTT & COMPANY, Inc.  
112-18 So. Los Angeles St., Los Angeles

## POTATOES

Wholesale selling prices:	
Northern Burbanks, cwt.	2.80@3.00
Russets	2.60@2.70
Rurals	2.40@2.45
Sweet, cwt.	2.65@2.85

## ONIONS

Wholesale selling price:	
Brown, cwt., 2.50; white	2.50
Garlic	8

## VEGETABLES

Wholesale prices:	
Artichokes, doz.	1.10
Beans—Wax	6@6½
Limas, lb.	8
Ky. Wonder	6@6½
Beets, sk.	1.00
Cabbage, lb.	1½
Carrots, doz	40
Cauliflower, doz.	1.10@1.25
Celery, doz.	85
Corn, lug	70@75
Cucumbers, lug	1.00@1.25
Egg Plant, lb.	3@3½
Horseradish, rt. lb.	15
Lettuce, doz.	40@45
Leeks	70@80
Mint	40
Onions, green, doz.	25
Okra, lb.	10@12
Peas, lb., Telephone	8½@9
Peppers, Chili, lb., 3½@4; Bell	3@3½
Parsnips, doz.	40
Parsley, doz.	20
Pumpkins, lb.	2
Radishes, doz.	20
Rhubarb—Strawberry	1.10
Romaine, doz.	50
Spinach, doz.	25
Squash, Summer, cr	1.20
Crookneck	70@75
Hubbard, lb.	2
Tomatoes, cr.	75
Turnips, doz.	85

## FRUITS

Wholesale prices:	
Apples—Skinners Seedling	1.50@1.75
Bellflowers	1.10@1.15
Jonathan	2.00@2.25
King David	1.75@2.00
Avocados, doz.	6.00@9.00
Bananas, lb.	4½@5
Casabas, lb.	4½@5
Figs, bx.	90@1.25
Grapes—Black	1.10
Malagas, lug	1.10@1.15
Muscad, lug	1.10@1.25
Tokays	1.50@1.65
Nectarines, lug	1.85
Pineapples, lb.	10
Peaches, lug	1.00@1.10
Pears, Bartlett, lug	1.75
Plums, lug	1.25@1.75
Quinces, lug	85
Watermelon, lb.	2

## DRIED FRUITS

Market on peaches quiet, sack prices f. o. b. Los Angeles running around 7½ and 8½ cents. No quotations are made on peeled stock for the reason that so little is delivered and the quality varies so greatly that the market is not established. Prices made by wholesalers in 25-lb. boxes, faced, are, Choice, 12; fancy, 12½.

## CITRUS

Lemons, 4.25@5.50; juice	2.25
Grapefruit	3.25@3.50
Limes, basket	1.00
Valencias	3.50

## HONEY

Wholesale prices:	
Extr. White, lb.	14@15
W. W. lb.	15@16
Comb, case, W.	3.75
W. W. case	4.25@4.50

## NUTS

Almonds—Almond Growers' Exch. announces prices on 1917 nuts.	
Nonp.	21½
L. X. L.	19½
N. P. U.	18½
Drakes	16
Peanuts, raw	12
Pine Nuts	20
Pecans	19
Walnuts—Cal. Walnut Growers' Association named prices Oct. 1:	
No. 1 Soft Shell, lb.	20
No. 2 Soft Shell, lb.	16
Budded, Diamond Brand	24
Budded, Standard Brand, (same size as No. 1 Soft Shell)	21
Prices delivered in East 1½c higher.	

## RICE

Wholesale quotations:	
Cal.	7.50
Broken	5.60@6.00

## BEANS

Wholesale Prices:	
Lady Washington	15.00
Limas	15.00
Pinks	12.50
Manchurian Reds	11.00
Baby Mex.	9.00
Garbanos	9.00@10.00
Small White	15.00
Blackeyes	10.50
Tebary	7.00
Lentils	18.00

## HAY

Quotations by Nichols-Loomis Company. Wholesale prices to growers f.o.b. L. A. carlots.	
Tame Oat	22.00@24.00
Volunteer Oat	17.00@19.00
Wheat	18.00@21.00
Barley	19.00@22.00
Alfalfa	19.00@22.00
The Alfalfa Growers' Association of Southern California writes:	
"The Association is now asking \$23.50 for No. 1 cow hay f. o. b. cars Los Angeles and Southern California points. The later cuttings are short and we are experiencing a shortage in our crops. Hay is selling very readily and all buyers are offering high prices. We have heard nothing under \$20 per ton being offered the growers for alfalfa. That price offered is of course net to the grower. We find that little hay is stored for this winter's use and that there will undoubtedly be a shortage before spring."	
Straw	7.00

## GRAIN AND FEEDSTUFFS

Wholesale cwt. f.o.b. L. A.	
Alfalfa Meal	1.75

Alfalfa Molasses .....	1.81
Barley, Rolled .....	2.81
Barley, Re-cleaned, Whole .....	2.94
Barley, Hulled .....	3.41
Beet Pulp .....	1.81
Bran, Heavy .....	2.32
Cocconut Meal .....	2.51
Cottonseed Meal .....	3.31
Corn, Yellow .....	4.41
Corn, White .....	4.51
Corn, Cracked .....	4.51
Corn, Feed Meal .....	4.51
Corn, Egyptian .....	3.51
Middlings .....	3.01
Milo .....	3.21
Oat Chop .....	1.91
Oats, White .....	2.81
Oats, Rolled White .....	2.91
Oats, Hulled .....	4.71
Oats, Rolled Chicken Groats .....	4.81
Oilcake Meal .....	3.41
Wheat, No. 1 .....	4.00@4.05
Wheat, Cracked, No. 1 .....	4.40
Rye .....	4.01
Blood Meal .....	5.10@5.20
Bone, Green .....	2.85@2.95
Bone, Dry .....	3.05@3.15
Charcoal, 50-lb. sk. .....	2.70@2.80
Clam Shell .....	70@80
Grit, Granite .....	65@75
Oyster Shell .....	1.25@1.35
Sunflower Seed .....	4.90@5.00
Soya Bean Meal .....	3.40@3.50
Scratch Feed .....	3.70@3.80
Gritless .....	3.90@4.00
Rice Bran, ton .....	40.00
Middlings, ton .....	45.00
Rice Polish, ton .....	49.00

## San Francisco Markets

San Francisco, Oct. 16, 1917

## BUTTER

Dairy Exchange quotations, lb.:	
Fresh extras	
Prime firsts	
Dairy Exch. quotations past wk.	
Oct.	9 10 11 12 13 15
17	46 46 46 46 46 46
16	33½ 34 34 34 33½
Rets. wk. ending Oct. 15, 384,400 lbs.	

## CHEESE

Dairy Exchange quotations:	
Cal. Flats, 18@22½ Y. Am.	22@25
Cheddar	22½
Ore. Young Am.	22
Jack Cheese, full cream	23@24

## EGGS

Dairy Exchange quotations:	
Extra	
Firsts	
Selected Pullets	
Firsts	
Dairy Exch. quotations past wk.	
Oct.	9 10 11 12 13 15
17	50 50 51 51 52 54½
16	47½ 50 49 48
Rets. wk. ending Oct. 15, 8002 cases.	

## POULTRY

Only 27 coops of California chickens received, October 15. Two carloads Eastern.	
We quote from producers, lb.:	
Hens, large, 27@28; Leghorns	21@23
Small colored	22@24
Broilers	28@32
Roasters	28@30
Squabs, doz.	2.50@4.00
Ducks	14@18
Geese	18@19
Belgian Hares, live, 14@17; dr.	17@20
Turkeys	22@30

## LIVE STOCK

Prices gross weight:	
Cattle: The following prices are for grass fed stock. Hay fed brings ¼ to ½ c more.	
Steers, lb., 6@9½; cows and helpers, 4@7½; calves, 7@9½.	
Sheep: Wethers, 10½@11½; ewes, 9½@10; lambs, lb., 14½@15.	
HOGS—Hard grain-fed, weighing 100 to 150 lbs., 14½@15; 150 to 300 lbs., 16½@17; 300 to 400 lbs., 16½@16½.	

## POTATOES

Wholesale selling prices at wharf:	
Salinas Burbanks, cwt.	3.00@3.15
River	1.50@1.70
Sweets, lb.	2½@2¾

## ONIONS

Wholesale selling price on wharf:	
Australian Brown, cwt.	2.30@2.40
Garlic, lb., new	5@6

## VEGETABLES

Wholesale selling price:	
Beets, sk.	1.25@1.50
Beans, string, lb.	4@5
Fy. Garden, 3@5; Lima	7@8
Carrots, sk.	1.00@1.25
Celery, doz.	40@55
Cucumbers, lug	35@60
Pickling, lug	50@2.00
Egg Plant, lug	90@1.50
Okra, box	60@75
Onions, Pickling	5@6
Peas, lb.	5@6
Peppers, Bell, lug, 90@1.00; Chili	75@85
Pumpkins, sk.	60@75
Squash—Marrowfat, sk.	60@75
Cream, lug	75@1.00
Hubbard, sk.	60@75
Tomatoes, lug	40@65
Turnips, sk.	1.50@1.60

## FRESH FRUITS

BERRIES—Strawberries 5.00@8.00 ch to trade; raspberries, 6.00@8.00; blackberries, 8.00@9.00; huckleberries, lb. 12½@16c.	
PEACHES—Sm. bx., 65@85; large lug, 1.00@1.25; Santa Clara peaches, sm. lug, 65@90; large lug, 1.00@1.25; mountain freestone, bx., yellow, 75@85; strawberry freestone, 85@1.00; Oregon Salways, 1.00@1.25.	
PLUMS and PRUNES—German and Grand Duke, cr., 1.00@1.25.	
FIGS—Black, double layer bx.: 2.00@2.25.	
PEARS—Lake County, Bartlett, wrapped, bx., 2.00@2.25; Winter Nellis, lug, 75@1.25; bx. wrapped, 1.50@1.75; winter pears, 50@1.00.	
GRAPES—Malaga, cr., 60@75; lug, 1.00@1.25 Thompson seedless, cr., 1.15@1.25; big lug, 1.75@2.00; Muscat, cr., 87@75; big lug, 1.25@1.50; black, lug 86@1.00; Tokay, lug, 1.00@1.25; Isabella, cr., 1.15@1.30.	



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Leadership in mileage justly belongs to Norwalk Tires because of the inherent quality in these casings. All the mileage that science and honest craftsmanship can possibly put into tires is embodied in Norwalks.

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Pico & Hope Sts., Los Angeles  
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Every potato grower can save money by owning and operating O. K. CHAMPION Potato Diggers.

For Catalog Write  
**California Implement Co.**  
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**PACIFIC MANURE & FERTILIZER CO.**  
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MELILOTUS VETCH HORSE BEANS SOY BEANS

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**BRENTWOOD IRRIGATED FARMS,** 50 Miles from Oakland in Contra Costa County.  
For Prices, etc. Address  
**BALFOUR, GUTHRIE & CO., LAND DEPT.,** 350 California St., San Francisco



Cornichon, cr., 75@85; wine grapes, Zinfandel, ton \$32.00@35.00.  
APPLES—Bx.: Bellflower, 90@1.00; Splitzberg, 4-tier, 1.75@1.85; B grade, 1.00@1.15; Red Pearmain, 75@85; white do, 4-tier, 1.00@1.15; 3½-tier, 1.15@1.25; Smith Cider, 4-tier, 1.10@1.15; 4½-tier, 85@1.00; Jonathans, 1.25@1.50; Baldwin, 1.25@1.50; B grade, 1.00@1.25; Wagner, 1.15@1.25; Hoover, 90@1.15; Newton Pippins 3½-tier, 1.15@1.25; 4-tier, 1.10@1.25; 4½-tier, 90@1.00.  
CANTALOUPE—Turlock, cr., standard, 1.25@1.50; pomies, 1.00@1.25; casabas, cr., standard, 75@1.00; flat, 50@75; Honey Dew, cr., 1.25@1.50; flats, 75@1.00.  
WATERMELONS—Doz., 1.00@3.00.  
CITRUS FRUITS—Bx.: Lemons, fancy, 5.50@6.00; choice, 4.00@5.00; lower grades, 3.00@3.50; lemonettes, 3.00@4.00; grapefruit, fancy, 3.25@3.75; choice, 2.75@3.25; lower grades, 1.50. Oranges—Bx.: New Valencias, fancy, 3.00@3.25; choice, 2.85@3.00; lower grades, 1.50@2.00.  
TROPICAL FRUITS—Bananas, Hawaiian, 5 lb., 1.25@2.00 bunch; Eastern, 4½ lb., red bannanas, 5½ lb., pineapples, 3.50@4.00 doz.; Hawaiian coconut, 90 doz.  
POMEGRANATES—Cr., 75@85.  
PERSIMMONS—Bx., 75@1.25, according to size and quality.  
CRANBERRIES—Bx. of 33 1-3 lbs., 1.25@4.50.  
Bananas, lb., 2.50@3.50  
Pineapples, doz., 2.50@3.50

**DRIED FRUITS**  
Manager Niswander of the California Peach Growers advises that a limited quantity of peeled peaches, either in assortments or carload lots, will be sold.  
PEACHES—Unpeeled, lb., standard, 9; choice, 9½; extra choice, 9½; fancy, 10½.  
RAISINS—The California Associated Raisin Company announced on August 22 new 1917 crop prices effective at once:  
Muscats, Package Seeded, cs. of 48 lbs, \$4@4.20; cs. 36 lbs Sun-Maid and Fy. \$3.15, Ch. \$3.00; cs. of 45 lbs, Fy. \$3.25, Ch. \$3.10. Bulk Seeded, 25 lb. bx. Baker's Sun-Maid \$1.75, Fy. \$1.90, Ch. \$1.75. Loose Muscats, 50 lb. cs. 1 cr. Re-cleaned and Flated, \$4.15, 2 cr. \$3.40, 3 cr. \$3.65, 4 cr. \$3.90. Layers and Clusters, 20 lb. bx. 3 cr. London Layer \$1.60, 4 cr. \$1.85, 6 cr. Imperial Cluster \$2.70.  
Thompson's Seedless, Package, cs. of 47 lbs, Sun-Maid Seedless \$4.65, cs. of 35-42 lbs Re-cleaned, \$2.80, other brands, cs. of 48 lbs, \$4.75, cs. of 50 lbs, \$4.00. Bulk Re-cleaned Baker's, 50 lb. cs. \$4.90.  
Sultanas, Package, 48 lbs \$4.75, 50 lbs \$4.00. Bulk Re-cleaned, 50 lb. cs. \$4.60.  
Bleached Thompson Seedless, Northern, 50 lb. cs. Ex. Fy. \$5.37½, Fy. \$5.12½, Ch. \$4.87½, Soda Dipped, \$4.75; San Joaquin, Ex. Fy. \$5.50; Fy. \$5.25, Ch. \$5.00.  
Regular California dried fruit contract, Pacific coast rail shipping points prices on all but bleached and dipped raisins, guaranteed against our decline (sales to United States government excepted) to January 1, 1918.  
All Muscats, October-November, seller's option; also November or December, buyer's option.  
Thompsons and Sultanas, September-October, seller's option; also November or December, buyer's option.  
No rebate allowed on export sales.  
Prices subject to change without notice.

APRICOTS—Lb., bulk basis: Standard, 14½; ch., 15; ext. ch., 15½; fcy., 16½; ext. fcy., 17½; fy. Moorpark, 17½; ext. fy., 18½.  
PRUNES—60s to 90s, 6% basis; 50s to 60s, ½c premium; 40s to 50s, 1½ premium.  
APPLES—In 50-pound bx. lb.: Fancy, 14½; extra choice, 13½; choice, 13.  
PEARS—Bulk basis, lb.: Fancy, 11½; extra choice, 13½; choice, 8; standard, 6.

**NUTS**  
Almonds—Cal. Almond Growers' Exc., gross prices: Nonpareils, 21½c; I. X. L., 19½c; Ne Plus, 18½c; Drakes, 16c; hard

shell, 11½c.  
Pecans ..... 16@18  
Pine Nuts ..... 16@19  
**HONEY**  
Comb, W. W., lb. .... 15@18  
Lt. A., 11@12; A ..... 12@15  
Extr. W. W. Alfalfa ..... 13  
Extr. W. W. Sage ..... 16  
L. A. Alfalfa, 13; do Sage ..... 14  
Amber ..... 10½@12½  
Seeswax, lb. .... 38

**BEANS**  
Jobbers' prices, cwt., new crop, re-cleaned.  
Limas ..... 14.00@14.25  
Bayous ..... 9.25@9.75  
Small Whites ..... 13.00@13.25  
Mexican Reds ..... 9.00@9.50  
Large Whites ..... 13.00@13.10  
Pinks ..... 10.00@10.50  
Black Eyes ..... 9.25@9.50  
Cranberry ..... 12.00@12.25

**HOPS**  
Per lb.: California crop of 1917, 35@40; on contracts, spot, 1916 crop, 18@22; old, 8@15.

**RICE**  
California rice, new crop, cleaned, 100 lb. head rice, \$6.90; brewers', \$5.25; screenings, \$5.65.  
Rough rice, 100 lbs., \$3.50.

**HAY**  
Under date of Oct. 13, Scott, Magner & Miller says:  
Arrivals for the week 1750 tons. The car situation remains unchanged, it being very difficult to obtain cars of any kind. The railroads are compelled to furnish the government with all the cars which they demand. Prices are firm, with an upward tendency. Hay is high in all markets along the Pacific Coast. Demand for alfalfa has continued excellent and prices have been decidedly firm.  
Fancy Wheat Hay (light 5 wire bale, ton ..... 24.00@25.00  
No. 1 Wheat or Wheat and Oat Hay ..... 21.00@22.00  
No. 2 Wheat or Wheat and Oat Hay ..... 18.00@20.00  
Choice Tame Oat Hay ..... 22.00@23.00  
Other Tame Oat Hay ..... 18.00@20.00  
Wild Oat Hay ..... 17.00@21.00  
Barley Hay ..... 18.00@21.00  
Alfalfa ..... 18.00@21.00  
Stock Hay ..... 15.00@17.50  
No. 1 Barley Straw, bale ..... 50@90

**GRAIN**  
Grain Exchange prices, etc.  
Wheat—Government price at San Francisco, \$3.50 cwt., or \$2.10 bu., with 4 cents added for sacks on No. 1 (60 lbs.); No. 2 (58 to 60 lbs.), 3 cents discount; No. 3 (56 to 58 lbs.), 6 cents discount.  
Corn, California Yellow ..... 4.00  
Barley, Feed ..... 2.42½@2.45  
Shipping ..... 2.42½@2.47½  
Oats, Red Feed, cwt. .... 2.65@2.75  
Oats, New Black ..... 3.25@3.50

**FEEDSTUFF**  
Wholesale prices per ton:  
Bran ..... 41.00@42.00  
Cornmeal ..... 86.00@87.00  
Cracked Corn ..... 86.00@87.00  
Middlings ..... 50.00@55.00  
Alfalfa Meal ..... 29.00@30.00  
Cocoanut Meal ..... 40.00@41.00  
Rolled Barley ..... 51.00@52.00  
Shorts ..... 43.00@44.00

**SEEDS**  
Prices in round lots, lb.:  
Millet, re-cleaned ..... 4½@5  
Alfalfa ..... 20@21  
Flax ..... 6@6½

**Citrus Fruit Market**

Los Angeles, Oct. 17, 1917.  
From 50 to 80 cars of Valencias are going forward daily and during the past week have maintained or even bettered prices. Small sizes have especially improved, commanding material advance over last week quotations.

The lemon market has been exceptionally strong and \$7.00 is not uncommon.

**Shipments**  
Shipments of oranges from Southern California since November 1, 1916, 39,571 cars, lemons 7621, total 47,192; to same date last year oranges 31,031, lemons 6777, total 37,808. From Central California to date this season oranges 5044, lemons 164, total 5208; to same date last season oranges 5398, lemons 146, total 5544. From Northern California to date this season oranges 845 cars; last season oranges 610, lemons 1.

**FROM THE AUCTION**

October 10  
New York: 1 oranges, 1 lemon—Val. \$1.15-\$4.90, lemons \$6.35-\$6.95, grapefruit halves, \$1.10.  
St. Louis: 3 Val., 1 lem. Val. \$2.25-\$3.10, lem. \$4.00-\$5.85.  
Cleveland: 2 Val., 1 lem. Val. \$2.75-\$3.25, lem. \$5.00.  
Boston: 6 cars. Val. \$2.15-\$3.20.  
October 11  
New York: 14 cars. Val. \$1.60-\$7.15.  
Boston: 5 cars. Val. \$1.30-\$3.35.  
October 15  
New York: 15 cars. Val. \$1.40-\$3.70.  
Pittsburg: 6 cars. Val. \$2.05-\$3.45, lem. \$4.75-\$6.10.  
Boston: 8 cars. Val. \$2.00-\$5.20, lem. \$4.35-\$7.00.  
Cincinnati: 2 cars. Val. \$1.70-\$2.90, lem. \$4.15-\$5.50.  
October 16  
New York: 9 cars. Val. \$1.85-\$4.60.  
Philadelphia: 5 cars. Val. \$2.45-\$4.70.  
Boston: 5 Val., 1 lem. Val. \$2.25-\$3.75, lem. \$6.90-\$7.40.

**WEATHER CONDITION**

San Francisco, Cal., Oct. 13, 1917.  
—Rainfall—Temp.  
Wk. Season Norm. Max. Min.  
Eureka ..... .00 .38 2.38 60 46  
Red Bluff ..... .00 .80 1.36 100 54  
Sacramento ..... .00 .51 .72 100 50  
San Francisco ..... .00 .02 .67 68 52  
San Jose ..... .00 .01 .68 86 52  
Fresno ..... .00 .00 .57 96 58  
San Luis Obispo ..... .00 .01 .76 72 52  
Los Angeles ..... .00 .00 .24 78 66  
San Diego ..... .00 .00 .24 70 60



Our Heavy Engine Chisel is made to use with the larger Tractors for extreme deep chiseling and is an excellent tool for preparing the ground for Beans, Beets or other crops. If used before the winter rains, it will open up the ground to a depth of ten to fourteen inches, aerating the soil and allowing the moisture to penetrate below the usual plowpan, which is to be found in almost all of our land.

The frame is of the "A" type, with steel casings and extra large standards. Wheels are twenty-four inches high, with six-inch face. Any style of chisel can be used in place of the "V" blade shown in the cut.

**The Killefer Manufacturing Co.**  
2209-21 SANTA FE AVE. BOX 156 ARCADE P. O. LOS ANGELES, CAL.

**Farm for Profit**  
and Help U. S. Win the War

Authoritative tests have proved that as high as 50 per cent increase in crop production may be expected from the proper use of fertilizer. Do you realize what that increase means? Fertilizer is the basis of crop production, and compared to the prices of the crops they help to produce, fertilizers were never so cheap as they are today.

**MORE CROPS**

will be raised in America this year than ever before. Make every acre you own or rent, produce to the limit. Fertilize your land—the increase in yield and price of crops will more than pay all the fertilizer expense—it will enable you to farm with profit. Don't spend your time working worn out land. Make it pay—Fertilize with Hauser's Organic Fertilizer.

**HAUSER PACKING COMPANY**  
9th and Mateo Sts. PHONES 10336-Bdwy. 5600 Los Angeles, Cal.

**STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS, MARCH 21, 1916.**

of California Cultivator, published weekly at Los Angeles, Cal., for October 1, 1917.  
State of California, County of Los Angeles, SS.  
Before me, a Notary Public in and for the State and county aforesaid, personally appeared Frank H. Thomas, who, having been duly sworn according to law, depose and says that he is the publisher and business manager of the California Cultivator and that the following is to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:  
1. That the names and addresses of the publisher, editor, managing editor, and business managers are:  
**NAME OF PUBLISHER** Cultivator Publishing Co. Los Angeles, Cal.  
**EDITOR** C. B. Messenger Los Angeles, Cal.  
**MANAGING EDITOR** Business Manager, Frank H. Thomas Los Angeles, Cal.  
2. That the owners are (Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.) Cultivator Publishing Co. Los Angeles, Cal.  
Frank H. Thomas Los Angeles, Cal.  
R. M. Teague San Dimas, Cal.  
3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.  
4. That the paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities as so stated by him.  
5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is— (This information is required from daily publications only.)  
Sworn to and subscribed before me this 5th day of October, 1917.  
W. E. STORRE, Notary Public in and for Los Angeles County, California. (SEAL)  
(My commission expires March 22, 1921.)

**LAYNE & BOWLER PUMPS**

**The Up-to-Date Rancher**  
realizes that an efficient pumping plant is the most vital part of his equipment. Now is none too early to prepare for next season's dry weather. Investigate at once. Don't wait. Consult with our advising engineers as to your pumping problems. They will gladly estimate the total cost of installing an entire plant or just the pump alone. Our descriptive Catalog gives valuable information.  
Ask for Catalog No. 30  
**Layne & Bowler Corporation**  
900 Santa Fe Ave., Los Angeles



# MAXWELL

Most Miles  
per Gallon

Most Miles  
on Tires

## All You Can Ask in a Car —the Maxwell

The day's work is done.  
The lamps shine cheerily. All is quiet  
and serene in the home.

Now—let's sit down and talk about  
that motor car you want to buy.

You are exacting in your ideas about  
motor cars. You demand mechanical  
efficiency, economy, and a smart appear-  
ance.

That is why we affirm that the Max-  
well is *your* car, above all others.

Mechanical efficiency! We are pleased  
and proud to discuss Maxwell efficiency  
with you.

The Maxwell builders have only one  
chassis model, which is never fundamen-  
tally changed, but constantly improved  
and refined.

Four years of concentration by one  
of the largest organizations in the motor  
car business has brought the one Max-  
well model to the pinnacle of mechan-  
ical perfection.

The engine is without a  
peer. The smooth clutch  
runs in oil. The perfected

transmission is efficient and trouble-  
proof. The mighty axles laugh at strains  
of the road.

This mechanical efficiency bears fruit  
in economy of operation. Thousands of  
Maxwell owners run their cars at a cost  
of \$6 to \$8 a month.

This year we have lengthened the  
wheelbase six inches and have put in  
6-inch instead of 3-inch steel frames.

But we have not added one pound to  
the lightweight Maxwell.

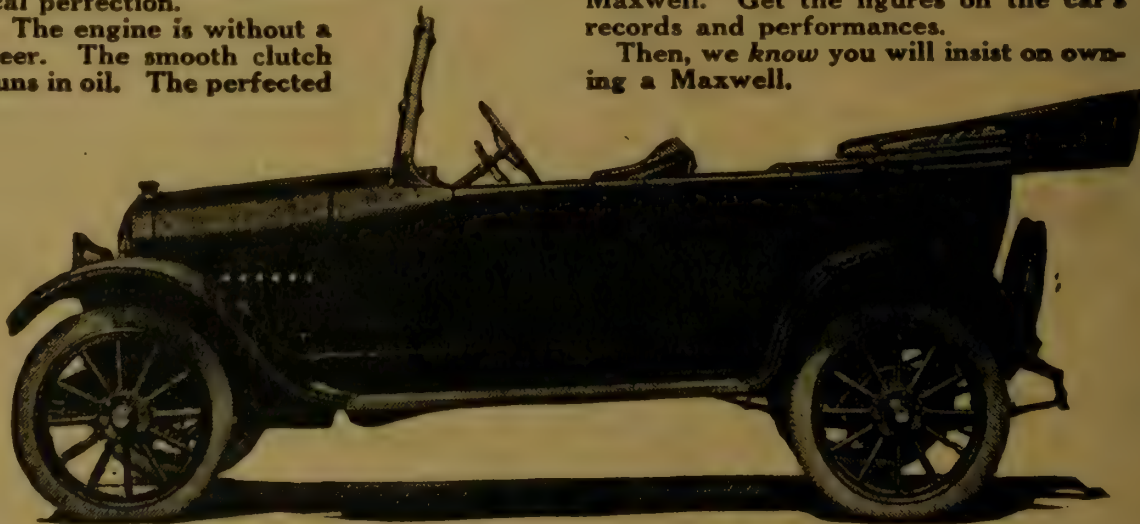
And, having perfected the Maxwell  
mechanically, we are now enhancing and  
perfecting its beauty.

This year the windshield is sloped, the  
body lines more graceful, and the body  
roomier.

The Maxwell has the same style today  
as the up-to-date models of the highest  
priced cars.

Visit your nearest dealer. See the  
Maxwell. Get the figures on the car's  
records and performances.

Then, we *know* you will insist on own-  
ing a Maxwell.



Roadster \$745  
Berline \$1095  
Sedan \$1095

Touring Car \$745

All prices  
f. o. b.  
Detroit

# Maxwell

Motor Sales Corporation

Write Today  
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# CALIFORNIA CULTIVATOR

*THE LIVESTOCK and DAIRY JOURNAL* Combined with **CALIFORNIA CULTIVATOR**

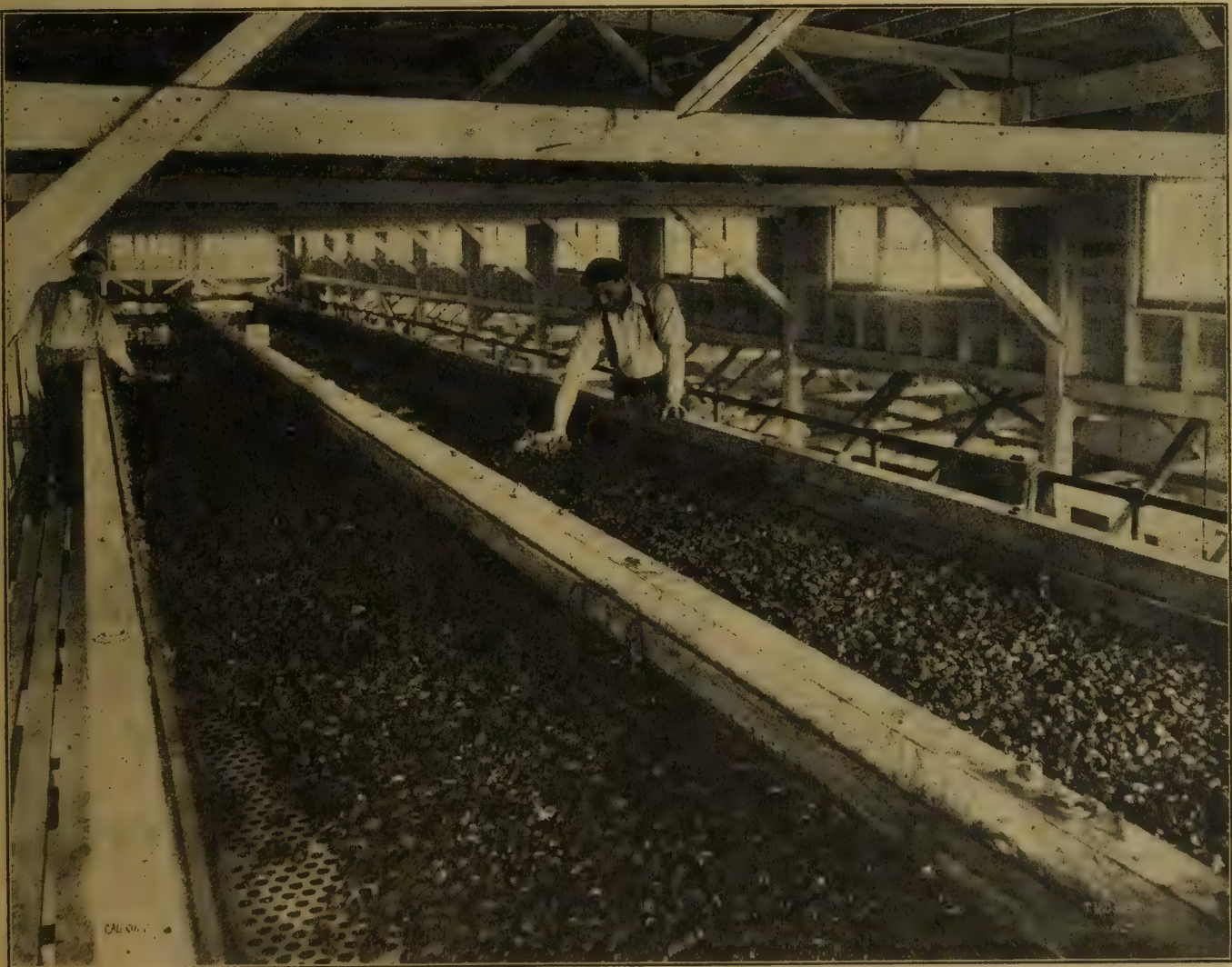
An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

CT 31 1917

LOS ANGELES

October 27, 1917

SAN FRANCISCO



Sizing Prunes in Santa Clara Valley



## Lumber Paint Plumbing

Every Time You Step Into the WHITING-MEAD STORE You Save Money

Your building estimates when figured here can be discounted from 10 to 20 per cent.

### SAVE ON PAINTS

10% to 50 per cent below market price.

Well known Standard Brands go at the following prices:

Acme Floor Wax Reg- ular 50c, now 25c. lb.	Standard House paint \$2.25 gal.
Varnish stains for floors and furniture \$1.75 gal.	Twenty-five per cent discount on paint brushes.

### SAVE ON ROOFING

We sell the Best roofing at the Least Price.

One ply roofing \$1.60 a roll.	Two ply \$2.00 a roll. Three ply \$2.25 a roll.
-----------------------------------	--

### SAVE ON PLUMBING

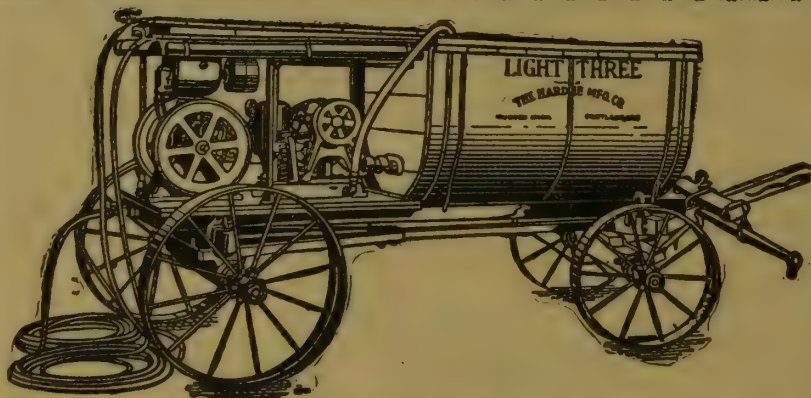
Laundry trays \$9 and up.	Five-foot bath tubs \$22. Portable shower baths \$8.
------------------------------	--

### SAVE ON HARDWARE

Special stove bargain. Durable sheet iron lined, air tight heating stoves \$2.	Garbage cans (heavy galvanized) \$1.50.
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**Whiting-Mead Commercial Co.**

9th and Maple Ave., Los Angeles



## A "HARDIE" Sprayer

for every spraying need. A Sprayer with no complications and so simple to understand; built for high pressure spraying. They are dependable, cost less to operate and maintain, HARDIE SPRAYERS are most economical. They last longer and give more continuous, uninterrupted service. This is proved by the thousands of HARDIE SPRAYERS in orchards all over the country where they are saving time and labor and are helping to produce highest grade fruit. Their superiority has made HARDIE SPRAYERS famous from coast to coast. We carry everything you need for your orchard and the best of everything, so you should send today for our 1918 catalog. Our display room is with A. F. George Company, 200 N. Los Angeles St., Los Angeles, Cal.

**Hardie Manufacturing Co.**  
PORTLAND, OREGON and LOS ANGELES, CAL.

# Farm for Profit

## and Help U. S. Win the War

Authoritative tests have proved that as high as 50 per cent increase in crop production may be expected from the proper use of fertilizer. Do you realize what that increase means? Fertilizer is the basis of crop production, and compared to the prices of the crops they help to produce, fertilizers were never so cheap as they are today.

## MORE CROPS

will be raised in America this year than ever before. Make every acre you own or rent, produce to the limit. Fertilize your land—the increase in yield and price of crops will more than pay all the fertilizer expense—it will enable you to farm with profit. Don't spend your time working worn out land. Make it pay—Fertilize with Hauser's Organic Fertilizer.

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# California Cultivator

Vol. XLIX No. 17

LOS ANGELES: October 27, 1917

One Dollar Yearly

## 7th Annual California Nurserymen's Convention

Nurserymen Gather in San Jose and in Berkeley and Discuss Matters of Transportation, Recorded Trees and Many Other Items of Interest to the Nursery and Orchard Industry. Santa Clara Valley Proves Royal Host

**M**IKE Flannery, the Westcote agent of the Interurban Express Company, leaned over the counter of the express office and shook his fist. Mr. Morehouse, angry and red, stood on

the other side of the counter, trembling with rage. The argument had been long and heated, and at last Mr. Morehouse had talked himself speechless. The cause of the trouble stood on the counter between the two men. It was a soap box across the top of which were nailed a number of strips, forming a rough but serviceable cage. In it two spotted guinea-pigs were greedily eating lettuce leaves."

And Mike and Mr. Morehouse, who were the heroes of Ellis Parker Butler's story, "Pigs is Pigs," had no more serious problem than that which confronts nurserymen of California and the Western Classification Committee of the railroads. All have probably read "Pigs is Pigs," and the comical situation in which Mike is placed is so far fetched and makes such an improbable story that it affords many a hearty laugh. Nurserymen of California, in annual session in San Jose, found themselves in much the same situation as Mr. Morehouse, and Mike Flannery seems to be an excellent prototype of the classification committee. The committee maintains that for some reason a citrus tree is entirely different from an evergreen tree of any other kind and hence first class rate and a half obtains with citrus trees, and the nurseryman or planter, as the case may be, pays 33 1-3 per cent penalty because of the unreasonableness of the classification commit-



California Nurserymen Ready for the Eats

The San Jose Chamber of Commerce and Nurserymen of Santa Clara Valley gave Royal Good Time to Nurserymen at Alum Rock Park, one of the Beauty Spots of the State.

tee. Mr. Meriwether, chairman of the committee on transportation of the state association, has written, then written again, and finally made a trip to Chicago in order to secure a reasonable adjustment of this and some other problems in transporting nursery stock. The chairman of the committee representing the railways has agreed to a meeting on the Pacific Coast when the matter can be pre-

sented to the classification committee, but like Mike's guinea-pigs the problem has only grown larger and the question has been referred from one to another of the classification committee and the Pacific Coast meeting has been deferred indefinitely.

All the nurserymen want is reasonable treatment and a ruling which ordinary railway agents—some of

Continued on Page 422



Joe Brooks

Secretary Chamber of Commerce and around Santa Clara Valley Booster.

## Better Seed---More Wheat

The Food Commission is Appealing to California to Produce Thousands of Acres More of Wheat Than Last Year. Seed is an Important Factor. Treatment for Smut Another. Letters Show That Provision is Made for High Grade Seed

**A** SUBSCRIBER who is anxious to serve his country and grow food and incidentally increase his own profits has written asking the Cultivator as to seed wheat, where it can be secured, how much it costs and how it should be handled. The handling, i. e., the practice of seed bed preparation, drilling or broadcasting, and other items are worthy of separate articles. But as to the seed:

The Cultivator has written to several seed houses and has information which follows, showing that there is abundance of seed and that it may be had at reasonable prices. The department of agriculture has issued warnings that in our zeal for planting more extensively we must be careful and not pay exorbitant prices for seed nor permit any abnormal expenditures. The fancy grades of wheat are being offered at long prices and the wheat grower may benefit himself by making some experimental plantings, but the main crop stick to the proven varieties. It is to be noted that the Grain Corporation, which names the prices on commercial wheats, permits the handling of seed wheat at additional prices, to allow for extra cost of cleaning with reasonable price to the grower. The large millers have agreed to handle and clean wheat at actual cost.

From a university standpoint we have the following from

Prof. Jno. W. Gilmore

As you probably know, the provisions of the law referring to the storage of grain in warehouses do not apply to those stocks of grain which are to be used for seed. In other words, while commercial stocks must remain in the warehouse more than 30 days, yet for material design-

ed for seed this does not apply. There is now concerted action on the part of several of the leading millers of the state, including the Sperry Flour Company and the Globe Milling Company and also many of the warehouse men, to locate and set aside good stocks of standard varieties of wheat for seed purposes. These stocks will be cleaned and graded in order to rank as No. 1 wheat. Farmers are being requested wherever possible to put in their orders for seed wheat early, dealing in every instance through the local seed dealers or warehouse men. This procedure is desirable for if a sufficient amount of the desired variety may not be on hand, the milling companies have agreed to see that it is secured at once without extra cost to the farmers. By dealing through the local warehouse men or dealers the necessity for credits is oftentimes obviated. In those counties where farm bureaus are organized and where farm advisers are at work the farmers are pooling their orders to be supplied through the farm bureau. By this means the desired seed can be secured in the locality oftentimes in carload lots, thus saving expense to all concerned.

There are also under the direction of the state university five men in the field and available to give demonstrations and suggestions to wheat planters regarding the treatment of their seed wheat for the prevention of smut. These men are working mostly in the counties where farm bureaus have not been organized but are in a position to go into any part of the state where they may be wanted for assistance regarding the planting of the fall crop of wheat. We are also attempting to indicate to those who desire to know the standard varieties of good milling wheats which will in

all probability do well in the various sections of the state.

Sperry Flour Company

We carry a supply of seed wheats, oats and barley, all these grains recleaned. Of course we are more interested in wheat than either oats or barley, and in the course of the season try to pick up white milling wheats for sowing purposes as true to type as it is possible to get them. We also test these wheats for seed if they have the proper milling and baking qualities, as wheats generally retain their characteristics, and one of the most essential things to do in raising wheat is to obtain seed with the best milling qualities possible to get.

After the grain comes from the farm it is thoroughly recleaned and a heavy suction put on to draw out all the light grains, leaving only the large healthy kernels.

You ask about the prices on these wheats and in reply will state that at all times we have to pay a premium in order to get the best. We intend selling recleaned wheat for sowing purposes at actual cost, plus the cost of cleaning and carrying charges.

One of the best milling wheats grown in California is the White Australia, the price of which is \$4.00 per hundred weight here today. Another milling variety that promises to do well in California is the Early Baart and the price of this wheat is \$4.50 per hundred weight. Club and Sonora wheats are \$3.90 per hundred weight and Red Oats \$3.40 and barley \$2.75 per hundred weight f. o. b. Stockton. These are prices that we are quoting today but they are subject to change at any time. (Letter written October 1.)

Great Western Milling Company

Seeds are a matter of vital import-

ance, but we find the farmers in a very large percentage of cases want to consider price first, over purity and cleanliness. Therefore it becomes necessary for us, in order to meet competition to give the farmer anything he wants.

We are in a position to furnish any of the seeds from any locality and we can also furnish samples of any varieties, and with the new testing apparatus we are just installing we will be able to give exact percentages of foreign substances or seeds contained therein.

Morris & Snow Seed Company

There will probably be enough seed grain to supply the demand this winter and we will be in position to supply most of the varieties used here. As to price this always depends on the supply and demand. Seed grains usually run 50 cents to \$1.00 per hundred above the commercial grades.

Germain Seed & Plant Company

We have selected and put aside for the coming season the following varieties: Sonora wheat, Defiance, Propo, and Durum, or Maccaroni.

We are endeavoring at the present time to obtain a supply of White Australian. It has been a good many years since any of the genuine White Australian wheat seed was brought into this country, and there seems to be very little to be found at the present time, although in a great many sections this wheat gave excellent satisfaction, bringing a better price on the market than any of the other varieties grown here.

In San Diego and Imperial Counties they are obtaining some very good results from the Defiance wheat. This wheat is a most reliable rust-proof

Continued on Page 422



# Going to Plant?

Ready  
November  
15th



## Send for This Book

Which accurately describes and prices more varieties of trees, shrubs, vines and roses than any other Nursery Catalogue in the United States.

### This New Illustrated Catalogue and Practical Planters Guide

(REVISED AND COMBINED)

**SENT FREE ON REQUEST**

**Some important features of this book are:**

- Beginning right.
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This book is equally valuable for the small fruit grower as well as the grower who controls hundreds of acres. Even though you have only a few vines or trees, you will find this book useful as it tells you about all kinds of plants and trees and how to grow them.

**Fancher Creek Nurseries**  
202 Holland Building Fresno, California.

## Recorded Nursery Trees



**P**EDIGREED vs. recorded trees has been discussed at some length by Dr. Colt in former issues of the California Cultivator, and nurserymen and orchardists have never yet fully decided on the proper term to apply to selected buds from trees of known productivity. To the orchardist the term is immaterial; what he wants is to be certain of securing quality trees; the nurseryman wishes to use the word which will convey to the orchardist information as to his trees.

In the issue of the Cultivator of January 20, this year, Dr. Colt discussed this matter, advocating the use of "recorded," also the sealing of such stock by the county horticultural commissioner or his deputy. Details of this plan are given in the issue of the Cultivator above referred to. Dr. Colt was invited to discuss this subject more fully at the State Nurserymen's Convention where he gave much of the information already given to our readers in that issue, in addition referring to the advisability of securing buds and scions from recorded trees. He said:

Proceeding now from the realm of science to the matter-of-fact concerns of practical orcharding in this state; what do we find? We find that with the possible exception of the nectarine, none of our California orchard fruits have so far given rise to a sport which possesses any marked commercial value. While the Navelencia and Thomson Improved oranges have been advertised for many years, you nurserymen know that they are not now being planted on any large or commercial scale. Furthermore if sports of great apparent value appear it will be necessary to test them for a number of years or else repeat the failures of those who a few years ago were planting large acreages to Thomson Improved ranges.

The overwhelming majority of the sports which occur in this state, whether they are comparatively rare as with apples or more frequent as with citrus fruits, are retrogressive and represent deterioration in the type. These aberrant forms have crept in unnoticed and have been increased by propagation and widely disseminated. The Australian Navel orange is a good example of these degenerates. There are probably similar cases among walnuts, figs, prunes, and other fruits. The frequency of these off types in any class of fruit probably depend upon the degree to which they are heterozygous or the amount of genetic disturbance established by previous crossing.

The popularization of the idea of improvement of tree fruits by bud se-

lection has confused the common mind and led many to lose sight of the fact that the greatest function of bud selection in California is the rescue of our degenerating varieties rather than their improvement. The production of our orchards is subnormal. Bud selection is an efficient means of bringing it back to normal. The scientific principles involved in the improvement of varieties by bud selection by no means understood. Our journals are filled with scientific discussion of the subject. On the other hand, there is not a particle of doubt about the efficacy of bud selection in standardizing our orchard trees and bringing their yields back to normal. The greatest function of the performance record is to mark poor trees for elimination. It also has some value helping to locate mother trees for cutting.

Now I take it that the nurserymen of this state who are business men are interested in facts rather than theories. It is a fact that they can be of inestimable benefit to the fruit growers of this state if they will propagate from selected buds only. It costs little more to produce such trees, unfortunately the public has not been educated to the point where they will pay the increased cost for all trees produced. There are many planters however, who are willing to pay an adequate price for trees of known quality.

In regard to terminology, I wish to take this opportunity to again go on record as opposing the use of the term "Pedigreed" in connection with plants propagated by cuttings, buds or grafts. The word pedigree is derived from the French pied-de-grue, meaning foot of a crane and refers to a table or chart of ancestry showing the lines of descent converging to a common point like the toes of a crane's foot. The word was evidently coined for use in connection with animals. Many people who are poorly versed in horticultural matters have a more or less vague idea that if a tree is said to be pedigreed it must necessarily be of fine ancestry. This is often taken advantage of by the astute tree salesman. Therefore my chief objection to the term "pedigreed" is that it implies more than is justifiable, and as long as the general public does not realize this, it possesses unwarranted selling power.

The term "recorded" trees is to the mind much to be preferred to pedigreed. They are trees for which a record has been kept both of the fruiting performance of the tree from which the buds were taken and of the propagation of each individual tree placed in the nursery.

## Date Palm Scales Eradicated



**H**ORTICULTURAL Commissioner G. H. Hecke is in receipt of a communication from Walter T. Swingle of the United States bureau of plant industry, that the government experts have solved the problem of controlling the troublesome scales which infest the date palm. This news is received with especial interest in Southern California as the date industry is becoming a very important one in this section.

For some time there has been on the statute books of the state a law restricting the movement of date palms from one locality to another, because of the danger of spreading the Parlatoria and the Marlatt scales—the two worst pests of the date palm.

Now comes a report from the government that these pests can be controlled and that strict watch will be kept over importations in future. Mr. Swingle's letter says in part:

"You will be interested to know that Mr. Shamblin, working for the federal horticultural board in cooperation with me, reports very gratifying progress in the eradication of Parlatoria blanchardi from the date palms in California. It is highly probable that this scale will be entirely eradicated within the next year or two, provided strict control is exercised on importations. I am contemplating recommending to the federal horticultural board that in future importa-

tions of date offshoots from abroad be held in permanent quarantine and never released for distribution small lots, in other words, that they be planted on a tract and kept there and only clean offshoots grown from these imported trees, when declared free from scale insects, can be sent for general planting.

"I feel that unless some such modification is made of the regulations the federal horticultural board immediately after the close of the year unprincipled importers may import large numbers of date offshoots of inferior varieties and sell them at retail all over Imperial County and the eastern half of Riverside County. The present regulations are not sufficient to guarantee that such offshoots are entirely free from scale insects, and experience has shown that the work of inspection rendered very costly by small plantings, in dooryards, etc. It is therefore my intention to suggest that future imported offshoots be planted only in large blocks where they can be held permanently in quarantine and observed easily by the inspector. "Mr. Shamblin also finds he is making great progress in controlling Phoenicoccus marlattii and thinks it may be possible to grow Marlatt scale free offshoots from infested trees, provided they are sprayed in proper manner. Every effort is being made to prevent the spread of the scale to seedling palms in Riverside



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ty and I believe successfully, like the cooperation of Horticultural Commissioner D. D. Sharp and agents. I feel that we will have

accomplished a most gratifying result if we are able to eradicate *Parlatoria blanchardi* and to control completely the *Phoenicococcus marlatti*."

## Citrus Performance Records

**TOP-WORKING** with buds from trees of known productiveness will do much to improve yields of citrus fruits. Deterioration in a number of California citrus orchards has been cause of complaints from growers who find that in some cases they are securing lower yields and a larger portion of low quality fruit than in previous years. Investigation by experts of the United States department of agriculture has shown that this trouble is due to the unintentional propagation of strains which are undesirable because of bud variation. It is to correct this condition that top-working is recommended.

Bud variation is of more or less frequent occurrence in the trees of citrus varieties, as is stated in the Farmers' Bulletin No. 794, "Citrus Fruit Improvement: How to Select and Use Tree-Performance Records." It is not in itself frequent enough seriously to affect the commercial product of the orchard. It is because undesirable bud variations have been indiscriminately propagated in nurseries along with the desirable strains of citrus fruits that it is now found in the commercial orchards a sufficient number of undesirable trees seriously to affect the commercial quality of the fruit and yield of the orchards. While there is no generally accepted theory to account for bud variation it appears probable that the effects of it, as far as commercial citrus plantations are concerned, can be controlled through the use of buds selected from individual trees which are known to be consistently heavy producers of fruit of the most desirable kind.

The first step in the improvement of an orchard by this method is to obtain records of the individual trees. For this purpose the bulletin mentioned recommends a system of numbering under which each tree is given a number, one indicating the division of the orchard to which it belongs; the second, the row; and the third the location in the row. These numbers should be painted conspicuously on the tree. After each tree has been numbered a record should be kept of the amount and grade of all fruit picked from it. This involves a slight additional expense in picking, but the advantages will more than offset the additional outlay. Ordinarily it has been found best to have one man from each picking crew assigned to this work.

The data obtained in this way should be transferred to a form showing the records of several successive seasons. The information afforded by these records for two successive seasons will, it is said, demonstrate to every grower the importance of the system. The records for four successive normal seasons will probably afford an adequate basis for selecting the best trees as sources of bud wood for propagation. This wood should be cut only from the best trees of the most valuable strain, and only fruit-bearing bud wood should be used for propagation. Every bud stick should have one or more typical fruits attached, if possible. The wood should be used as soon as possible after it is cut, but if it is necessary to keep it for some time it should be packed in sterilized sphagnum moss and stored in a cool room, with a temperature preferably of about 70 degrees Fahrenheit and a relative humidity of 90 per cent. The spring is the most favorable time for budding, but it can be done at any time during the growing period of the tree.

Two or more of the main limbs of an undesirable tree which it is proposed to top-work should be selected as the foundation for the new head. The selected buds should be inserted in these limbs about one to two feet from the trunk of the tree and after they have made a union with the tree the limb should be sawed off about six inches above the inserted bud. The freshly cut surfaces should be covered with some pruning compound and the remainder of the tree coated liberally with whitewash or other ma-

terial as a protection. After about a year's growth the limbs should be cut back again so that only one bud is left on each.

The Cultivator still has on hand a few of the annual and period tree record blanks which aid in keeping records of every tree in the orchard.

With corn worth two cents an ear, or more, it pays to husk the cornfields clean. The ears that are missed don't help to feed the Allies.

### GOOD PRICES FOR OLIVES



MANAGER Vernon Campbell of the California Growers' Association writes

As result of our last year's olive pack at our association plant at Hemet we returned our growers, as follows: For small olives, \$104.27 per ton; medium, \$142.50; large, \$187.32; extra large, \$216.04; mammoth, \$282.14.

This season we expect to return our growers at least \$50 per ton more for the various sizes, as the canned olives will bring more on the market.

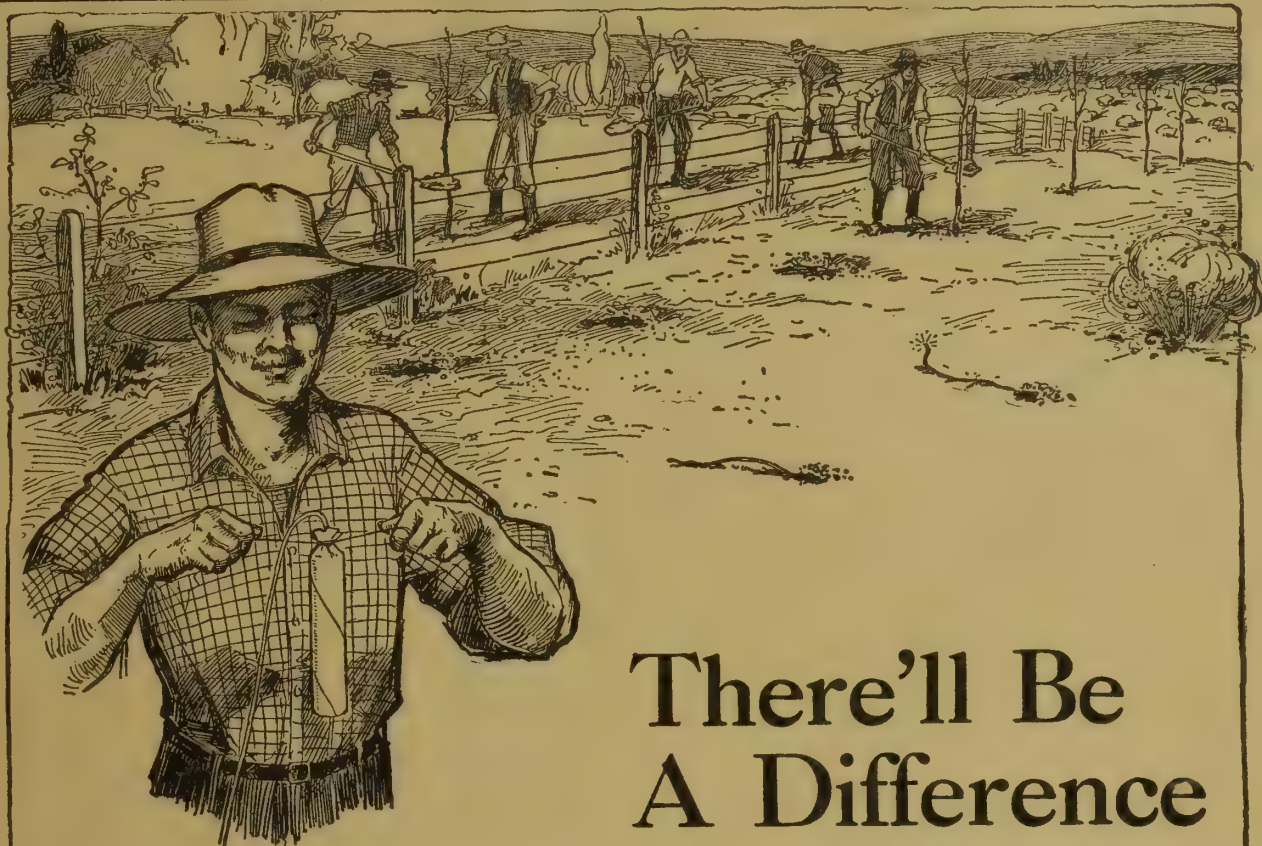
One reason we are able to make the growers such returns is that the same factory which handles the deciduous fruits handles olives in the winter time. On account of the very large tonnage of other fruits handled the expense borne by the olives is very small and thus reduces the cost of

packing. No plant operating on olives alone can ever pack at so low a cost as we are able to pack in these co-operative canneries.

If the olive growers would become members of the California Growers' Association and take advantage of the association's canning plants in the packing of their olives, they would be able to realize more for their crop than has ever been paid in California.

### INCREASE QUARANTINE INSPECTION

I have just received the report of Avery S. Hoyt, southern field deputy, upon his trip to Florida to investigate citrus canker, and the serious situation which he found in that unfortunate state leads me to urge everyone of you to keep up, even increase, the efficiency of the quarantine inspection. We must keep the citrus groves of



## There'll Be A Difference

**I**F your neighbor plants an orchard in holes dug with a spade, and you plant in holes made with Hercules Dynamite, there will always be a difference in your favor.

The difference will show in the first cost in time and labor; in the size and strength of the trees a year from now; in the quantity and quality of the fruit obtained four and five years hence; and lastly, in the profits deposited in the bank. Eventually your neighbor will follow your method of tree planting. The difference will make him.

## HERCULES DYNAMITE

not only makes holes more quickly and cheaply but it makes *better* holes. The soil is loosened and broken up. Roots have a chance to spread as they should. The tree has nothing to do but live and grow and prosper.

When planted in a spade-dug hole it

has to fight for life. The difference always shows.

Find out more about the use of Hercules Dynamite on your farm. Write today for the 64 page book, "Progressive Cultivation." It is sent free on request. The coupon below is ready for your signature.

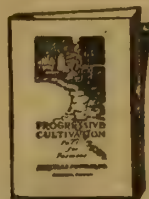


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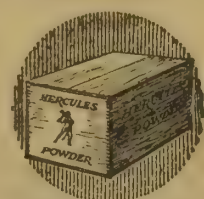
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For dormant season spraying you want a good, general clean-up spray; a spray that will serve not alone as an insecticide—but will tone up and stimulate your fruit trees. For instance—

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Among the other sprays we manufacture or distribute are:

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Whenever you have any questions to ask—write our Service Department, in charge of Paul R. Jones, Entomologist. This expert advice costs you nothing.

Insecticide Department

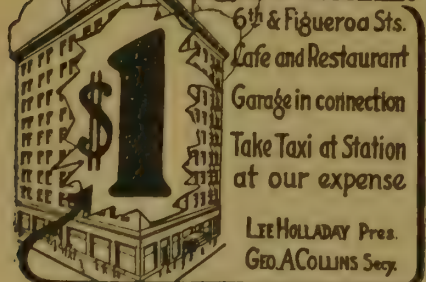
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Farmers can best do their bit by doing their best now.

California clean as far as it lies in our power to do so.

Mr. Hoyt will take a trip through the citrus sections of northern California the week of October 1 to 6 and will address meetings of the growers at Fair Oaks, Orland, Oroville and other points. Upon his return to Southern California the latter part of October he will be prepared to give a stereopticon lecture on the Florida situation.—G. H. Hecke, State Horticultural Commissioner.

### BETTER SEED—MORE WHEAT

Continued from Page 419

wheat, does well on the high, dry hills in San Diego County and will do better under irrigation in the Imperial Valley than almost any other variety.

The following varieties of wheat comprise what we have to offer, and the prices quoted are per hundred pound bags. In larger quantities we shall be glad to quote special prices on request: Defiance, \$5.00; Durum or Maccaroni, \$5.50; Sonora, \$5.00; Turkey Red, \$5.50 Propo, \$5.00. We also quote: Rye seed, \$4.25; barley, common, selected, re-cleaned, \$3.00; oats, Texas grown, red, rust-proof, selected stock, \$3.75; speltz, or emmer, \$5.00; buckwheat, \$5.50. (Prices as given October 4.)

We are at the present time working on a lot of Beardless barley, also Hulless and Bald barley, to be shipped from Oregon or Washington; but are unable at this time to state definitely whether we shall be able to get this seed in time for fall planting.

Globe Grain & Milling Company

It is our opinion that all varieties of seed grain will be held very high this year, due to the peculiar existing conditions. While a maximum price has been placed on wheat by the administration, this does not apply to seed wheat. We are disposing of considerable Oregon Bluestem and Early Bart, to various sections of the country for seed purposes. Regarding chicken feed varieties: There are still ample stocks of choice Sonora remaining in the San Joaquin Valley warehouses to take care of any demand which may arise, and we do not anticipate extremely high prices on this particular variety.

The California oat crop was very short this year, and practically everything raised in this state was either moved to the San Francisco territory or retained at shipping point for local use. Southern California has been compelled to depend entirely on shipments from Texas and Oklahoma, and prices have not been exorbitant, compared with values of other grains.

We are disposing of a fair quantity of seed barley in this territory, most of which is grown in the north end of the San Joaquin Valley. This is choice quality, fairly heavy, clean, bright, and has always given very satisfactory results.

Aggeler & Musser

We are usually able at all times to furnish high grade seeds of wheat, oats, barley, etc., at the market price.

C. C. Morse & Co.

In reply to your letter asking for information as to barley and other grains for seed, we would say that we are carrying these and are putting out an extra good grade.

The price of this cleaned seed is of course higher than the market price, for everything that is taken out is a loss and the labor charges are high these days. It is however, by far the cheapest seed that a planter can put in, for there is no use in paying for dirt, infertile seed or wastage of any kind.

### NURSERYMEN'S CONVENTION

Continued from Page 419

which are of Mike Flannery's type—can understand.

But the report of Mr. Meriwether for his committee made only a very small part of the interesting program and discussions which occurred in San Jose last week at the seventh annual session of the California Association of Nurserymen. Leonard Coates, the president, and Joe Brooks, all around chief factotum and Poo-Bah of the Santa Clara Valley, had made complete preparations for a great week, and indeed it was a week of pleasure and, we believe, of profit to all nurserymen attending.

The sessions began on Wednesday evening when the mayor or city manager of San Jose extended a welcome to the visitors, and his proffer of the entire city to the visiting nurserymen was surely kept for everything which the nurserymen could desire was turned over to them until the closing session on Friday evening, an executive session in which nurserymen discussed in a heart to heart way their own business affairs.

However, the real closing session of the convention was that held in the city of Berkeley on Saturday afternoon. Dean Hunt appeared at the first session of the nurserymen on Wednesday night and gave personal invitation to attend the dedicatory services of Hilgard Hall. The invitation was unanimously accepted for practically every nurseryman who attended any of the sessions of the week appeared before the speaker's stand at the dedication. Later in the day the first convention to hold a session in the new building was called to order.

The association now has 152 members but the attendance, especially at opening time, was much smaller than President Coates had anticipated, in fact, not till the closing day when George Roeding arrived and gave some additional pep to the discussions was the chamber of commerce hall fairly well filled.

State Horticultural Commissioner Hecke and his deputies, together with other officers of the state commission, were also present during the closing sessions, and while there was some discussion on the part of nurserymen to the effect that the present state law was one of the most unreasonable ever written into any statute book, the officers of the state and county commissions each maintained that reasonable enforcement of the reasonable measures of the law would only result in good to the entire fruit growing industry. The dependence of the fruit grower upon the nurserymen and vice versa was a point made by many of the speakers.

Besides Mr. Meriwether's report on transportation Mr. Crow touched upon the present condition of the deciduous fruit trade and its effect upon the nursery business. Mr. Swett, chairman of the committee on viticulture, made report of the present outlook and emphatically sustained the effort being made to secure the passage of the Rominger bill. Mr. Kruckeberg reported on publicity secured for the association and the report of E. H. Elmer of San Jose on exhibitions was a visible one in the excellent showing of plants and bulbs which he secured from the gardens of the Cottage Grove Nurseries. Mr. Ward has a branch of his Humboldt County nurseries just in the outskirts of the city of San Jose.

Another discussion which called for general participation was that introduced by Max J. Crow, "How to Make Labor Content." Mr. Crow stated that he had not employed, and hoped that he should not employ, other than white American labor, but there was a labor situation which called for correction, and so long as organized labor held its present attitude the only solution of the problem which confronted the employer of labor was the securing of Asiatic labor or that from any other section which offered. His position was commended and condemned, for many of the nurserymen felt that regardless of the cost to them and other employers of labor, California should be maintained as a home for Americans or those who will become Americans.

Mr. Crow referred to the awful destruction of orchards in Europe and to the duty which will confront fruit growers of America for a decade to come. Mr. Bergholdt and other speakers called attention to the increasing consumption of fruits, stating that they are more and more considered a staple and the present time was one in which encouragement should be given to increased consumption because of the need of Europe for staples easy of shipment. Americans now eat far more fruit per capita than any other people, and in the production of this fruit, while California has no monopoly it does have advantages possible to no other section of the world. It being true that California fruit is becoming a staple there is a call for greater production of dependable nursery trees.

Excepting for the opening session the only evening session open to the public was that of Thursday which was given over entirely to discussion

of landscaping or ornamentation the home grounds. Planting and care of lawns, which had been assigned Mr. Wakefield, who had been named commissioner of San Jose, was charged to take in general landscaping, especially with reference to city improvement. John Vallance discussed the vegetable garden as a home beautifier, and if his own home garden comes up to his estimate of what home vegetable garden should be

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OLIVES AND GRAPE VINES  
SHADE AND ORNAMENTAL TREES

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**2522 Tulare Street  
Fresno, Cal.**



ne has a most beautiful setting. One of the interesting discussions brought out during the convention was that of W. L. Howard of the division of pomology, University of California, who has been making investigation of the stocks and information which he has secured from many nurserymen. He spoke as follows upon:

**Stocks for Deciduous Fruit Trees**  
A survey of the leading California nurseries in late summer 1917, showed the average that the following stocks are now being used for deciduous fruits:

For almond: Almond (bitter and sweet) 56 per cent; peach 44 per cent.  
For apricot: Apricot 58 per cent; peach 27; Myrobolan 13; almond 3 per cent.  
For cherry: Mazzard 71 per cent; haleb 26; others 3 per cent.  
For peach: Peach 91 per cent; almond, apricot and Myrobolan combined 9 per cent.  
For pear: Japanese or Serotina 63 per cent; French 33; and quince 4 per cent.

For plum: Myrobolan 60 per cent; peach 37; and almond 3 per cent.  
For prune: Myrobolan 64.3; peach 11.4; and apricot 1 per cent.

The reasons given for planting almond on peach are that peach is more adaptable to extremes of too much and too little moisture and that it thrives better than almond root on thin or dry soils. Also peach is not so susceptible to root knot. It is universally conceded that Myrobolan is a good stock for almond on account of its union.

While peach is pretty generally grown upon peach stock, almond seems to be preferred by many for dry soils. This is apparently in conflict with the statement that peach is a good stock for almond because it is better than the almond root on dry soils. Myrobolan is used for soils inclined to be wet. Davidiana has been successfully used on a small scale for growing peaches in alkaline soil where peach stock had always failed.

Many nurserymen and growers prefer to use peach or even almond stock where the trees are to be planted on dry, gravelly soils. In like manner, peach is the preferred stock for trees in foothill soils where peaches are known to succeed.

Peach is a popular stock for apricots where the trees are to be planted on dry or gravelly land, and Myrobolan stock adapts the trees to soils usually too moist for apricot roots. Opinion is divided regarding the advisability of using Mahaleb as a stock for sweet cherries. Some are enthusiastic at the prospect, saying that Mahaleb is the coming cherry stock, while others can see no good in using it at all except for sour cherries. The Mahaleb advocates say this stock will enable the trees to better withstand extremes of too much or too little water in the soil, while the opponents declare it makes a poor union and harms the trees.

Nurserymen are pretty well united in the advisability of discarding the French stock for pears in favor of the Pyrus serotina, or the so-called Japanese stock, which is quite resistant to blight and wooly aphids.

Every S. Hoyt, deputy state horticultural commissioner, outlined some of the difficulties and awful losses endured by Florida citrus growers because of the citrus canker.

The resolution committee reported an expression of appreciation for the courtesies of the San Jose Chamber of Commerce also of the Santa Clara Valley nurserymen who extended the glad hand. San Jose ladies led to the pleasures of visiting by various courtesies.

The luncheon at Alum Rock, a favorite resort of Santa Clara Valley, was put up by the city of San Jose, was a final pleasure of the San Jose meeting.

Officers for next year are: President, Max J. Crow; vice-presidents, J. Bergtholdt, Charles Howard, Henry Ehl, T. E. Mabey, George F. Otto; secretary-treasurer, H. W. Kruckeberg.

At the recent annual meeting of the Bernardino County Fruit Exchange James Barnhill of Colton was elected president and John I. Cunningham, secretary-treasurer and manager.

## Apricot Disease and Grape Mealybug

**J**P. CUNDIFF paid a visit recently to Fresno, Kings and Tulare Counties. While in Kings County he spent some time with Commissioner Fred K. Howard inspecting apricot groves infested with the unidentified gum disease which is becoming such a serious problem. He reports: "The apricot disease is assuming rather alarming proportions in some sections of this county and unless a remedy is promptly found which will control this disease severe losses will result to apricot growers."

### Grape Mealybug

"A number of vineyards were investigated where the mealybug infestation is the most severe. This included the 40 acre vineyard where Prof. R. L. Nougaret of the federal department of agriculture has been doing experimental work for the control of this pest for the past three years. The grapes were being picked and placed on trays, which gave an excellent opportunity to observe the severity of the infestation and injury wrought by this pest to the crop being harvested.

"Commissioner Howard informed me that this pest, (*Pseudococcus bakeri*), has spread within the past few years until it can now be found

in most of the vineyard sections of Kings County. This pest has also been found in some of the vineyards of Fresno and Tulare Counties.

"Commissioner Howard reports that in all of the experiments thus far made by him, working in conjunction with Prof. Nougaret, no method has been devised whereby over 95 per cent efficiency has been obtained in the control of this pest. The best results thus far secured have been by an application of oil spray in the early spring just after the vines have been pruned. An efficiency of 95 per cent does not keep the pest below a point of injury to the crop or prevent its continued spreading to other vines."

### SOUTHERN CALIFORNIA APPLE SHOW

Apple growers of Yucaipa Valley are planning for the Southern California Apple show to be held at Yucaipa, November 1-4. The committee of local people pushing the matter are: David Coey, manager; J. B. Hundley, secretary-treasurer; George Pendleton, Albert Redding, F. E. Dillon, Mrs. H. E. Church, Mrs. David Coey.

The Raisin Growers' Association this year expects to handle close to 150,000 tons of raisins.

### SHIPPING TOMATOES IN SOUTHERN CALIFORNIA

By R. G. Risser, Bureau of Estimates

Although Southern California has a larger acreage than last year it is not probable that the shipments of tomatoes will exceed the shipments of last year. Much difference of opinion is expressed on the production this year, but there is general complaint and much talk of the crop being short. While some of the sections have been near normal, comments on the other districts indicate that there is not much more than half a crop.

The first car was shipped from Imperial Valley June 4. Then San Pedro Hills put stock on the local market. The first car from Wilmington rolled July 7, and the first from Moneta August 11. El Monte, San Fernando Valley and Orange County have recently started shipping and will continue for a month or more if the weather is favorable.

The number of cars yet to come from the principal shipping points is estimated as follows: Gardena-Moneta, 50 cars; San Fernando Valley, 30; Orange County, 200; Newmark, 15; Escondido, 40; total, 335.


It must be understood that weather conditions at this season are uncertain and heavy rains or frosts would cut the crop short.

Worms which are usually troublesome in the tomatoes (especially the first ones to ripen) have caused more loss than in past seasons.

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THREE HUNDRED ACRES  
WEST DESSAU STREET.



Ontario, California,  
October 18, 1917.

**To Our Customers:—**

Many a man sold his fruit this year for more than his land cost him. This means a big acreage will be planted—a big demand for trees.

And already the stock is showing up short. So we say to our friends—place orders early.

Take peaches—or apricots—or walnuts, you yourself know of cases where this year's crop more than paid for the land. Lots of these folks plan to plant. And some will have to go without.

The wise ones are placing orders now—here's a letter from Moorpark dated October 18th:

"Please book me for 300 and A. H. for 500 Royal Apricots, for delivery January 15th. The trees that I received from you last year proved very satisfactory and made a good growth under unfavorable conditions."

My 28 years in the business counts—I am able to advise. Better let me know, right now, what you're going to want.

We can fill your orders for fruit trees of all varieties, with satisfaction. Don't put off writing.

ARMSTRONG NURSERIES,  
J. S. Armstrong, Prop.

Send your name  
for 1918 catalog,  
out in December.

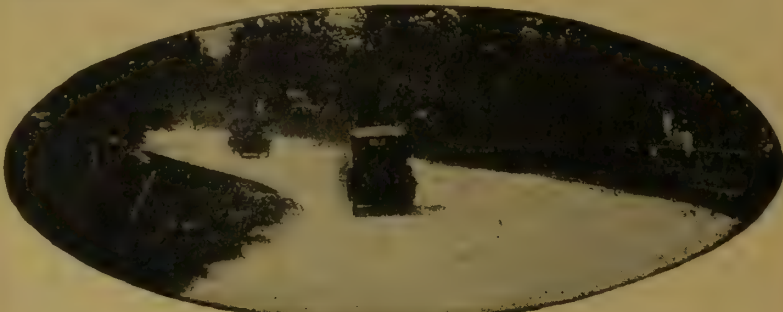


## A Simple Road Problem

What is the repair cost ?  
on your old roads ?

How much would con-  
crete roads cost ?

Your tax receipts will answer the first question. Your county engineer should be able to answer the second. By subtracting the cost of permanent roads from the repair expense for 20 years of poor roads you will find capital for building the permanent type, like the one below:



Sheridan Road, near Kenilworth, Ill.—Built by Edw. Laing, Highland, Park, Ill.  
C. N. Roberts, Chicago, Engineer

THE fact has been established that in the average rural community in the United States, temporary roads' cost to repair and rebuild during a 20-year period, about twice what it would cost to build permanent concrete roads.

**Concrete roads are not an experiment.** Concrete roads are not a luxury. Any community can afford them. No community, from the standpoint of economy, can afford to be without them. Reasonable in first cost, low in upkeep, they immediately become a profit-earning asset of the community.

**CONCRETE ROADS**  
Their Advantages  
No Mud—No Dust  
No Ruts—No Holes  
No Skidding  
Easy Hauling  
Smooth Riding  
Long Life—Safety  
Always Ready for Use  
Low Maintenance  
Moderate Cost

**Be sure you know what a concrete road is**  
Concrete is made of portland cement, sand and pebbles, or crushed stone, and water. It is hard and durable. Concrete is the material used in building concrete dams, factories, bridges, and big engineering works like the Panama Canal requiring great solidity and strength.

Write for a free copy of our Bulletin 136. After you have read it, pass it on to your road officials, then insist that your road funds be spent for permanent concrete roads.

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We developed the known-price idea in clothes. We concentrate our volume, lower our costs, give exceptional all-wool fabrics, style and tailoring at moderate price. The popularity of Styleplus Clothes throughout the nation has proved the soundness of our method. Even though Uncle Sam has already required 200,000,000 lbs. of wool for the soldiers, we are able to supply the American public with guaranteed all-wool stylish clothes at known moderate prices. Styleplus Clothes \$17 (black label) excel at that price. Styleplus Clothes \$21 (green label) excel at that price. Style plus all-wool fabrics—perfect fit—expert workmanship—guaranteed wear. Write us (Dept. AB) for free copy of "The Styleplus Book."

HENRY SONNEBORN & CO., INC. Founded 1849 Baltimore, Md.

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Clothes \$17



Styleplus  
Clothes \$21

## Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

### Colds, Perhaps

Being a reader of the Cultivator I feel safe and at liberty when in trouble to come to you for advice. This time it's our poultry. Our last spring pullets are affected by a sort of gape, followed by a short spasmodic cough or choking spell, generally only of short duration, while others breathe with a wheezing sound continually and cough or choke occasionally; others make no sound, but gape, at the same time stretching their necks and heads forward and upward. Their combs are bright and appetites good. Of a flock of 500, 100 must be affected as above stated.

It is possible that the air passages of some of these birds are partially closed by mold tubercles, the result of eating moldy feed or scratching in moldy litter, but more likely they have all contracted slight bronchial colds which manifest themselves differently in different birds. The best preventive and cure for such colds is the open-front roosting house, fronting south so that the sun may reach the farthest corner, and with no cracks through which drafts may blow. I have never had results from the use of potassium permanganate in the drinking water, but many experiment stations use it. A tablespoon of olive oil or a little pure vaseline often helps to loosen up such a cold, and sometimes a grain capsule of quinine, is useful, but the main reliance must be on sanitation. For severe cases Dr. Salmon recommends a dose of 10 drops spirits of turpentine in a teaspoon of castor oil, repeated in five or six hours.—J. A. K.

### Cure For Egg Eating Hen

If anyone having an egg eating hen can be helped by this please print it. I had a Plymouth Rock hen who would turn and eat her own eggs as soon as she laid them. As she was and still is laying every other day I tried various remedies to break her of this habit. I filled an egg shell half full of red pepper and she gobbled it up and looked around for more. Shaving her bill till it bled did not hinder her from enjoying her egg feast in the least. At last I decided to try H. H. H. Ointment, very similar to Sloan's Ointment. I filled an egg shell with a mixture of H. H. H. and cooked oatmeal. A more surprised or a madder hen never lived. After two doses she was cured and has never eaten an egg since. Indeed as soon as she lays an egg now she walks rapidly away as if afraid it will run after her and choke the loathesome medicine down her throat.—Mrs. Slaughter, Perris.

### Round Worms

Will you please tell me what causes our Buff Leghorn hens to have worms about two inches long and what is good to kill the worms? We are feeding wheat, bran, soaked oats, all the white clover, and Swiss chard they want. Keep them penned. They are not laying much. — Subscriber, Lincoln.

Round worms exist in the intestines of many fowls without doing any appreciable harm, but when they become numerous as to be noticed in the droppings it is time to do something. The latest treatment is that recommended by the University of California. Steep a pound of finely chopped tobacco stems two hours in sufficient water to keep them covered, then mix this liquid and the stems with ground feed enough for half the usual feeding. This is for 100 hens. If your flock is smaller use a proportionate amount.

If you are not in the habit of using moist mash you will have to guess the amount to prepare, only remember there must be no more than birds will clean up immediately or else you waste your medicine.

night before treating give half much feed as usual. Next morning give nothing. At 2 o'clock, when birds are ravenously hungry give medicated mash. Two hours later a little more mash (about half as much as the first feeding) in which Epsom salts (11 ounces to 100 lbs dissolved in water has been mixed). Repeat the treatment in seven days. It is probable that the worms are to the hens being confined in yards which have not been recently purified by a crop of green stuff, and the treatment will be absolutely without result unless the birds are moved immediately thereafter to new ground, for the ground they are on is doubtless infested with them. Remove the birds, disinfect the infected yard with 1 to 1000 solution of bichloride of mercury (corrosive sublimate, 1 ounce to 8 gallons of water). It will take a gallon of this for every ten square feet of yard to penetrate the soil to the necessary depth. The houses should be disinfected.—J. A. K.

### Diseased Liver in Rabbits

Am raising New Zealand Red rabbits for market. Some which I recently killed had spotted livers. Will kindly advise what causes this?—Subscriber, Imperial Beach.

The "Belgian Mare Guide" recommends one-half grain of calomel every 12 hours, plenty of fresh air and comfortable quarters. Townsend's "Practical Rabbit Keeping" says: "The correct feeding and green food in season, particularly dandelion, rabbits rarely suffer from liver complaint. Should the liver become diseased, chronic inflammation set in the patient had better be destroyed and thus out of its misery as the chances of permanent care are exceedingly remote."

### Chicken-pox

Will you kindly tell me how to treat chickens for chicken-pox? At that is what I am told is the trouble. It starts with hard dark spots on the comb and particularly around the eyes.—Subscriber, Nestor.

The simplest and easiest treatment for chicken-pox, which is probably a trouble with your chickens, is the sulphur treatment. Purchase a quantity of old fashioned flowers of sulphur, and mix with the dry mash, using it one-tenth of the mash. Lay this before all the hens, sick and well, for three days, then give the ordinary mash without sulphur for three days, returning to the sulphur mash for another three days. For the hens that are too ill to eat you will have to moisten some of the medicated mash and feed by hand in good sized pieces. If the trouble should prove not to be chicken-pox, the sulphur will be good for the birds anyway, for it is a good blood purifier.—J. A. K.

### Scaly Leg

What is a good remedy for scaly leg?—Subscriber, Nestor.

Scaly leg, if it has not gone too far, can often be cured by repeated applications of lard and sulphur, mixed half and half. If it does not disappear under this treatment try soaking the feet in warm, strong soap suds. The scales are so softened that they can be removed part of them with your fingers or with a soft brush, taking care, however, not to draw blood.



-----State-----



Established 1888. Twenty-eighth Year

**The California Cultivator**

A Journal of Horticulture, Agriculture and Live Stock

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**Saturday, Oct. 27, 1917****OUR ADVERTISERS RELIABLE**

We guarantee our subscribers against loss through dishonesty of any advertiser in the Cultivator. We do not attempt, however, to adjust trifling differences between subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within 30 days from date of the transaction, and the subscriber must have mentioned the Cultivator when writing the advertiser.

**THIS WEEK'S COVER**

California's greatest crop of prunes is being handled more economically than ever in the up-to-date packing houses of Santa Clara Valley. One corner in one of these great establishments is shown on our cover this week.

**FERTILIZE**

"Fertilize when fertilizer costs are up as now!" Sure. Fertilize as never before, not because we need the food but because the farmer needs the money which fertilizer makes. Present prices of products and labor create a condition in which only the rich can farm indifferently; the poor will go broke.

Throw her into the high.

**HOGS TO KANSAS CITY**

Imperial Valley papers are filled with particulars of the gathering of carloads of hogs for shipment to Kansas City packing houses. One paper says that although there has been three cents per pound in favor of Kansas City markets there exists at the present moment a range of \$4.10. Top prices at Kansas City will approach fairly close to 20 cents. The cost per hundred of shipment is \$1.50. This leaves a net of around three cents in favor of the Eastern market. Four days are required to make the trip. Of course, only hard finished, grain fed hogs will pay for this shipment. A special train is being made up for the trip and the farm adviser's office is aiding in the campaign which will result in more net money to Imperial Valley producers. It is to be regretted that California conditions do not permit of this stock being packed in this state.

**COOPERATION**

The central thought in the address of President Coates before the Nurserymen's Convention was: "I feel very strongly that the keynote of this seventh annual convention should be and is a better cooperative spirit and understanding between the members of the association, and the building up of the association by largely increased membership, to the end that we may be in deed as well as in word, a power in the land."

The cooperative spirit is everywhere, but the need is no greater in any calling than in the nurserymen's. Energy now wasted might be saved by intelligent cooperative distribution of nursery stock.

**ANTHRAX**

We may prefer to suppress the information, for it is not pleasant to announce that anthrax is general in many counties of the state. Some have been quarantined by order of the

a success because of the packing and failure to "feed" down. But with modern cutters and easy delivery 100 or more feet away from the cutting machine certainly there is opportunity to figure out a degree of profit by the use of modern machinery.

**KEEP BOOKS**

Between December 31 and March 1 "An Annual Return of Income must be made by every corporation, by every single person receiving more than \$1000 net income, and by every person who is the head of a family who receives a net income of more than \$2000."

How many farmers are able to make such return of the preceding year's business we do not know, but surely too many farmers have proceeded by the easy method of "main strength and awkwardness" without knowledge of the why, where and when of the profit and loss.

"Guess so" won't go with these re-

**HAS YOUR SON RECEIVED THIS CARD?**

"War Department

"Official Business.

"You are hereby notified that you have been selected for military service as a part of the quota from Local Board for District.....etc.

"You will therefore hold yourself in readiness to report for military duty at the office of this Local Board at a time to be specified by notice posted at the office of this board in the near future. Notice will also be mailed you, but the posting of notice at the office of the board will charge you with the obligation to report. From the date so specified for you to report you will be in the military service of the United States and subject to military law.

"While as much time as possible will be allowed you, you are hereby cautioned that the necessities of the service may require you to be called on very short notice. You should therefore put your affairs in order to report upon 24 hours' notice."

Signed "Local Board."

A great number of us may not go across, but everyone of us may come across with the money which will increase Uncle Sam's power. Many of us, especially in the West, fail to appreciate the fact that we are at war, and particularly have we failed to put the accent on the right word in that phrase. We appreciate to a very small degree the horrors of the war, but until we realize more fully that we—with strong accent on the "we"—are at war, the country will not be able to accomplish to the fullest the thing we have set out to do.

We must have money; we must have the good will and proof of the determination of the people to unite in this second liberty loan. The three billions must be subscribed before Saturday night. We hope every reader of the California Cultivator will do his bit. Every bank in the state will loan money for the purchase of liberty bonds at the same rate of interest the bonds draw. Buy and pay on the installment plan and prove that we are truly the un-i-t-e-d states.

Farmers have use for every cent of capital, but buy a Liberty Bond; it is good security for more capital to buy more seed to grow more crops to buy more bonds.

Presumably the banker will not loan working capital to the farmer at four per cent; perhaps he will charge seven or eight. At present prices and under present war conditions the farmer is justified in using his four per cent bonds as collateral, borrowing his money and after harvest returning and redeeming his bonds. If they remain at par he is well repaid, but bear in mind United States bonds have almost invariably commanded a premium. Statistics relative to former issues are evidence of future prices and possibilities of present liberty loan 4s.

The 5 per cent bonds issued in 1860 sold at 127 in 1863.

The 4½ per cent bonds issued in 1876 sold at 116½ in 1881.

The 4 per cent bonds issued in 1877 sold at 129½ in 1887.

The 4 per cent bonds issued in 1895 sold at 137½ subsequently.

governor and the state veterinarian. It is a time when we need to be careful; it is a time when we need to use every preventive measure. There is no cure for this dread disease.

As a rule it is not transmitted to man, but there are plenty of cases to show that it is often enough to call for extreme care in handling carcasses or hides of diseased animals. There are many forms of the disease and it calls for expert handling. Therefore cattle owners should keep in close touch with their county veterinarian.

**CUT THE HAY**

A subscriber has said that 25 per cent greater storage is possible where hay is fine cut and stored than where mowed away as cut in the field; also the cost of handling is materially lessened. We know of one dairyman who attempted to mow away finely cut alfalfa in bins something like elevator bins, with chutes and openings at the bottom so that the finely powdered or cut alfalfa might be drawn off in barrows or carts for immediate delivery to the stock. This, however, was not

ports to U. Sam, and the farmer who can point his finger and say, "Here's exactly what I did and here's what I didn't" may save himself loss.

When one buys a thousand dollar bunch of steers, then borrows a thousand dollars to buy feed and employ labor to care for them, then sells the bunch for \$3000, he doesn't want to pay income tax on the entire \$3000, or, in other words, on his capital, expense and income combined. When he knows his items, justice will be secured.

By the way, the Cultivator Account Book is one of the simplest and best books for the small farmer.

**NATHAN WESTON BLANCHARD**

One of California's finest, one of the earth's finest, Nathan W. Blanchard, has passed. A pioneer in the state, coming by the way of Panama in 1854, he has been responsible for its development as have few others. He was often called the father of the citrus industry, being one of the first to engage in it in Ventura County, in 1872. Prior to that, however, he had purchased a large tract of land

and laid out the townsite of Santa Paula. Realizing the importance of the citrus industry he later purchased a large tract of land and organized the Limoneira Company which is one of the largest lemon and walnut holdings in the country, and has always been a regular attendant at state fairs, growers and other conventions. With Mrs. Blanchard, presented at Santa Paula the beautiful public library building which now adorns that city. He was one of the original board of trustees of Pomona College, and, we believe, continued in that office until the time of his death. He has represented his district in the state legislature.

With all his connection with California's material advancement, he in every way in his power advanced social and religious interests. He was past 86 years of age, but we had hoped he might remain with us many years longer.

**Agricultural News Notes**

The navy yards are utilizing metal and old rope.

America is making war locomotives for use in France at the rate of 100 a day.

Tuesday is "beefless day" on diners and restaurants of many of the railroads.

Canada's wheat crop is estimated at 250,000,000 bushels, an increase of eight per cent over 1916.

The United States has bought most the entire output of onion from the Canary Islands.

Egypt and India are investigating the various schemes for establishing cooperative banks for farmers.

The white potato crop in the United States this year by latest government estimates is 467,289,000 bushels.

Nurserymen of Texas, Arkansas, Oklahoma, New Mexico, Louisiana and Old Mexico have organized the Southwestern Nurserymen's Association.

The Portland Cement Association has asked that carriers be required by law to give preference in supplying cars to those shippers who load, test and release cars most promptly.

Carload shipments of grapefruit going forward from Florida but changes are not expected to start until the first of November. Crops are generally normally advanced for the season.

Growers of the Canary Islands are arranging to make shipments to New York of winter tomatoes. The success of the venture depends on sailing ships. These tomatoes were formerly marketed in Liverpool.

The 5th National Corn Exposition will be held in Columbia, South Carolina, January 27 to February 3. In addition to exhibits of grains and grasses there will be demonstrations of implements and equipment of all kinds.

The shortage of cattle feed in California has induced use of ground flax bolls and dried potato peels. High prices and doubt as to the wholesomeness of these substitutes has caused the government to conduct investigation and fixing of prices.

The Canadian government announces the sale at post offices of special war savings stamps. A card issued having squares upon which 25 cent stamps and one ten cent stamp may be placed as purchase. When filled the cards will entitle holders to \$10 at the end of three years.



# Agricultural News Notes of the Pacific Coast

## Northern California

Butte County has bought \$100,000 worth of liberty bonds.

Farm Adviser C. J. Williams of Sacramento County has been given an assistant.

The Poultry Producers of Central California has decided to buy feed for members.

The proposition to establish paper mills to work up rice straw is interesting Oroville.

Placer County olive growers are receiving offers of \$140 a ton, orchard for Missions and Manzanillos.

There will be local center meetings the Sacramento County farm bureau at Hood, October 24; Franklin,

The almond crop of Colusa County all harvested. Very few shipments have been made because of scarcity of rain.

The Sacramento County farm bureau is sending out Vol. 1 No. 1 of the Sacramento County Farm Bureau monthly.

At the recent meeting of the Pacific Growers' Association in Sacramento the minimum price was fixed four cents.

Olive growers in Butte County are somewhat alarmed over the labor situation. The picking season is upon them and labor scarce.

Horticultural Commissioner Mills says that the grape industry of Sutter and Butte Counties is doomed unless vitloxera resistant roots can be obtained in large quantities.

It is announced that all box factories of Northern California have entered into an agreement with the government to furnish box shooks to fruit men at prices set by the government.

A number of farmers in the Dixon district of Solano County are using portable alfalfa meal grinders. Where there is plenty of hay the farmers say it is better to grind in the field than bale.

The annual meeting of the Humboldt County Stockmen's Association is held at Ferndale, October 6. Dr. Hart of the University of California delivered an address on the diseases of range cattle.

From Calistoga comes the report that for the first time in many years the grapes in the Upper Napa Valley are too sweet and simply refuse to ferment, thereby causing the wine-makers to buy large quantities of new grape.

## Central California

Several cases of anthrax have been reported in Stanislaus County.

The great Pine Flat irrigation project is steadily growing in favor.

Tulare County expects an exceptionally good navel crop this season.

The grape crop is now being moved at the rate of 200 carloads per day.

Oakdale, Stanislaus County, has harvested about 600 acres of beans this year.

Stanislaus County has a cow testing association with a membership of 41 dairymen.

Directors of the Oakdale Irrigation System expect to expend \$50,000 in improvements.

The Kern County farm bureau will hold local meetings at Manteca on the 19th and Live Oak on the 22nd.

It is reported that the Ridge Route between Los Angeles and Bakersfield will be paved before next summer.

Twenty-seven thousand carloads of

## Southern California

Hemet expects to ship 18 carloads of beans.

Many ranchers of the Imperial Valley are planning to erect silos.

Shipments of citrus fruit from Riverside to October 1 total 4184 cars.

Palo Verde made a cotton exhibit at the Riverside County fair held last week.

The Walnut Growers' Association of Hemet expects to handle 150 tons of nuts this season.

The plan of the Banning Cannery to can apples has been abandoned owing to shortage of cans.

Walnut and bean growers of the Carpinteria Valley are happy over prices being received.

It is estimated that Imperial Valley's cotton crop the coming season will be about 70,000 bales.

The Dehesa post office has been discontinued, mail now being distributed from the El Cajon post office.

## The Coast

Nampa, Idaho, has an exceptionally fine crop of apples.

A new apple juice plant has been installed at Lewiston, Idaho.

Fifty new silos have been built in Ada County, Idaho, this year.

Alfalfa hay is selling in the stack in Minidoka County, Idaho at \$15.

Yuma, Arizona, is to have a cotton carnival beginning November 27.

Idaho County, Idaho, has begun a campaign to secure a county agriculturalist.

A new fruit drying plant is to be built at Wenatchee, Washington, and another at Zilla.

Colorado poultry raising sections report a small crop of turkeys being raised this year.

Live stock worth \$100,000 was shipped from Wallowa County, Oregon, on one day recently.

A farmers' week and boys' and girls' club exhibit is being held at Caldwell, Idaho, this week.

Quite a number of silos have been erected in the Enterprise section of Oregon this summer.

Pima Indians of Arizona will hold their annual harvest fair at Sacaton, October 31-November 2.

Potato shippers of Colorado have formed an organization to cooperate with the food administration.

Orchardists of Apple Valley, Idaho, have incorporated an association that will market crops of members.

The total yield of Jonathan apples in the Wenatchee Valley, Washington, will be more than 1200 cars.

The cotton crop in the San Pascual Valley of Arizona is very good, much of it promising a bale to the acre.

A \$10,000 sale of Holsteins was recently made at Yakima, Washington. The average price received was \$160.

Idaho will harvest 6,000,000 bushels of potatoes according to estimate of the federal bureau of crop estimates.

The Wenatchee Valley is harvesting its Jonathans. The quality is reported excellent but the fruit has colored slowly.

Manufacturers of canned milk have voluntarily put themselves under the control of the United States food administration.

### MORE POSTAGE, PLEASE

Mail your letters November 2 and thereafter with three cents postage; your postcards with two cents. The same rates apply to mail to Canada, Mexico, Cuba and Panama. Rates on foreign mail are fixed by international treaty and remain as heretofore. Drop letters, whether delivered by city or rural carrier, require only two cents; postcards, two cents.

fruit have been shipped from California to the East during the last three months.

Under the present state law all fumigators and sprayers of orchards and vineyards must have county licenses.

The Stanislaus Poultry Association is planning for its annual show to be held early in December. Pet stock entries will be admitted this year.

Scarcity of grazing land and high price of feed in the Oakdale section of Stanislaus County is forcing many cattlemen to sacrifice young calves.

J. W. Jeffrey of the state viticultural commission has taken an exhibit of table grapes from the Dinuba and Alta districts to the San Francisco Land Show.

Dinuba table grape growers have been aroused by the car shortage this season and plan another year to have a cold storage plant that will insure them against loss from such source.

Carpinteria Valley schools were dismissed for two weeks so that the children might help with the walnut harvest.

Alfalfa and cotton occupy about the same acreage in Imperial Valley and stand at the head of the list of profitable crops.

At the last meeting of the Perris farm center Prof. Jacobson of the United States department of agriculture gave a demonstration of preparing grain to poison squirrels.

At the recent meeting of the Tri-Counties Reforestation Committee, held in Riverside, Chairman Cuttle urged the necessity of cooperation in handling the flood waters of the Santa Ana.

Local associations affiliating with the California Lima Bean Growers have been formed at Owensmouth and Van Nuys in the San Fernando Valley. This brings the number of local associations up to 13.

READY FOR  
SERVICE

# Moorland Sir Cristeria

FOR 1000  
DOLLARS

Born November 1st, 1916

The average per cent of fat of his three nearest dams, 5.16, is not excelled by any sire on the Pacific Coast.

The seven day records of his five nearest dams average, butter, 29.37 pounds.

He is a son of COLANTHA SIR PONTIAC AAGGIE, one of the four leading sires of California, who is the sire of 14 A. R. O. daughters, seven above twenty pounds, one a 32.87 pound Junior Three-Year-Old whose average test was 6.33 per cent. One of his sons won first at the California State Fair this year.

His dam, LADY CHRISTERIA MECHTHILDE, was selected by Messrs. Hughes, McAlister and Morris for the December Guaranty Sale, and has a record of 26.93 pounds butter; she is by De Kol Spofford Promise and from CRISTERIA OVERTON MECHTHILDE 3RD, who has a record of 28.43 pounds butter.

He is ready for service, well grown, long-bodied, more white than black and unquestionably a youngster of exceptional promise.

TERMS TO RESPONSIBLE PARTIES

## Gotshall & Magruder

RIPON, CALIFORNIA

Home of the State Champion Two Year Old



# Bridgford Holsteins

Suit Any Judge

Shown at **California State Fair**

**Grand and Junior Champion Bull:**  
"King Segis Alcartra Prilly"

**Grand and Senior Champion Cow:**  
"Miss Korndyke Mercedes"

**Seven Firsts—Seventeen Awards**

**Stanislaus County Fair:**

Reserve Grand and Junior Champion Bull: King Segis Alcartra De Kol Pledge.

Grand and Junior Champion Cow: Princess Inka Butter Girl.

Reserve and Senior Champion Cow: Spring Farm Canary Pontiac.

Six firsts. Seven other awards.

**Fresno District Fair:**

Grand and Junior Champion Bull: King Segis Alcartra Prilly.

Grand and Senior Champion Cow: Miss Korndyke Mercedes.

Reserve Grand and Junior Champion Cow: Princess Inka Butter Girl.

First Herd, best 10 Holsteins.

Seven firsts. Five other awards.

**Fifteen Entries**

**Sixteen Championships Selected from Same Herd by Three Different Judges**

**Our Consignment to the Sale to be Held at**

**SACRAMENTO OCTOBER 30-31**

**Consists of Ten Females and Two Males, Including:**

A four year old cow with 28 pound three year record sired by a 36 pound son of Rag Apple Korndyke.

A 23.6 pound cow, whose dam is a 30 pound cow. Due to freshen November 30 to King Segis Alcartra Abbekerk.

A yearling daughter of King Walker 5th, from a 29 pound dam. In calf to King Segis Alcartra Prilly.

Seven other highly bred heifers all in calf to our herd sires.

A bull from a 30 pound dam; another bull from 25 pound dam, whose sire is King Segis Alcartra Abbekerk.

## Bridgford Company

**Knightsen, Contra Costa County, California**



### Santa Anita Rancho

Anoakia Breeding Farm



**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by imported Stallion Ibn are the choicest thoroughbred mares on Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahrusa, world renowned imported desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the best blood lines. Meet all these animals have winnings at World's Fair. Write for catalogue.

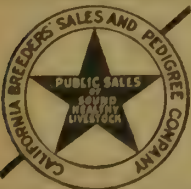
**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted female State Record Cows. Write for details.

Correspondence Invited

**Anita M. Baldwin**

**W. H. TAYLOR, Superintendent**

**Santa Anita, Cal.**



### SERVICE TO THE BUYER TO THE SELLER

Economy of time, effort, and money is only one of the many services our organization is delivering to both sellers and buyers of registered livestock in public auctions. If you want to consign cattle for public sale, or disperse your herd to best advantage, write us about it.

**California Breeders' Sales and Pedigree Co.**  
C. L. HUGHES, Sales Mgr. SACRAMENTO, CAL.

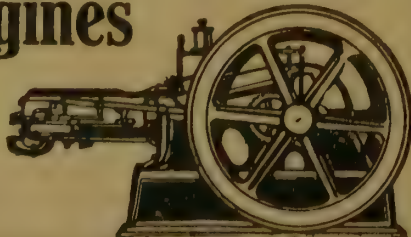
## Commercial Engines

Always Make Good!

An ironclad written guarantee protects the purchaser of every Commercial Engine. Write for new illustrated catalog. It pays to investigate.

**COMMERCIAL ENGINE CO.**

2414-22 Porter St., Los Angeles, Cal.  
Branch: 1228 "H" St., Fresno, Cal.



## Who's Who

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photographs and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Written for California Cultivator By C. A. Briggs



**C**ALIFORNIA won a good clean cut American farmer and live stock breeder and Montana lost one when Homer Hewins, Jr., manager of the Maplewoode Ranch, Calistoga,



Homer Hewins, Jr.

left the northern state for the state of Heart's Desire.

Mr. Hewins was born in Helena,

Montana, October 2, 1883, living there for 17 years. After moving to California he attended Dunn's Preparatory School at Berkeley, entering the University of California at Christmas, 1901, taking the electrical engineering course, but making a specialty of studies in agriculture and stock breeding. After his university course he spent a year in Montana, and then returned to San Francisco where he engaged in the general mercantile business for four years. In February, 1909, Mr. Hewins married the youngest daughter of Mr. and Mrs. Martin Holje of San Francisco. Since that time he has been the active manager of the general farming operations of the Maplewoode Ranch, the home of Mrs. Holje.

In 1914 he started in the breeding of pure bred stock, Berkshire swine and Holstein cattle and now has a number of exceptionally fine animals of both breeds.

Mr. Hewins is an enthusiastic breeder. He is building up a reputation for square dealing and is well liked by breeders and buyers. This state is rapidly coming to the front in live stock matters and the influence on the business of the efforts of our younger breeders like Mr. Hewins is now placing and will in the future, keep the state in the front ranks of the industry.

## Silos and Silage

From Address by Chas. A. Crate at California Creamery Operators' Convention at Petaluma



**B**ECAUSE of the demands for beef and the shortage of forage in all of the warring European countries the number of dairy cattle has materially decreased in the past three years. Recent reports from the French government show a decrease of about 17 per cent in cattle, 33 per cent in sheep and 38 per cent in hogs, while the combined record of the European nations show a decrease of over 28,000,000 head of cattle alone.

Conditions do not seem to be any better in the United States for according to government statistics the number of cattle in the United States decreased some 16,000,000 head in the six years intervening between 1907-1913, while it is estimated by leading authorities that the decrease in the past three years has been equally as much or approximately a 20 per cent decrease.

The principal cause of the decrease of the number of cattle in this country in the past three years is the heavy demand for beef coupled with the shortage of mill feeds and in many sections the shortage of forage with consequent all around high prices. This has resulted in many dairy herds being deliberately sacrificed to the butcher.

Another contributing factor to the present cow shortage is the practice of slaughtering calves for veal. In the whole milk sections the price received for the milk has been such that the dairyman has felt he could not afford to raise even the heifer calves, and this feeling has been intensified for the past two years by the unusually high prices for feed, with the result that more calves are being sacrificed now than formerly.

An analysis of the situation as it exists must lead all to conclude that the ending of the war will bring a demand on this country for dairy stock for shipment to Europe that we will not be able to fully supply, with the result that prices will be exceedingly high.

The problem that confronts us is:

First, cheapening the cost of production; second, increasing the stock carrying capacity of the land; third, improving the quality of the dairy stock; fourth, raising the heifer calves. The accomplishing of the first two will in a measure automatically bring about the latter for if the dairyman has progressed to that extent he will appreciate the advantage of better stock and will be more disposed to raise the heifer calves for they will be worth more.

**The Silo is the Solution**

The silo is the solution to both reducing the cost of production and increasing the stock carrying capacity of the land, for it will provide the equal of the very best of rich juicy green grass for all the year round and when fed in conjunction with a legume such as clover or alfalfa hay will permit the almost entire elimination of the mill feed expense bill and still maintain the maximum production.

The crop grown for silage and fed as such, regardless of what it may be, will feed from 25 to 40 per cent more stock than when harvested in any other manner. This, for the reason it is cut at a period when it has reached its greatest feeding value, is succulent and all of the forage is utilized which is not the case either in soiling or where allowed to mature and only part is harvested and fed dry.

**Silo Must be Air and Water Tight**

The making of silage is like the canning of fruit in that both the silo and the fruit jar must not let the juice leak out, as if they do there will be spoiled feed and spoiled fruit.

The silo that will serve you best and pay a good return on the investment must be of proper design, material, and workmanship so that it will be air and water tight, and that it can be kept so for a period of years without it being necessary to rebuild it every time it is filled.

**Value of Feed Greater Than Cost of Silo**

The value of the feed put into the



## Flush Cows After Calving

Protects Against Abortion and Barrenness

Barrenness or Sterility, like Abortion, retention of After-birth and Premature birth, is nearly always caused by infection of the reproductive organs by the germs of Contagious Abortion. Unless infection is promptly overcome by use of a powerful but safe antiseptic, may permanently affect the reproductive organs so that the cow will continually fail to stick.

Every time a cow drops a calf—whether alive or dead—by premature birth or aborting, whether the after-birth is retained or not, her reproductive organs could be flushed out, because that is where the infection is developing.

B-K, the powerful non-poisonous antiseptic, is scientifically correct for this work. Used as a douche the uterus, it quickly brings the after-birth, dissolves the slimy albuminous matter, kills the germs, discharges and controls the infection. B-K is not cause straining, but is soothing and heals.

Other germicides such as carbolic acid, cresol, caustic soda, iodine, etc., tend to irritate, do dissolve the slimy albuminous matter, but tend to coagulate or thicken them, thereby preventing destruction of the germs and cleansing of the tissues.

The remarkable germ-killing strength of B-K is fully marked and guaranteed on every package. It contains no poison, acid nor oil. It is safe and easy to use. B-K may be used freely in drinking water.

B-K is convenient. Just add water as directed. You have your treatment for calves, bulls and cows and also your disinfectant for general use. B-K is used so successfully by leading breeders that it is now sold over the entire world and the demand for it has increased 500 per cent in three years. A well known breeder of registered stock says:

"I want B-K for I know it is doing good. Cows that have been barren for more than a year are getting with calf."

B-K is sold by dairy and farm supply houses, druggists, general stores, etc., everywhere. Dealers wanted in every town.

Write us for more evidence from users and for our bulletin No. 52, "Contagious Abortion," and No. 136, "Calf Scours."

**GENERAL LABORATORIES**  
115 So. Dickinson St., Madison, Wis.

**B-K-B-K-B-K-B-K-B-K-B-K-B-K**

Use of B-K protects your herd against **ABORTION and BARRENNESS**



**Distributing Agents**  
**O. J. WEBER CO.**  
59 Creamery and Dairy Machinery and Supplies  
80. LOS ANGELES ST. LOS ANGELES, CAL.

**B-K-B-K-B-K-B-K-B-K-B-K-B-K**



**Does Your Stable Look Like This?**  
—bright, cheerful and attractive with its walls, ceilings and stalls painted pure white, and so thoroughly disinfected that they hold no germs of contagious diseases. You can make YOUR stables so with

**CARBOLA**  
The Disinfecting White Paint

It disinfects and paints at a single operation. Carbola is a mineral pigment combined with a germicide 20 times stronger than pure carbolic acid, yet it's not poisonous or caustic. An animal is safe in licking a Carbola-covered surface.

Carbola comes in powdered form—always ready for use, never spoils from standing. Mix with water, and apply with brush or sprayer. Won't clog the sprayer. Dries pure white. Doesn't blister or peel off. Used and recommended by farmers everywhere. Booklet and trial package containing enough Carbola to cover a 250-sq.-ft. surface sent for 25c and the name of your dealer.

10 lbs. (10 gals.), \$1.00 and postage.  
20 lbs. (20 gals.), \$2.00 delivered.  
50 lbs. (50 gals.), \$4.00 delivered.  
Get it from your dealer or  
**Germain Seed & Plant Co.,**  
Los Angeles, California

**Shropshire Hogs—Milking Shorthorns**  
Breeding Stock For Sale  
**A. Murphy - Perkins, Cal.**

silo every time it is filled is greater than the cost of the silo. Now if through faulty design, poor material or workmanship the silo leaks and spoils a portion of the feed, the loss is quite likely to be greater than the difference in the cost of a good silo and a makeshift, the latter being dear at any price.

The history of silo building in the East and Middle West is replete with failures; not because silage was a failure, but because of the many inferior cheap silos that were put up in the mistaken notion that almost anything would do.

### Save the Wasted Dry Feed

Another means of conserving the feed available is by finely cutting dry feed instead of feeding in the bulk. The waste when feeding in the bulk especially where the hay is coarse and stemmy ranges all the way from 10 to 40 per cent all of which can be eliminated by cutting it up with the same machine you will use for filling your silo. The feed cutter of today is not merely a machine that you will use a few days during the season but because of its adaptability for cutting not alone all kinds of green feed, but dry feed as well, including the making of an excellent grade of alfalfa or bean straw meal at a cost much less than half of that for baling, it is an all the year around piece of equipment.

Another advantage in cutting dry feed is that it requires less storage space than hay in bulk and the expense of handling is much less.

### Alfalfa Meal and Bran

It has been thoroughly demonstrated in practical experiments, that alfalfa meal which you can make with your own cutter at less than a dollar per ton for cost of labor and power is practically the equal of bran when fed in connection with good corn silage to milk cows. The results of such a test made at the Nebraska agricultural experiment station is given in a leaflet that may be had for the asking.

### Alfalfa Meal and Buttermilk or Skim-Milk

One of our creamery managers recently told me of the excellent result obtained by the use of alfalfa meal which they had made themselves when fed to hogs in connection with buttermilk from the creamery. This institution has always kept a careful record of the cost of their hog lot, consequently were in a position to make comparisons of results that were conclusive.

Where the ration for stock hogs was alfalfa meal and buttermilk as compared with alfalfa hay and buttermilk, the gain in favor of the alfalfa meal and buttermilk lot amounted in weight to more than \$1.00 per head when sold on the basis of the market two years ago. Both lots of hogs were of about the same age and size and fed the same length of time, both lots being finished on a grain ration additional to the alfalfa and buttermilk.

Creamery managers, it is to your interest as well as the interests of your patrons that you induce better methods among the dairymen, for to do so will increase the production of milk and improve and foster the dairy industry. This you can do by encouraging better breeding and better feeding. The farmer should be encouraged to raise his heifer calves as this will result in more dairy cows in the future. He should also be induced to put up a good silo and provide a succulent feed for all the year round and as well shown how he can eliminate the waste of dry feed by cutting it up and thus enable the keeping of more stock with consequent larger supply of raw material for the creamery.

### MILCH GOAT BULLETIN

Bulletin No. 235, "The Milch Goat in California," written by Edwin C. Voorhies, is now being distributed by the agricultural experiment station of the College of Agriculture, Berkeley.

It is only a 30-page bulletin but filled with the most complete information regarding milch goats in California yet gathered together. It gives general information concerning milch goats, following with discussion of various breeds, quality and composition of goat milk, various uses, cheese making, feeding, goat houses, milking and general care.

Don't cry over spilled milk. Stop spilling it.

## The Morris Consignment

Holstein Breeders' Sale

Sacramento, Cal., October 30-31

### Twenty Choice Heifers in Calf to:

Prince Gelsche Walker  
King Mead of Riverside  
Sir Aaggie De Kol Acme  
King Morco Alcartra

Enough Said

### Four Splendid Serviceable Bulls

A son of KING MEAD OF RIVERSIDE from a 29.00 pound cow with almost 1100 pounds butter.

Three excellent sons of PRINCE GELSCH WALKER from dams up to 28 pounds.

Your Opportunity  
Don't Miss It

**A. W. Morris & Sons Corp.**

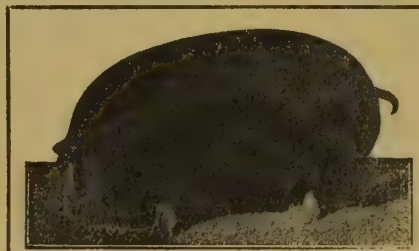
WOODLAND, CAL.

## Poland Chinas, Medium Type

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain; 12 firsts, Junior Champion and Reserve Grand Champion Boar, Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

**M. Bassett**

Hanford, Kings County, Cal.



### 2.95 Pounds Butter Daily for 158 Days

has been produced by Empress Lass under dairy conditions. Still working. Her sons and grandsons are from big producers of show type. Prices right.

**LOCKEFORD STOCK FARM**

N. H. Locke Co., Props.

Breeders of Jersey Cattle and Chester White (O. I. C.) Swine.

LOCKEFORD, San Joaquin County, CAL.

**EMPRESS LASS 218446**  
Grand Champion Washington, Oregon California and A. Y. P. Exposition

## Hauser's Digester Tankage

GIVES GREATEST VALUE FOR LEAST MONEY.  
IT MAKES THEM FAT.

Hauser Packing Co.

Los Angeles

10  
2 Year  
Old  
BULLS

**SHORTHORNS**

H. L. & E. H. Murphy  
Perkins - - - California

8  
BULL  
CALVES

Extra parts are always available without delay for standard advertised machinery. This class always found in the California Cultivator.





**Sacramento  
California  
Wednesday  
December 5  
1917**

Selections have been practically completed for the history making offering of registered holsteins at Sacramento on December 5th.

At least eighteen of the famous herds of California will be represented in this sale, and the breeders have kept their pledge to permit the Committee of Selection to go into the tops of their herds.

There will be six or more 30 pound cows in this sale!

There will be fifteen or more daughters of 30 pound cows!

There will be a large number of great yearly record cows and daughters of great yearly record cows!

There will be daughters of Prince Gelsche Walker, King Mead of Riverside, It, King Segis Pontiac Alcartra, King Walker 5th, Tidy Abbekerk Prince, King Korndyke Sadie Vale, King Segis De Kol Korndyke, Segis Pontiac De Kol Burke, King Segis Pontiac, Prince Gelsche Walker Korndyke, Annie De Kol Lakeside Model, Aralia King, Korndyke Queen De Kol's Prince, King Korndyke Pontiac, and King Morco Alcartra, out of dams of outstanding breeding.

There is not a female of milking age in this sale that has not a good A. R. O. record; there is only one female of milking age in this sale that has a record below 20 pounds butter in seven days, and that one is a carking good heifer that made 19.63 pounds butter in seven days as a senior yearling.

## Bulls

Only a few bulls will be sold, and these include:

A son of King Valdessa out of the world's record 35 pound first calf heifer.

A son of the California champion junior three year old Miss Valley Mead De Kol Walker, 36.82 pounds butter in seven days.

A beautiful son of King Mead of Riverside out of a 33 pound dam. A show bull and nearly white in color.

A show quality son of Spring Farm King out of a 31 pound dam.

A son of a great 32 pound cow that will make around 1200 pounds butter this year.

A son of a 25 pound three year old daughter of a 34 pound cow, and sired by one of the best bred sons of Prince Gelsche Walker.

Every animal over six months of age has been tuberculin tested AND IS SOLD SUBJECT TO TUBERCULIN RETEST BY THE BUYER WITHIN SIXTY DAYS OF DATE OF SALE.

The breeders contributing to this sale have permitted the selection from their herds of animals that they part with only very reluctantly, but have accepted it as a duty to the advancement of the dairy industry to participate in this offering which has been arranged to meet the insistent demand for the highest class of registered Holsteins.

There will be much to study in every pedigree of the catalog of this sale and we will mail one to everyone who writes requesting it.

### MANAGEMENT OF

**California Breeders Sales and Pedigree Co.**

J. M. HENDERSON, Jr., Pres. C. L. HUGHES, Sales Mgr.

**SACRAMENTO, CALIFORNIA**

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C. L. HUGHES

## Land Show • Livestock Exhibit Score Success

Written for California Cultivator By F. F. Stonerod



THE biggest single feature of the Land Show at San Francisco last week was the live stock tent. The biggest feature of the live stock show was the interest in the judging ring from the opening to the closing day. Thousands of people sat in the stands and marveled at the beauty of dairy animals as they were led to and from

carloads of choice Jerseys for the San Francisco show. Nixon, Welch, and Smith sent in their full, Guernsey herds; Napa State Hospital, Buena Alta, Susaeta, and Stenzel filled the Holstein space, while Baile, McFarland made his usual classy show of Ayrshires. In quantity the dairy show was not to be bragged about; in quality it was.

The following championships were awarded in the different classes:— junior and grand champion Holstein bull, F. A. Heroux on the senior bull calf, Model Domino Glista; senior and grand champion cow, Napa State Hospital on Hazelwood Hello Queen; senior champion bull, Napa State Hospital on Lord Asa; junior champion female, F. A. Heroux on Rosa Burke.

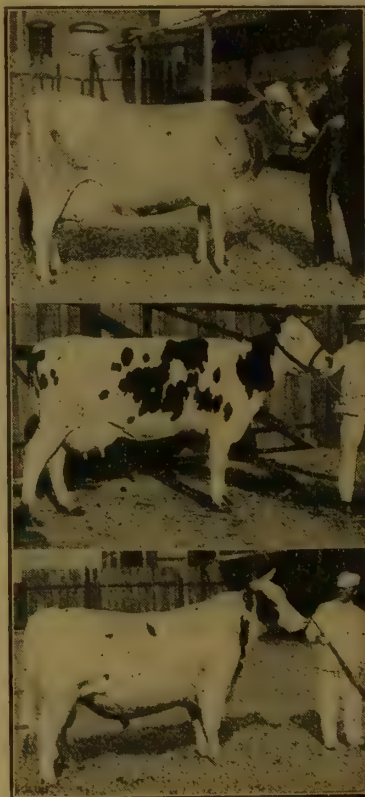
Guernseys: Senior and grand champion bull, Nixon on Imp Itchen Daisy's May King of Langwater; junior champion bull, Nixon on Ricardo of Edgemoor; senior and grand champion cow, Welch on Imp Argie of Linwood; junior and reserve grand champion on cow, Welch, on Theodora of Hidden Valley.

Jerseys: Senior and grand champion bull, Thorp on Imp of L; junior and reserve champion bull, Thorp on Jolly Senator Raleigh; senior and grand champion cow, Locke on Valets Golden Biddy of L; junior and reserve grand champion cow, Thorp on Nomie of Mossdale.

Several surprises were sprung on the exhibitors by the judge who reversed other judges' decisions on the same animals, but that is nothing new. Mr. Gillette was impartial and rendered his decisions with care and study. He is a pupil of Prof. Kildee who gave so much satisfaction at Sacramento this year and he proved a very capable and likable judge.

McFarland's heretofore unbeatable Ayrshire cow, Willowmoor Vesta, lost championship and first in class to her stablemate, Willowmoor Happy Girl. This cow also was awarded the prize for champion dairy cow of the show although we often wonder why such a class is made, as winning the prize does not accomplish anything in particular. If the prize read "the best cow of her breed" or "highest butterfat producer," there would be something tangible to work on. A. J. Welch showed his aged cow, Argie of Linwood, and beat Nixon's great cow, Clatford Fay of the Mill, who had beaten her in Sacramento, but in this case the expected happened. Both are wonderful show cows but Argie is now in her prime and Fay is slipping, especially in the udder. It was no disgrace to the Nixon cow to get beaten. Judge Gillette liked Mr. Nixon's bull the longer he looked at him. This bull is the perfect dairy type if not the ideal show type and has a world of style and masculinity.

The Dairymen's League, which supplies New York City, has issued a price of \$3.34 per 100 pounds for milk to the producer, delivered to the shipping station for November. This price is for "B" grade milk three per cent fat and four cents per hundred pounds additional for each one-tenth of one per cent butterfat in excess of three per cent.



Winners at Land Show

Top: Valets Golden Biddy of L, 259973, senior and grand champion Jersey cow, property of N. H. Locke.

Center: Hazelwood Hell Queen, 204336, senior and grand champion Holstein cow, owned by Napa State Hospital.

Lower: Willowmoor Robinhood 32nd, senior and grand champion Ayrshire bull.

the ring. They listened eagerly to the splendid talks made by Judge Gillette of the Iowa University. After he had tied the ribbons in each class they swarmed into the live stock tent from 10 o'clock in the morning till 10 o'clock at night, and the management had to close the doors for an hour each evening to enable the herdsmen to feed and water their animals. If all these things spell success then the Land Show live stock exhibit was more than a success the first week, and as this is written the tent is filling again with the beef cattle, the university farm and horse exhibits, and the crowds are simply immense. To those who are responsible for this first show cannot be given too much credit and praise. J. M. Pickering, chairman of the live stock committee, Jos. E. Painter, manager of the live stock department, C. Fatjo, Mr. Harigan, and numerous others worked night and day to make the show a success—and they did.

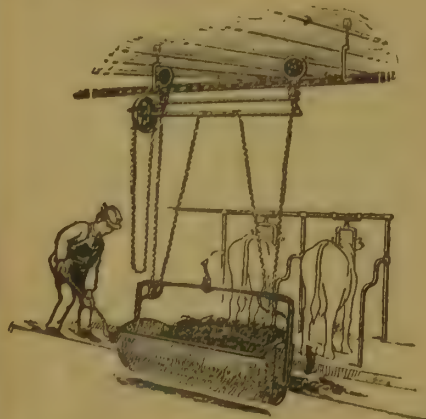
Stanislaus County Jersey breeders got together and made up a couple of



King Segis Alcartra Prilly, 192705  
Grand and junior champion bull state fair and Fresno district fair, 1917. Property of The Bridgford Company.

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Dam's official record at two years 24 pounds butter in seven days, 188 days 450 pounds butter. Test 4.28.  
Sire's dam official record seven days \$3.79 pounds and for thirty days 133 pounds butter. Test 4.21.  
Sire's sister Grand Champion at Panama Exposition 1915, also National Dairy Show Chicago in 1912. Note the combination high records and show ring type. Very cheap for quick sale. Write for extended pedigree.

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One service bull from 29 pound dam, 102 pounds milk one day. His two nearest dams through sire yearly record average 21,000 pounds milk and 812 pounds butter.

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## SEPTEMBER WORK IN COW TESTING ASSOCIATION



We have just received from Prof. Woll performance of the various contestants for the Cultivator \$300 prize money for the month of September excepting, as noted, for one dairy, figures are not yet available. Prof Woll writes:

The following records of the average production of butterfat for herds entered in competition for the California Cultivator prizes for the month of September have been received.

### Herds of Less Than 25 Cows

Name	No. of Cows	Ave. Pounds Butterfat Per Cow
A. Ambort	19	34.34
F. Beebe	18	35.15
J. W. Coppini	22	48.70
C. Darnell	10	28.92
L. Hess	8	18.75

### Herds of 26 to 50 Cows

Iver Iverson*		
F. J. Kell	27	26.17
G. E. Trigg	35	44.70

### Herds Over 50 Cows

Coppini & Coppini	59	36.17
John Hansen	100	36.67
W. Terkelsen	52	42.55

\*No report.

The number of cows given for each herd includes all heifers or cows in milk during the full month and does not necessarily indicate the group in which the herds will compete for the three Cultivator prizes. The award of these prizes for the highest average production of butterfat for one year by herds belonging to a cow-testing association will be based upon association records for all heifers and cows in milk in the herd for six months or more during the record period.

## WESTERN DUROC ASSOCIATION

President W. W. Everett of the Western Duroc Association writes:

"The Western Duroc Association, which was formed last May at Davis when a meeting was called by prominent breeders of the popular red hog, held an important meeting at Sacramento during the state fair session. The new association had as its guests President McLain of the National Duroc-Jersey Record Association and R. L. Hill, field secretary of the same national organization. Both of these officials expressed the feeling that the Western Association would eventually prove a powerful factor in the control of Duroc-Jersey interests throughout the entire West.

"The officers of the Western are: President, W. W. Everett, St. Helena; vice-president, R. K. Walker, Devore; secretary, Haydn Smith, Woodland; directors: J. E. Thorpe, Lockeford; F. M. Johnson, Napa; James McDonnell, Redwood City and C. N. Slocum, Wilows.

"The National Duroc-Jersey Record Association has given the new Western organization its hearty approval and has requested the latter to take charge of the Record Association's western business interests as far as consonant with the policies of the eastern body.

"Membership in the Western Duroc Association may be had by any breeder of Duroc registered hogs who will send in his name to the secretary, Haydn Smith of Woodland. It was originally intended to elect the new members before they were notified of their selection but it has now been decided to open the lists to every breeder; the continuance of whose valuable membership will depend entirely upon the manner in which his business is conducted. Buyers of registered Duroc hogs will soon come to appreciate that they are entirely protected by the Western Association when dealing with one of its members.

"With the cooperation of the great national Duroc organization and of the Coast's stock and agricultural papers, the new association seems destined to accomplish that for which it has been incorporated. The next meeting will be held in Sacramento at an early date so that applications for membership should be sent at once to the secretary.

Don't be content with doing your bit for the country; do your best.

# Increase your Alfalfa hay tonnage-

If you want to know why ranchers and dairymen all over the State are planting Germain's Hairy Peruvian Alfalfa Seed, write or call today for our big illustrated folder which tells the whole story.

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The farmer who wants a hog that puts on 200 lbs. of firm meat at six and a half months of age buys the Hampshire.



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Gertie's Son's Victor No. 123159  
Dam, Victor's Lady Kate, (R.O.M.) of 537 pounds Butter in 303 Days as a four-year-old.

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## The Food Situation in France

By Fred B. Pitney

This article points out how and why the French army receives better food than the civilian population, also some of the methods used to stretch the rapidly disappearing supplies of grain and meat. The agricultural machinery in France is also in bad condition as a result of a shortage of mechanics to keep it in repair and of the cessation of imports of new machinery from the United States. The third and last article in this series will appear next week.



HOW many times I have heard soldiers on leave from the front say, "I would rather have our bread at the front than your bread here in Paris." The same thing was true of coffee. Soldiers would say, "What do you call this stuff? We get real coffee at the front."

At the rear the civilians drank a compound from chicory, for the coffee supply was short, while the real coffee was reserved for the army. In like manner the soldiers get a purer wheat flour than do the civilians. The wheat supply being so much curtailed two measures have been necessary to try to increase the amount of flour.

A law has been passed requiring the mixture of 30 per cent of other grains with wheat in making flour, while another law raised the percentage of extraction permitted in the manufacture of flour. Before the war this percentage was 70, it has been raised successively to 74, 77, 80 and 85. Seventy-seven is the extreme limit of nutritive extraction. After that the flour becomes permeated with particles indigestible for human beings.

The result of mixing grains and high extraction has been a flour that is often not only unpalatable but indigestible, and it has caused not a little sickness, particularly gastric troubles among the children. Adults frequently throw away the soft inside of the bread and eat only the hard baked crust. Very often I have found this "war bread" an unpleasant dark brown in color with a soggy, glutinous inside. It is no one's fault. It is the best that can be done under the circumstances.

### Shortage of All Cereals

Another problem enters with the authorization to mix other grains with wheat in making flour. It is the shortage of the other grains. For it is not only wheat that is short in France but all cereals. We can have recourse once more to the official figures.

The annual consumption of barley in France before the war equalled approximately 1,250,000 tons, of which about 15 per cent was imported. The production has fallen off to such an extent that nearly one-third of the barley had to be imported last year. This year the production will be slightly higher, but there will still be a deficit far above the normal. Furthermore, the deficit in barley must be considered not only in relation to the normal consumption, but with regard to the fact that it must be used very largely to supplement and replace wheat.

With rye the normal consumption was about the same as for barley, with imports of about eight per cent of the requirements. In 1915 the production was about 400,000 tons under the normal consumption and in 1916 it was about 350,000 tons under the consumption, while in both of those years there were practically no imports. Thus there was less rye than was needed and rye could only help out wheat by reducing still further the amount given to its normal uses.

The annual consumption of corn averaged 1,150,000 tons, about one-half being imported. The proportion of imports in 1916 had risen to two-thirds.

The annual consumption of oats before the war was 5,500,000 tons, of which 500,000 tons were imported. In 1916 the imports rose to over 1,000,000 tons and the stock was still short 500,000 tons.

### Agricultural Labor Shortage

When one travels over France one speedily learns the reason for the shortage in the grain crops. It is because there is not the labor to do the farm work. Cultivation has to be left to the old men, the women and the children. All others have been taken for the armies and the defense of the country.

In crossing and recrossing the French agricultural regions it has

been a continual source of wonder to me how the few workers in the fields have been able to produce the crops they have achieved. One sees plows with the handles held by women and the horses led by small boys, women stooping among the long rows of corn, cultivating the ground, groups of women slowly crossing the fields, creeping on their knees, painfully tending the newly planted crops. Occasionally one sees a white bearded patriarch among the women. I should say that the proportion is roughly one man to six women. This, however, is by no means an official figure. It is only my own rough guess.

There is no wonder that with this tremendous shortage in labor, fields are left bare, while those that can be cultivated produce less than the normal amount per acre. What would our western farmers think of turning the land in the spring with long bladed hoes? Yet I have seen this very thing being done in many parts of France because of the dearth of agricultural machinery.

### Farm Implement Shortage

Most of the farm implements of France before the war were of American make. One saw the American mark on the plows and harrows, the rakes and reapers and binders and threshers all over France. Since the war much of this machinery has deteriorated sadly and a great part of it is entirely unfit for use because there are not the mechanics to keep it in repair, and there has not been the importation of new machines and parts to replace the old and worn out pieces.

France is a country at war, very really and terribly at war. The invader is on her soil. Her mines and furnaces and factories are in German hands. Her richest manufacturing provinces are held by the enemy. Her men must go to the trenches to defend their country and drive back the hordes from across the Rhine. And those men of the armies must be fed and have the means to fight. Above all, they must have arms and munitions, big guns and shells.

### Resources Have Suffered

Every thought of France for three long years of a bloody and sacrificial war has been given to "les braves" at the front. Little has remained for the civilians at the rear, who have borne their trials in stoic calm for the sake of the soldiers in the trenches. And in those years the resources of France have suffered, especially the farm resources, for imports have had to be directed to the army. The steel brought in has been for shells, the machinery to make more shells and guns. The plowshare has been beaten into a sword, while the reaper has rotted idle in the fields with only the hands of women and children to tend it.

Now, France needs grain. She must have grain to make bread both for soldiers and civilians. And only America can supply it. The burden of victory lies as heavily on our western farmers as on the soldiers on the battlefields of France.

### STUDY OF NATURAL RESOURCES

In commenting on neglect of Australian forest resources the Maryborough Advertiser of Victoria says:

"South Africa is busily engaged in showing us what an improvident people we are with regard to our timber asset. Through the neglect of our wattle plantations, valuable for export and home consumption, prices have gone up for wattle bark here (bark of acacia used in tanning). South Africa got seed of this tree from Victoria years ago and now supplies the European market and even sends bark to the Australian states, including Victoria. Was there ever a more severe and complete indictment of a public policy? We may go to the same lengths yet in regard to our eucalyptus, for California plants these valuable trees in millions, while we neglect them and experiment with pines, which often do not succeed."



# The Case of the Runt

Written for California Cultivator By Jean A. Koethen

**A** RUNT is evidence of a blunder somewhere, one of the unfit which ought not to survive, but which still has too much vitality to slip quietly out of existence. Almost every flock of chicks contains one or more. Some of them drop off in the first few weeks; others linger on, crow-headed, half feathered, short-backed, to an age and size when they are consigned to the frying pan.

In every flock some chicks seem from the first a little larger, a little more vigorous than the average. These are the chicks that are always first at the feeding trough, first out from under the mother's wings in the morning and last to seek them at night. The first chill of late afternoon never drives them to shelter. They rejoice in a sudden shower. Whatever you feed them, they grow right along. Other chicks in such a flock are what might be called just good average chicks, not too anxious to leave the sheltering wings of mother Biddy, nor yet too ready to seek them, good eaters, but not so good as to rob the rest of the flock, growing steadily but never phenomenally.

A very large proportion of runt chicks are runts because their parents were not what they should be. Possibly the male bird was lacking in vigor. Perhaps the mother was worn out by heavy laying and had no vitality left to put into the germ of the chick she was compelled to be responsible for. Careful investigation has shown that where half a dozen hens of apparently the same breeding and vigor are together in a breeding pen one may lay eggs that contain strong germs and hatch into strong chicks while another will rarely lay a fertile egg, and another perhaps lays eggs containing germs so weak that they rarely survive incubation.

It would be worth while to test out the hens in every breeding pen by the simple method of hatching each hen's eggs separately and marking the chicks so that there might be no doubt as to what hen was the mother of each. This plan, while apparently a troublesome one, would prevent great loss, for it would eliminate from the breeding pen the hens whose eggs contain weak germs or no germ at all, or which produce chicks that are not worth raising. It is quite possible, too, that further investigation will prove what one investigator has announced as his own conclusion, that some hens' eggs contain mostly pullets, while others run to cockerels. Think of the saving, in time and eggs, if one could know with fair certainty when he set a clutch of eggs that most of them would hatch into strong, vigorous pullets. The day is coming when we shall be able to do this very thing.

But not every vigorous chick has a chance to develop into a vigorous, useful bird. The path of every chick, even the hardest, is beset by enemies. The first of these, and one which attacks only brooder chicks, is overheating. The first few days chicks require a great deal of heat and can get along without very much ventilation. As the days pass, however, overheating and underventilating get in their

deadly work, and the chick's vitality is hopelessly sapped before ten days have passed. Watch a hen with her brood these warm summer days. For four days she keeps them quiet and much of the time under her wings. When these four days have passed they are ready to spend the larger part of the day in a temperature of 75 degrees and up. Compare this natural condition with that of the brooder chick which is often forced to live for several weeks in a temperature of 90 degrees or more. Overheating makes the chick susceptible to the slightest chill, and you might as well kill a chick outright as keep it always either chilly or too warm.

Overheating as the chick grows older checks the growth of the feathers. The half-feathered chicks you often see are the direct result of overheating in the brooder. Not always, for the same thing is often seen in chicks that have never been near a brooder. Slow feathering in hen-brooded chicks is sometimes due to improper food and often to lack of stamina.

The "mighty" mite is another enemy that sometimes changes a healthy, normal chick into a runt. Mites in the brooder or coop night after night soon rob the chick of so much blood that it has no longer the courage to try to live, but mites occasionally, just now and then when the coop has gone too long without cleaning, stunt the chick without killing it. The same may be said of lice.

"Economical production" is the slogan, or perhaps I should say one of the slogans of the new poultry husbandry. All these little losses, the setting of infertile eggs, the death of chicks in the shell, loss of life or vitality through carelessness or ignorance after it is hatched, all together make a very great loss in the end, a loss so great that it may make the difference between success and failure. Better 20 chicks and raise them all to a vigorous maturity than hatch a hundred and have at the end only 50 strong birds to show for all your work and expense.

## KEEP OUT MITES

To prevent the introduction of chicken mites in mite-free flocks by means of new stock, the specialists suggest these precautions: New stock not known to be free of mites should be isolated the first few nights and allowed to roost on new roosts wrapped with pieces of folded paper. The object of using the paper is to furnish a convenient place for mites to hide. The paper should be examined and if mites are found the fowls should be kept on these roosts five or six days, or until no more mites come off the fowls. Removing and destroying the papers and treating the roosts thoroughly with kerosene or crude oil will prevent an infestation.

The superior profit records of small flocks, as compared with large ones, have long been recognized. Hens do better when kept in small units, and for that reason the poultryman who has decided to keep 75 to 150 hens and must build accommodations, should, if he has plenty of room and a little extra capital, build several colony poultry houses instead of one.

There are experts nowadays who, by studying skilled laborers at work, detect waste motions, eliminate them, and thereby double efficiency. The poultryman ought to study just as critically his method of mixing and distributing mashes and scratch feeds. He may be able to make short cuts which will reduce labor by five or ten per cent, or even more.

Other conditions being equal, egg production is always higher in flocks kept under the colony system, which has several incidental advantages. Disease can be checked before it has spread far. The owner develops the egg-laying capabilities of his strain easily yet efficiently by hatching eggs each season from the house which has laid the best.

We would cull carefully, and, if pullets and hens are kept, house and feed them separately.

## Spend a little time Keeping posted

Science has made a discovery of great importance to poultrymen—LEARN ABOUT IT.

It will only take a minute to address two postal cards. Two cents is not much money, but it may mean the difference between success and failure.

Invest one cent in a postal to the Dept. Agriculture, Berkeley, Cal.; ask for bulletin 162 (sent free) it is of great importance to all who keep poultry. Find out what buttermilk means to your poultry's health and your poultry success.

Invest one cent in a postal to Globe Mills, Los Angeles, for a free sample of GLOBE A-1 BUTTERMILK MASH and valuable feeding information.

GLOBE A-1 BUTTERMILK MASH costs but little more than ordinary mash. Learn why it's worth a great deal more.

You can stop Chick Funerals. Get more Eggs. Keep your flock in GLOWING HEALTH; let us tell you how.

Spend two one cent stamps today; write the government, and write the Globe Mills.

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## Buttermilk GLOBE A-1 Dry Mash

**PETALUMA INCUBATORS & BROODERS**  
"STANDARD OF THE WORLD"

**Ducks Never Cackle**

Neither do all people write us who are making big hatches in different parts of the world in the

**PETALUMA INCUBATOR** but thousands have and we would like to tell you what they say. Present Models better than ever. You should know about *The Electrified Hen*. Write us. Just say "Send your big envelope of free literature. We Pay Freight."

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Simple, Reliable, Efficient

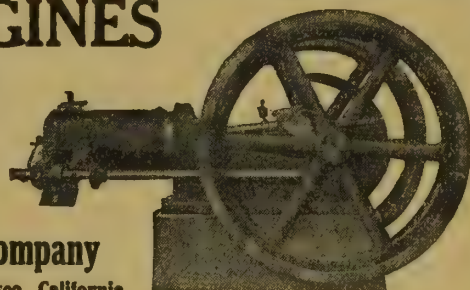
Operate on Stove Distillate, No. 1 Distillate or Gasoline

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## The Best Feed on the Market

Has the highest protein at the lowest price \$2.80 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before feeding all day; about one hour before feeding them their grain in the evening WEET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or

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Here is Your Opportunity to Secure A1 citrus trees. We offer several thousand 2-year-old lemons; Eureka and Villa Franca, also Washington navel; also several hundred Valencia on sweet root. We call these good trees and we know whereof we speak. **ALBERT JACKSON, Upland, Cal.**

**For Sale: Citrus Trees—Choice stock, young and thrifty. Selected buds, Valencia and Washington Navel, Eureka and Rialto seedless lemon. Marsh seedless grapefruit; also young seedlings. W. W. Burns, 631 Security Bldg., F. 3110, Los Angeles.**

**Pear Trees—Offer several thousand Bartlett, 2 and 3 feet, heavy caliper at 9c each. French prunes. Trees of all kinds. No agents; we sell direct. Write for price list. Carlton Nursery Co., Carlton, Ore.**

**By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator. The cost is only 3 cents per word per issue, with a minimum of 35 cents.**

**For Sale—Valencia trees, extra fine yearlings, straight, thrifty, sour root, high buds, not fertilized, fine soil for balling. Will contract for spring planting. S. R. Coate, Anaheim, Cal.**

**For Sale—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. Randall Bros. Nursery Co., Whittier, Cal.**

**Olive Trees—Mission, Manzanillo, Ascolano. Propagated by me from trees of known bearing qualities. Guaranteed. L. T. Schwacofer, Hemet, Cal.**

**Citrus Trees—All kinds, any quantity. Butler's Morning Side Nursery, Laramanda Park, Cal.**

**Citrus Nurseries, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.**

### WANTED

**Wanted by a man of experience and ability a position on first class dairy ranch. Expert in handling and care of high grade milk cows and farm crops. Will rent equipped dairy if first class proposition is offered. Address Stock, Care California Cultivator.**

**Wanted—Single man, not subject to draft, with farm experience and farm school training, to build up ranch of cattle and hogs near San Diego. \$50 per month and found. Apply to San Diego Land Corporation, 402 Southern Title Bldg., San Diego, Cal.**

**Wanted—Hogs of all sizes, weights or colors, large and small lots considered. What have you? Phone, write or call Durbin & Forbes, 722 San Fernando Building, Los Angeles.**

**Wanted—Position as tractor engineer and blacksmith - machinist or as ranch manager. References exchanged, or would rent dairy on shares. Box 20 Cultivator, 112 Market St., San Francisco.**

**Wanted—Position as ranch manager by sober, industrious, experienced, competent man of 40 years. At liberty Nov. 1st. Address 4521 Wadsworth St., Los Angeles, Cal.**

**Man With Years' of Experience would take charge of large wheat farm, good with all farm machinery. Single. Address Good, care Cultivator.**

### MISCELLANEOUS

**Famous Hairy Peruvian Alfalfa Seed—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.**

**Prepare for Frost—For sale 7000 gallon galvanized tank, \$75; 410 gallon wagon tank \$30. 14 feet steel hose \$20. Frost alarm \$12. Brass lined pump \$10. Whole outfit \$125. E. Richard, Sunset 108R11, Rialto, Cal.**

**Blackened Lime—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road, Pasadena.**

**To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.**

**For Sale—1915 Petaluma Brooder Stove (for distillate) cost \$27.50. Price \$15.00 good as new. Red Horse Shoe Poultry Farm, Box 163, Sierra Madre.**

### HORTICULTURAL PRINTING

**Catalogues—Good Printing. Specialists in preparing nursery, seed, poultry and live stock catalogues and all kinds of commercial printing. For prices and information address: WOLFER PRINTING CO., 424 Wall St., Los Angeles.**

**Our Printing Will Get Results for You.—It will help to sell your goods and earn you profits. Send for samples and price list. G. C. Gallagher, 441 Sacramento St., San Francisco.**

### PATENT ATTORNEYS

**Patents that protect are secured through The PACIFIC COAST PATENT AGENCY, INC. Savings & Loan Building, Stockton, California. Send for our little booklet on "PATENTS."**

**Patents—Copyrights, trade marks and labels registered. Solicitor of American and foreign. James E. Townsend, 712 San Fernando Bldg., Los Angeles. Phone, Home A4619. Sunset Main 347.**

### TO LET

**Wanted—Party to take 10 year lease 25 acres alfalfa land. I will furnish water piped on upper side of land and furnish one half seed and hay \$2.00 per ton for balling my part. Lessee must level and put the land in proper condition for irrigation and seed, water, cut, bale and give me one half of crop f. o. b. nearest railroad station. Land is two miles from station. Mention paper you saw advertisement in. J. E. Youngblood, Lang, Cal.**

### HOGS

**Registered Durocs—We offer for sale a choice service boar out of a daughter of M decto King and by a grandson of Burk's Good E Nuff; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col.; three young boars out of a great sow of Crimson Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. Derryfield Farm, I. O. O. F. Building, Sacramento, Cal.**

**Chester Whites, the Billiken Brand—The big winners at the California State Fair; Billiken was Grand Champion boar; a son was Reserve Grand Champion and a daughter was Grand Champion sow. Do you want some of this strain? Twenty gilts bred to farrow during October and November. Fifty Billiken pigs, both sexes—March and April farrow. Every animal is cholera immune. Write for prices and booklet on Chester Whites. C. E. Cunningham, Mills, Sacramento County, California.**

**Grape-Wild Farm Berkshires—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.**

**Large Yorkshires—Choice spring boars, gilts and weaned pigs from champion sow P. P. I. E. or from breeding of champion boar and sow Sacramento 1916. If you see them grow you will like them. Riverina Farms, Paradise Road, Modesto, Cal.**

**Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.**

**Berkshires—First prize junior boar; first and second senior boar pigs including junior champion; fifteen spring and fall open gilts sired by Ames Rival 115, champion boar; and two junior yearling bred sows priced cheap for immediate sale. F. D. Hall, Ferris, Cal.**

**Duroc-Jersey Boars 1 Year Old—For Sale—Sons of Burk's Good-E-Nuff, Grand Champion Illinois State Fair, 1914. Out of Queen Is Rite, Grand Champion California State Fair, 1916. A. A. Trueblood, P. O. Box 582, Sacramento.**

**Rancho Rubio Durocs—Some extra good gilts sired by Orion Model and California Keen 5th and out of my best sows. Write for prices bred or open. Weaned pigs either sex. Elmer Lamb, Ceres, Cal.**

**Bernstein Sells 20 head of choicest Poland-Chinas at the Big Sale October 19 at Hanford, Kings County. W. Bernstein.**

**Duroc-Jerseys—See our Gold Models at Riverside, October 9th to 13th. Peters, Lamson & Walker, Devore, San Bernardino County.**

**Duroc-Jersey Spring Boar—Sire, dam, dam's dam, and three litter mates of dam were 1916 Riverside winners. A high class boar priced to sell. H. C. Withers, Palo Cedro, Cal.**

**Big Type Durocs—Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.**

**Most Money in Duroc-Jerseys—Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.**

**Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.**

**Large Type Poland-Chinas are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Cal.**

**Large Type Poland-Chinas—Very best stock. Prices reasonable. Weanlings my specialty. C. R. Hanna, Riverside, Cal.**

**Durocs—P. & L's Defender by Defender heads herd. Joseph Prendergast, Route 2, Box 87A, San Bernardino, Cal.**

**Model Herd Berkshires bred for size and quality. Weanlings and gilts. J. L. Gish, Laws, Cal.**

**Carruthers' Farm Berkshire Hogs—Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.**

**Poland-Chinas—A few good breeding boars. S. F. Williams, Orland, Cal.**

### LIVE STOCK

**Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.**

**For Sale or Trade—Registered Percheron stallion; black, age five years; sound; weight 1950 lbs., height 17 hands. Good breeder and fine action. Will trade for registered Holstein cows. Picture, price and pedigree on application. Address D. B. Adams & Son, R. F. D. 1, Modesto, Cal.**

**Registered Shires—Blackhawk Stock Ranch. Importers and Breeders. Boston & Ward, Burlingame, Cal.**

**Registered Tongueburn Goats—Choice buck kids. Heavy milking strain. No does. C. U. Widmer, Upland.**

### CATTLE

**Pedigreed Bull Calves, Registered \$50.00, unregistered \$25.00. Service bulls \$75 and up. Good individuals from producers. Cows with yearly records at a profit, tuberculin tested. Write or come and select. Horses. N. H. Locke Co., Lockeford, Cal.**

**For Sale—As we are going into registered Holsteins exclusively, will sell or trade for steers 50 head grade Holsteins and Jerseys. All bred to registered bulls. An excellent opportunity to pick up a top string. Terms. Agee Bros., Brawley, Cal.**

**For Sale—Good Shorthorn and Jersey cow coming four. Fresh in January. Gives two gallons per day, also twin heifer calves one year. Bargain, \$130 cash. J. G. Stup, Yorba Linda, Cal.**

**D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.**

**For Sale—A few head of registered Jerseys best blood in the country, few young cows, heifers and calves of both sexes. Prices reasonable. Tribble Bros., Lodi, Cal.**

**For Sale—Some registered A. R. O. Holstein cows. Write for pedigree or see them at my ranch. J. W. Benoit, Route C, Modesto, Cal. Ranch three miles out Muze Highway, one mile south.**

**Registered Holsteins out of ARO Dams. Grandsons of Pieterje Maid Ormsby, 35.55 pounds average 5.31. Geo. Kounias, Modesto Farms, Modesto, Cal.**

**Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.**

**Veramont Stock Farm Pure Bred Herefords. Location Plumas County. Ideal for stamina and vigor. Bulls for sale. Address H. M. Barngrover, San Jose, Cal.**

**Registered Holstein Bulls from high producing dams for sale at reasonable prices. Also a few choice females. McAlister Sons, Chico, Cal.**

**For Sale—Fine registered Holstein three year old bull, dam's record 25.08 lbs. butter fat, 635.7 lbs. of milk. Call or write F. W. Bowdle, Hawthorne, Cal.**

**Sunshine Farm Jerseys—Bulls from officially tested dams for sale. E. E. Greenough, Merced.**

**Small Herd of Jersey cows and heifers. Price right. G. R., 826 North Ave. 65, Los Angeles.**

**Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Cal.**

**Registered Holstein Bulls of various ages for sale. Millbrae Dairy, Millbrae, Cal.**

**Registered Jerseys—both sexes for sale. J. R. Carhart, Fullerton, Calif.**

**Holstein Bulls from record cows. Prices right. A. M. Bibens, Modesto, Calif.**

### MACHINERY

**WHY BUY NEW? SAVE HALF**  
Material guaranteed. It's second-hand after used few times, but not worn out.

Engine snaps: 6 Stearns, \$39; 2 1/2 h. \$39; 9 Foss, \$125; 18 Western, \$295; 34 Lambert, \$390. Many others.

**NEW, USED WOOD, GALV. TANKS.**  
All sizes; galvanized wagon tank, \$48; 3500 well corrugated galv. tank, \$72.50; 10,000 gal. redwood, \$75; 10,000 galvanized, \$135; 15,000 corrugated galv., \$195; 5000 gal. redwood, \$48; 25,000 gal. redwood, \$125; 8000 redwood and stand \$75. Complete gas plant for private home, \$75.

**WINDMILLS, SPECIALLY PRICED.**  
8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel.

**PUMPS, CYLINDERS, PIPE**  
2 1/2-in. two-stage hor. centrifugal pump, \$38; 2-in. rotary, 3 hor. cent., \$35; 5-in. two-stage B. J. hor. cent. pump, \$175; 8-in. hor. cent., \$150, pumps 200 in. water; deep well double-acting No. 2 Ames, \$145. Large Bulldozer Jacks, \$68. Small Bulldozer, \$42.50. Plunger pumps 5x6 air compressor, \$29. Pipe fittings; new complete gas plant for private home, \$75.

**RANCH MACHINERY**  
Walking and riding plows, harrows, cultivators, scrapers; brand new 3/4-in. cable, 6c; water troughs, \$4; bone grinder; feed mill, sprayer; mowers, rakes, belting, sundries. Down town office DEMMITT CO., UP-STAIRS, 120 N. Main, Yards, 816 Yale, Los Angeles.

**Gasoline Engines, the largest stock of used gas engines in California from 1 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles.**

**For Sale Caterpillar Holt 30—Used two seasons on small ranch, \$2000. Also 1000 ft. seven-inch irrigating pipe at 40c per foot. H. N. Vaughn, Artesia, Cal.**

### SEEDS AND PLANTS

**Alfalfa Planters, fill your fall requirements NOW with GREEN-GOLD seed. High quality because of personal field selection. Low price because of direct dealing. Send for samples and prices. Romberger Seed Co., Modesto, Cal.**

**\*\* ORDER YOUR SEEDS NOW \*\***  
If you are going to need any seed for next season now is the time to render your order. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbutuck, Cal.

**\*\*ALFALFA SEED OUR SPECIALTY\*\***  
Alfalfa Seed—Common variety, Hairy and Smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. E. F. Sanguinetti, Yuma, Arizona.

**Rhubarb—\$1127.00 from one acre. A crop every month of the year. Write to me and I will tell you how you can do as well. J. M. Stone, Lodi, Cal., Route 4.**

**Vetch Seed—New crop clean seed, \$4.00 per 100 lbs., on car. Alsike, Red Clover. Price on application. Carlton Nursery Co., Carlton, Ore.**

**New Crop Alfalfa Seed now ready. Not the lowest in price, but high in quality. Leo Turner, Yuma, Arizona.**

**For Sale 50,000 Choice Banner Strawberry Plants—Hugh C. Newton, Castella, Cal.**

**AUTOMOBILE STORAGE BATTERIES**

**Titian Batteries for Service, get our prices before buying or having an old battery repaired. Call or write, Olive Street Electrical Co., 910 South Olive St., Los Angeles, Cal.**

### FARM LANDS FOR SALE

**1900 Acres—First-class stock farm in Douglas County, Oregon, about two miles by the Pacific Highway. A hard surface road now under construction from Oakland, a good little town on the main line of the Southern Pacific railway. All well fenced, with heavy woven wire, white oak post and subdivided into pastures, each with spring water. Beautifully timbered; scattered oak and fir. Suitable buildings. Good repair. New modern sheep barn for large flock lambing ewes. About one-half tillable; 150 acres in cultivation; 50 acres seeded down to hay. Early pasture. Price \$27 per acre on reasonable terms. Farm is in capital condition and partly stocked. Sheep, horses, implements can be taken over at an appraised valuation. Wm. MacMearns, 701 Corbett Building, Portland, Oregon.**

**Lake County, California—Climate uncalled. We have two 160 acre ranches both have an abundance of running water, fruit, grain, wood and pasture land. Orchards of walnut, prunes, pears, peaches, apples, berries, etc. Three room cottage, five room house, barns and out buildings. Fenced and cross fenced. Three miles to good small town, one mile to school. Price \$7,000.00 and \$7,500.00. No exchange. Terms. Address Box 71, Kelseyville, Cal.**

**LAND WITHOUT PAYMENT**  
We have large and small ranches in different parts of the state, improved and unimproved, that we can sell without payment on the principal for from two to five years. Write us for particulars. Pacific Coast Land Company, 725 Hearst Building, San Francisco.

**Oregon, California Government Lands. Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.**

### TO LET OR FOR SALE

**To Let—Ranch at Bakersfield for term of three to five years. Ideal for dairy; 160 acres (all level) 80 acres in alfalfa, balance in wild grass. Ample ditch water for irrigation always available. Good well for stock and domestic purposes. Good two story eight room house, barn, shade and fruit trees, grapes, nuts and berries. Complete outfit of new farming implements, wagon and buggy. Rental to tenant who will put in 20 additional acres of alfalfa each year) \$1200 first year, thereafter \$300 additional rental each year. Or will sell for \$3,000; terms one-third cash, balance five years, interest 6 per cent. per annum, with privilege of paying an account at any time. Owner, 636 Wesley Roberts Bldg., Los Angeles.**

### POULTRY

**Blue Andalusian Cockerels, Blue Orpington cockerels and Ancona cockerels. Large vigorous birds, for the shows or breeding pens. Write for prices. J. R. Huddleston, 342 Edgeware Road, Los Angeles.**

**Day Old Chix—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Cal.**

**Poultry Wanted—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.**

**200-250 Egg Fall Chicks, Eggs, Stock, reasonable. Rocks, Reds, Wyandottes, Anconas, Leghorns. Few pens each breed sacrificed, make room. C. Beeson, Pasadena, Cal.**

**For Sale—Twenty pairs correctly mated Red Carneaux pigeons. Good workers and from best blood obtainable. Four dollars pair. Red Horse Shoe Poultry Farm, Box 163, Sierra Madre.**

**"Eastman's Bred-to-Lay" Barred Plymouth Rocks. Fall chicks, eggs, cockerels. Fairmead Poultry Farm, Fairmead, Cal.**

### TURKEYS

**Our Geese and Turkeys Win Again—Grand Champion Sweepstake Special, for best pair of birds in show. For size, vigor and quick maturity, our stock are best, East or West. Stock and eggs in season, also Collie pups. Correspondence solicited. John G. Mee, St. Helena, Cal.**

### LUMBER

**Lumber—Sash—Doors—Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A R.W. Shingles \$60 per bundle. Send list for estimate. Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.**

### THOSE CALIFORNIA CHAMPIONS

California live stock people are still talking over the remarkable winning of Mr. Brush at the National Swine Show at Omaha. We doubt not Mr. Brush and Mr. Barrows are receiving many congratulations. We were glad indeed to have direct from the show an account of these winnings by Prof. Thompson and given in last week's issue. We regret that we did not give credit to Mr. Frost of the Berkshire World for use of the photos from which our engravings of the two California winners were made. Mr. Frost is a strong admirer of the Berkshire, and especially of California Berkshires and so is anxious to pass on information as to the winnings of these two magnificent animals.

### A GREAT BULL

See the announcement of Moorland Str. Cristeria, one of the greatest bulls on the Pacific Coast in the ad of Gotshall and Magruder on page 427. It costs money to secure offspring from such a bull but great producers are money makers.

Read that ad all through.

At the University Farm Seed Show recently held at Davis J. M. Romberger of Modesto was awarded first prize on a five pound sample of his Green Gold alfalfa seed. The same sample was awarded grand prize for being the best legume seed shown.



Legal Queries

Louis B. Stanton, attorney, 243 Wilcox Building, Los Angeles, will answer legal queries in this department. Immediate mail replies cannot be given except where fee to Mr. Stanton is paid. When replies are wished in Cultivator address query to 115 1/2 N. Broadway, Los Angeles.

Bull Trespassing

A and B are neighboring farmers. A has registered Jersey cattle; B has a Durham bull running at large in pasture. B's bull comes through the line fence and breeds three of A's cows. A, after warning B, shut the bull up. B has the keep of the bull for its use; the owner is C. Can A collect damages and, if so, must he include C in the action? Must A wait to bring suit until the cows calve, as A has no witnesses to prove that B's bull did breed his cows? What can A do if the bull again comes back?—Subscriber, Las-  
senger.

If domestic animals, such as in the above case, do injury while wrongfully in the place where the injury is done the owner or keeper is liable for injury, thus A would have right of action, especially after warning. If the action was taken merely to recover damages without attachment of the bull, although C would be a proper party defendant, he would not be a necessary party defendant and the action could go against B alone. If action was taken by attachment of the bull and to enforce a lien thereon both B and C would be necessary parties defendant. In all cases where the land upon which trespass by the animal is made is planted to growing crops, vines, fruit trees, or vegetables and is entirely and substantially enclosed the person in possession of such property is entitled to proceed to enforce the lien against the trespassing animal for the damage caused and such animal is not exempt from execution sale for any judgment which may be rendered against the owner of the animal for the trespass committed. If your premises are entirely enclosed with a good and substantial fence, you are entitled to take the procedure outlined in the estray act and retain the bull until the owner has paid the cost of its keep while in your possession, but to do this you must comply with the provisions of the act as to notice and recording, but under the estray act you are not entitled to hold the animal for the damages caused by trespass. That would be your remedy, however, if the bull came back. Of course, you are required to prove that B's bull did breed in order to recover damages, and unless you saw it yourself or can prove the act in some manner other than by production of the calves, it would apparently be the part of wisdom to wait until you have substantial proof in your possession; there would be no legal requirement, however, which would compel you to so wait.

Note—The requirement as to substantial fence in the estray act applies only to certain counties in the state of which Lassen is one.

Water Right

A and B own adjoining tracts of land. B has used for some years and is using a strip of land belonging to A in which there is a creek, for the purpose of watering his cattle. B maintains that he has a right to go on using this. What are A's rights and how can he best assert them?—Subscriber, Solvang.

Unless facts are given in a case as the above showing exactly the origin of the claimed right, it is impossible to tell whether or no a party has obtained an easement over the property of another which he is entitled to maintain or not. Many times it is simply a matter of bluff without any legal basis for the claimed right of way, or easement. But, it must be understood that where such a right is openly and notoriously claimed and acted upon continuously for the period of five years, with the knowledge and acquiescence of the owner of the land over which it is claimed, that it ripens into an estate and title. It is, therefore, of the utmost importance to have such matters judicially determined. Your method of bringing this about would be to prevent B from using the land or creek by the erection of fences or other adequate means of preventing access to the land and creek in question, or to bring action of trespass

against him which would determine the right.

Perfecting Title

A enters into a contract to buy a lot from B on a sales contract providing that when A pays the full purchase price according to his time contract B will deliver to A a deed and certificate of title. B died two years ago and the heirs have had no administrator. A now sells the lot and wishes to give a deed and certificate of title. If the heirs refuse to act or are dilatory how can B proceed to get title?—Subscriber, Huntington Park.

A is entitled to petition the superior court to have an administrator appointed; it would probably be well to set forth in the petition the above facts; then such administrator can be required after a proper showing made to the court to execute under the order of the court the required deed. The costs of such proceeding, including the fees of the administrator and of the attorney for the administrator would be borne by the estate of the deceased. The right of A in this case is that of a creditor of the deceased. As the proceedings are technical it would be necessary for you to employ an attorney to guide you through.

The pomegranate crop of Tulare County is reported somewhat short but of splendid quality. It is now being packed.

\$500,000

It is easy to be liberal when we have nothing to be liberal with, and in the handling of figures ciphers cost nothing. In the Pacific Coast items of the issue of the 13th we were rather liberal with the Pinto bean crop of Colorado and New Mexico, at least we were liberal with the ciphers attached thereto and made out that those two states would produce three billion bushels. Now when we talk in billions it means some beans, and as the United States produces only about 15,000,000 bushels we want to recall some of those Colorado and New Mexico Pintos. California is the pioneer bean state of the Union. According to the government crop estimates it will produce this year 9,280,000 bushels. Colorado, New Mexico and all other states combined, with Pintos and other varieties, will hardly reach our output.

While the production of alfalfa seed in California is not up to normal, growers are realizing better profits than usual owing to the unprecedented demand. Dealers variously estimate the amount being shipped to Middle Western points at 12 to 15 carloads, and it is claimed that a considerable quantity has been purchased for South American shipment.

Thirty thousand visitors attended the Kern County fair at Bakersfield.

THE TRACTOR OUTPUT

Upon the authority of one of the leading manufacturers of engine plows the portable output of standard tractors of all kinds and sizes for 1917 will total about 67,000. Despite the seriousness of the material situation, this output is considerably in excess of the production last year and testifies both to the necessity and demand for tractors. The significant fact about this is that the necessity is becoming more emphatic, while the supply of standard type tractors is woefully inadequate to meet the demand.

With high priced sugar, high priced honey and other sweets why not raise sorghum? Some months ago we referred to the excellent sorghum made by D. L. Wray of Tulare County. We understand he is now running his mill and producing a quantity of that excellent sweet. It is a good time to plan for next year's sweet supply by providing the field for sorghum next season.

From El Centro comes report that after the county farm bureau had secured promises of sufficient hogs to make up 30 carloads to be sent to Kansas City, San Francisco and Los Angeles buyers came in and bought up practically the entire lot at a cent and a half advance on former prices.



Raynster

Reg. U. S. Pat. Off.

Raynster is the name of the best storm-coats. To make sure that you get full value when you buy, look for the Raynster label.

You're equipped for the roughest work in the roughest weather when you have a Raynster.

These strong, durable storm-coats keep you dry through the worst of down-pours. They bring the protection of your own roof out into the fields.

And mark this: When you buy a Raynster your selection is not limited. This word represents a line of storm-coats complete in every style and type of coat.

Every man, woman, boy and girl can find just the coat they most need in the Raynster line. Work-coats, dress-coats and play-coats of all kinds and descriptions, with real service and the best of materials and workmanship, is the real meaning of Raynsters.

Go to your dealer's and select the right Raynster for your needs. Take it home. Then when it rains you're ready. Write us for interesting style book. It pictures some of the most popular Raynsters.

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## maximum Nutrition minimum cost

That's the cry of the world today. The food that qualifies is the food for every home.

Drink a cup of Ghirardelli's Ground Chocolate every day in place of more expensive foods. Ghirardelli's Ground Chocolate is made of pure cocoa and sugar, the two great nutrimental foods, and blended in the right proportions to insure its distinctive taste-appeal, its easy assimilation and unusual nourishment. A tablespoonful, 1c. worth, with milk added, makes a cup—a true conservation food beverage.

### Ghirardelli's Ground Chocolate

Comes in ½-lb., 1-lb. and 3-lb cans

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Since 1852

San Francisco



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Chases the chills in a jiffy—you bathe or shave in comfort. Portable. Fuel consumed only when heat is needed—no waste. No smoke or odor.

STANDARD OIL  
COMPANY  
(CALIFORNIA)

HEAT  
WITH  
PEARL  
OIL



## PERFECTION OIL HEATER

Better service is assured by the advertiser if when writing you mention the California Cultivator.

## Household Department

JIM DALE

By Ellis Parker Butler of the  
Vigilantes

Young Jimmy Dale, across our street,  
Is just a gawky lad,  
He grew so fast, the doctors said,  
His heart was mighty bad.

They wouldn't let him do much work  
Or any hearty play  
But, just the same, they drafted Jim,  
And Jim has gone away.

Jim was a sort of great, big kid  
And fooling all the while  
So, when they ordered him to camp,  
He went there with a smile.

Jim Dale is in the army now,  
Lank legs, bum heart and all,  
To fight like other drafted men  
That got the country's call.

God, yes! Jim's heart may drop him dead  
Or he may live to be  
Shot all to pieces "over there"—  
What odds to you or me?

By thunder! it's these odds to you!  
If kids like Jim can go,  
With smiles, to fight our wars for us  
We can put up the dough.

If we can buy a bond or two  
And don't, while Jim, poor cuss,  
Goes smiling off to death or wounds—  
Then hell's too good for us!

### ON TRIAL

Written for California Cultivator  
By Linda W. McNeil, San Jacinto



MARIE Benton looked around her tidy room and sighed. The idea of John Jones wanting her to marry him! She had known him all his life; they were schoolmates, but he had married years ago and now his wife was dead, leaving him with four small children, the youngest a baby of two years. And he had asked her to be a mother to his little ones.

"I don't believe I could stand it to have children tearing around and upsetting things." But she thought of John with the children clinging to him and her heart softened.

"The baby is a sweet little thing with those big brown eyes; the boy is a manly little fellow and tries to take care of her; the twin girls are bright but perpetual motion isn't in sight with them around. They'd be all over in a minute and I'd never know quiet again. Dare I try such a thing?"

She sighed. Then she looked out at her clean yard with its orderly flower beds and the yellow cat sleeping in the sun.

"They'd trample the flowers and pull the cat's tail and chase her. I'd be in hot water all the time." Again she mused: "That baby is a dear and needs a mother. They all do. John is just as bad. His coat had a rip in it and his collar was ragged. I believe I'll take the children for a while

and see how we get along before I make up my mind." Next day she said to John:

"Let me have the bunch for a month and see how we get along together. I don't know if I can stand it with them, and I want to be sure before I say 'Yes' or 'No.'"

"All right," said John, and a shade of relief crossed his face.

A month later a neighbor reported the situation:

"I've just been up to Marie's house and of all the sights you ever saw! The whole four of the Jones children are there; have been for four weeks. The boy was making some kind of a contraption with a board and hammer on the back porch, and of all the racket! The twins were playing in the kitchen. One had the chairs piled up, playing train; the other had a kitten wrapped up in that brown and yellow rug Marie sets such store by. It always made me think of a garter snake. Marie sat there in all that noise with the baby in her lap. It was pulling her hair till it was all loose and fluffy around her face and she looked happy. I never noticed before that Marie was pretty. She and John are to be married next week."

### HALLOWE'EN SPORT

Written for California Cultivator  
By Mrs. W. H. Proctor, Kingsburg



ELLIS Rollins came home from school one afternoon in October and eagerly told his mother of a plan the boys were making to have "fun" on Hallowe'en.

They were going to pile stones on Mr. Martin's porch, put a jack-o-lantern on top, knock on the door and run away.

Mrs. Rollins listened in silence, but with a picture in her mind of old Mr. Martin just recovering from a stroke of paralysis which, though slight, had left him in a weakened condition, unable to do any except the very lightest work, and of Mrs. Rollins, old and frail.

"I can tell you a better plan than that," said she. "You know you have always wanted to be a boy scout. Here's a chance to do the kind of thing the boy scouts would do."

After a little demur, Ellis agreed that the new plan would truly be more fun than the one he had told about.

Accordingly Hallowe'en night found nine boys moving very quietly about Mr. Martin's place. Their whispers and smothered laughs were not heard by Mr. and Mrs. Martin, neither was the quiet opening of porch and cellar doors. With so many nimble, willing workers, it took only a short time for the pumpkins and squashes to be transferred from garden to cellar; and then a large pile of stovewood was quickly moved from the place where it lay some distance from the house and quietly piled in the end of the back porch.

As Ellis placed the last armload upon the porch, one stick slipped and

### FOOD PLEDGE CARD

TO THE FOOD ADMINISTRATOR:

I am glad to join you in the service of food conservation for our nation and I hereby accept membership in the United States Food Administration, pledging myself to carry out the directions and advice of the Food Administrator in my home, insofar as my circumstances permit.

There are no fees or dues to be paid. The Food Administration wishes to have as members all of those actually handling food in the home.

Anyone may have the Home Card of Instruction, but only those signing pledges are entitled to Membership Window Card, which will be delivered upon receipt of the signed pledge.

Cut out this slip, sign and mail to Food Administration, Washington, D. C.

NAME \_\_\_\_\_

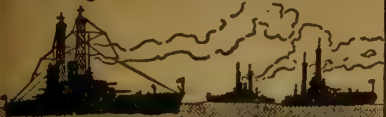
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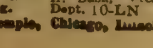
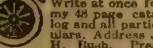
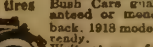
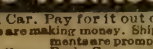
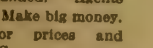
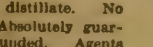
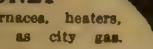
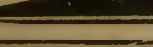
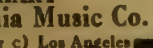
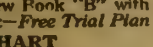
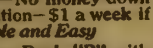
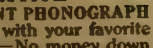
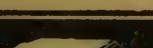
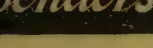
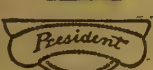
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Suspenders

fell to the floor. The noise brought Mrs. Martin to the door. When she saw the neat pile of wood she exclaimed, "What fine scouts you boys are!"

This made the boys feel quite proud, and when Mrs. Martin filled their hands and pockets with doughnuts and apples they all agreed that they had had the very best kind of Halloween.

## GREEN TOMATO PICKLES

This calls for one gallon of green tomatoes, one-half dozen large onions, three cups of brown sugar, one-half lemon, three pods of red pepper, three cups of vinegar, one tablespoon each of whole black pepper, whole cloves, whole allspice, crushed celery seed, mustard seed and ground mustard. Slice the tomatoes and onions thin. Sprinkle over them one-half cup of salt and let stand over night in a crock or enameled vessel. Tie the pepper, cloves, allspice and celery seed in a cheesecloth bag. Slice the lemon and chop two pepper pods very fine. Drain the tomato and onion well. Add all seasoning except one pepper pod to the vinegar, then all the tomato and onion. Cook for one-half hour, stirring gently at intervals to prevent burning. Remove spice bag to prevent darkening the product. Pack in ten ounce jars and garnish with slender strips of red pepper, placing them vertically on the opposite sides of each jar. Sterilize for 15 minutes.

## CELERY PICKLES

Take pickles the size of dill pickles, cut the long way into two or three slices, one large onion in the bottom of a two-quart jar. Then fill with the pickles and four or five celery sticks, or celery seed as much as liked. Let one pint of vinegar, one pint of water, one-half cup of sugar and one-fourth cup of salt come to a boil, pour over, and seal.

## DILL PICKLES

To make dill pickles, take one cup of vinegar, one cup of salt, nine cups of water, one head of dill, and one-fourth teaspoon of alum, for a two-quart jar. Put the dill and the pickles and the alum in the jar, and let the others come to a boil. Pour over, and seal. These can also be put up in stone jars.

## OCTOBER PRIZE WINNERS

Winners in October prize contest are: Linda W. McNeil, San Jacinto, first; Mrs. W. H. Proctor, Kingsburg, second. Others whose stories are published will receive a year's extension of subscription to the California Cultivator.

## BLACKBIRD PIE

"Sing a song of sixpence,  
A pocket full of rye;  
Four-and-twenty blackbirds  
Baked in a pie.

"When the pie was opened  
The birds began to sing;  
Was not that a dainty dish  
To set before the king?"

The old nursery rhyme is suggested by a letter from G. Frank Rossaire of Tulare County. Mr. Rossaire writes: "I noticed an item in one of your late issues stating that rice growers are shooting blackbirds which are eating their rice crops. Rice growers may be interested to learn that the blackbirds are very good eating and especially fine in pies. Of course the birds are skinned, cleaned and only the breast reserved."

## A GOOD WAY OUT OF IT

At a certain Northern military depot an obvious malingerer attended the regimental doctor for examination. His tale of woe was, however, laid on too thick—what with a weak heart, corns, lumbago, etc.

The shrewd doctor patting him on the shoulder, said to him:

"My poor fellow, go to France and get shot out of your misery."

## FANCY!

"They say that the plates on a battleship are nearly a foot thick."

"Mercy! Fancy having to wash them three times a day!" — Girls' World.

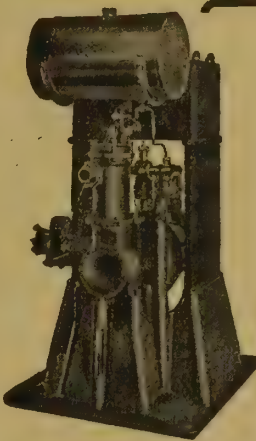


"The Range  
with a  
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## Equipped to do her bit!

With a Majestic in your kitchen, you can do more to help the nation save food and prevent waste. Its heat-tight, cold-riveted construction saves fuel. Its perfect baking results saves food. Its unbreakable malleable iron and rust-resisting charcoal iron body saves repairs and outlasts three ordinary ranges. Years after this war is over, your Majestic will still be proving that.

Do you know that now much less crops will buy a Majestic than a few years ago? Less than 2 acres of corn pays for it—think how little seed and labor you give for an article that means so much to the whole family. One quality, many styles and sizes. There is a Majestic dealer in every county of 42 States. Send for free booklet and name of dealer near you.  
Majestic Mfg. Co., Dept. 203 St. Louis, Mo.

Get the Light  
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from your own generating plant  
The UNI-LECTRIC lighting system will put electric light in every room in your house, will run your sewing machine, electric iron, vacuum cleaner, churn, washing machine, etc.

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Operates with a silent gasoline engine of high speed, generator and automatic governor. Uses standard globes and fixtures. Is easy to install.

Can be used for one or more houses, barns, sheds, workshop and any place where you need light and power.

Write today for illustrated catalogue to

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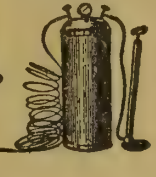
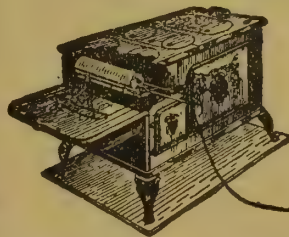
Besides being cheaper, it is cleaner, more convenient.

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Ask about the Ro-San Washstand—Hot and Cold  
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I Save  
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"Grains will be valuable almost any-  
where this year," says the Farmer's  
Guide, "except when fed to rats."

Cull potatoes make profitable pork.





# NORWALK TIRES

Definite savings in fuel and power are made by Norwalk Tires because they roll with the least resistance and absorb the shocks in a remarkably efficient manner; deliver the greatest degree of comfort—the kind that is filtered free of jars and vibration. Try Norwalks next.

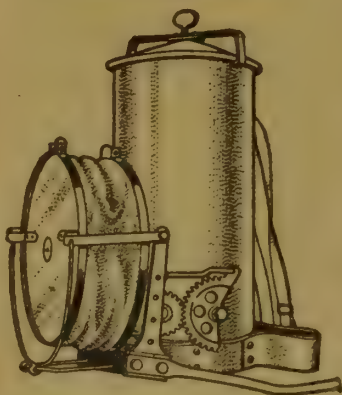
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6029 Pasadena Ave., Los Angeles

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With INCLOSED MOTOR  
Keeping OUT DUST and RAIN—Keeping IN OIL

SPLASH OILING  
SYSTEM

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Every Bearing With  
Oil, Makes It Pump  
The Lightest Breeze  
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Water Supply Goods—Steel Frame Saws  
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**SMITH-BOOTH-USHER CO.**

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**MACHINERY**  
OF EVERY DESCRIPTION  
**BOUGHT and SOLD**  
**BUTTRISS & McCLELLAN**  
205-7 N. Los Angeles St. A-5473 Bdy. 8098

## California Cultivator

Costs Only \$1.00 Yearly

## Los Angeles Market

Los Angeles, Oct. 24, 1917.

### BUTTER

Produce Exc. Quotations.  
Price to trade 4c higher.  
California extra creamery .....46  
Dairy Exch. prices past week.  
Oct. 17 18 19 20 22 23  
'17 47 47 47 46 46 46  
Rets. wk. ending Oct. 23, 326,400 lbs.

### CHEESE

Brokers prices:  
California fresh, lb. ....25  
Oregon Longhorn .....29  
Tillamook Trip .....28  
Domestic Swiss .....34

### EGGS

Exchange quotations. Prices include  
cases and fillers valued at 35c.  
Fresh extras .....57  
Case count .....54  
Pullet .....45  
Dairy Exch. prices past wk.  
Oct. 17 18 19 20 22 23  
'17 56 56 56 56 56 57  
Rets. wk. ending Oct. 23, 418 cases.

### POULTRY

We quote to producers:

Broilers .....31@32  
Fryers, 2 1/2 lbs. and up .....28  
Hens—Leghorns .....22@23  
Roasters, 3 lbs. and up .....26  
Ducks, lb. ....16@21  
Squabs, doz. ....3.00@4.00  
Rooster, old .....14

### LIVE STOCK

We quote cwt, f. o. b. L. A.  
Corrected Wednesday morning, Octo-  
ber 24, by the Cudahy Company.

Cattle—  
Beef steers, av. 1000 to 1100 lbs. 8.50@9.00  
Heifers, good .....6.50@7.00  
Cows, good .....5.50@6.50  
Canners .....4.50@5.00

HOGS—  
Av. 125 lbs. ....13.50  
Av. 150 lbs. ....14.50  
Av. 175-200 lbs. ....15.00  
Rough, docked 20 lbs.; piggy sows, 40  
lbs., stags, 40 per cent. ....9.50@10.00  
Ewes .....9.00@9.50  
Lambs .....13.50  
Yearlings .....10.00@10.50

### POTATOES

Wholesale selling price:  
Northern Burbanks, cwt. ....2.75@3.10  
Russets .....2.60@2.70  
Rurals .....2.40@2.45  
Sweet, cwt. ....2.65@2.85

### ONIONS

Wholesale selling price:  
Brown, cwt, 3.00; white .....3.00  
Garlic .....8

### VEGETABLES

Wholesale prices:  
Artichokes, doz. ....1.10  
Beans—Wax .....7@8  
Limas, lb. ....7@8  
Ky. Wonder .....7@8  
Beets, sk. ....1.00  
Cabbage, lb. ....1 1/4  
Carrots, doz. ....40  
Cauliflower, doz. ....1.00  
Celery, doz. ....80  
Corn, lug .....70@75  
Cucumbers, lug. ....1.25@1.35  
Egg Plant, lb. ....3@3 1/2  
Horseradish, rt. lb. ....15  
Lettuce, doz. ....40@45  
Leeks .....20  
Mint .....40  
Onions, green, doz. ....25  
Okra, lb. ....10@12  
Peas, lb., Telephone .....8 1/2@9  
Peppers, Chili, lb., 15; Bell .....3@3 1/2  
Parsnips, doz. ....40  
Parsley, doz. ....20  
Pumpkins, lb. ....2  
Radishes, doz. ....20  
Rhubarb—Strawberry .....1.10  
Romaine, doz. ....50  
Spinach, doz. ....25  
Squash, Summer, cr .....1.20  
Crownneck .....70@75  
Hubbard, lb. ....2  
Tomatoes, cr. ....75  
Turnips, doz. ....35

### FRUITS

Wholesale prices:  
Apples—Skinners Seedling .....1.50@1.75  
Jonathan .....2.00@2.35  
King David .....1.75@2.00  
Avocados, doz. ....6.00@9.00  
Bananas, lb. ....4 1/2@5  
Casabas, lb. ....2  
Cranberries, bbl. ....14.00  
Figs, bx. ....90@125  
Grapes—Black .....1.10  
Malagas, lug .....1.10@1.15  
Muscat, lug .....1.10@1.25  
Tokays .....1.50@1.65  
Nectarines, lug .....1.85  
Pineapples, lb. ....10  
Peaches, lug .....1.00@1.10  
Pears, Bartlett, lug .....1.75  
Plums, lug .....1.25@1.75  
Pomegranates, lug .....1.50  
Quinces, lug. ....1.00@1.10  
Watermelon, lb. ....2

### CITRUS

Lemons, 4.25@5.50; juice .....2.25  
Grapefruit .....3.25@3.50  
Limes, basket .....1.00  
Valencias .....3.50

### HONEY

Wholesale prices:  
Extr. White, lb. ....14@15  
W. W. lb. ....15@16  
Comb, case, W. ....3.75  
W. W. case .....4.25@4.50

### NUTS

Almonds—Almond Growers' Exch. an-  
nounces prices on 1917 nuts.  
Nonp. ....21 1/2  
L. X. L. ....19 1/2  
N. P. U. ....18 1/2  
Drakes .....12  
Peanuts, raw .....20  
Pine Nuts .....19  
Pecans .....19  
Walnuts—Cal. Walnut Growers' Associ-  
ation named prices Oct. 1:  
No. 1 Soft Shell, lb. ....20  
No. 2 Soft Shell, lb. ....16

Budded, Diamond Brand .....24  
Budded, Standard Brand, (same size  
as No. 1 Soft Shell) .....21  
Prices delivered in East 1 1/2c higher.

### RICE

Wholesale quotations:  
Cal. ....7.50  
Broken .....5.60@6.00

### BEANS

Wholesale Prices:  
The entire bean market is weak and  
uncertain at this writing. The food com-  
mission is urging buying only to fill im-  
mediate needs. A subscriber asks as to  
Teparies and why these do not sell. In  
the Los Angeles market conditions with  
Teparies are fully as satisfactory as with  
any other variety of beans and present  
quotations are \$9.00. The Tepary is be-  
ing well received and if the local market  
is not satisfactory growers should get in  
touch with the larger centers. It is rumo-  
red that the food commission may take  
a hand in fixing prices on beans.

Lady Washington .....14.50  
Limas .....14.00  
Pinks .....11.50  
Manchurian Reds .....11.00  
Baby Mex. ....9.00  
Garbanzos .....9.00@10.00  
Small White .....14.50  
Blackeyes .....10.50  
Tepary .....9.00  
Lentils .....18.00

### HAY

Quotations by Nichols-Loomis Com-  
pany. Wholesale prices to growers f.o.b.  
L. A. carlots.  
Tame Oat .....22.00@24.00  
Volunteer Oat .....17.00@19.00  
Wheat .....18.00@21.00  
Barley .....19.00@22.00  
Alfalfa .....20.00@23.00

The Alfalfa Growers' Association of  
Southern California writes:  
"At a meeting of the executive com-  
mittee October 15, it was decided that  
market conditions justify association  
members asking \$24 f. o. b. per ton where  
the \$1.50 freight rate applies, and \$23 f.  
o. b. per ton where the \$2.50 freight rate  
applies. Demand exceeds supply. We  
are having a number of calls for hay."

### GRAIN AND FEEDSTUFFS

Wholesale cwt. f. o. b. L. A.  
Alfalfa Meal .....1.85  
Alfalfa Molasses .....1.90  
Barley, Rolled .....2.85  
Barley, Recleaned, Whole .....2.90  
Barley, Hulled .....3.45  
Beet Pulp .....1.80  
Bran, Heavy .....2.15  
Cocoanut Meal .....2.50  
Cottonseed Meal .....3.80  
Corn, Yellow .....4.35  
Corn, White .....4.45  
Corn, Cracked .....4.40  
Corn, Feed Meal .....4.45  
Corn, Egyptian .....3.40  
Middlings .....3.05  
Milo .....3.15  
Oat Chop .....1.90  
Oats, White .....2.85  
Oats, Rolled White .....2.90  
Oats, Hulled .....4.75  
Oats, Rolled Chicken Groats .....4.85  
Oilcake Meal .....3.40  
Wheat, No. 1 .....4.00@4.05  
Wheat, Cracked, No. 1 .....4.40  
Red Millet .....4.65@4.75  
Rye .....4.00  
Blood Meal .....5.00@5.10  
Bone, Green .....2.75@2.85  
Bone, Dry .....2.95@3.05  
Charcoal, 50-lb. sk .....2.80@2.90  
Clam Shell .....70@80  
Grit, Granite .....65@75  
Oyster Shell .....1.25@1.35  
Sunflower Seed .....4.90@5.00  
Soya Bean Meal .....3.40@3.50  
Scratch Feed .....3.70@3.80  
Gritless .....3.90@4.00  
Rice Bran, ton .....40.08  
Middlings, ton .....45.00  
Rice Polish, ton .....49.00

## San Francisco Markets

San Francisco, Oct. 23, 1917.

### BUTTER

Dairy Exchange quotations, lb.:  
Fresh extras .....45  
Prime firsts .....44  
Dairy Exch. quotations past wk.  
Oct. 16 17 18 19 20 22  
'17 46 46 46 46 46 45  
'16 33 33 33 33 33 33  
Rets. wk. ending Oct. 22, 389,400 lbs.

### CHEESE

Dairy Exchange quotations:  
Cal. Flats, 18@22 1/2 Y. Am. ....22@25  
Cheddar .....23  
Ore. Young Am. ....25  
Jack Cheese, full cream .....23@24

### EGGS

Dairy Exchange quotations:  
Extra .....55  
Firsts .....54 1/2  
Selected Pullets .....44  
Firsts .....43  
Dairy Exch. quotations past wk.  
Oct. 16 17 18 19 20 22  
'17 54 54 54 54 54 55  
'16 48 48 48 48 48 46 1/2  
Rets. wk. ending Oct. 22, 8485 cases.

### POULTRY

We quote from producers, lb.:  
Hens, large, 25@26; Leghorns .....21@23  
Small colored .....22@24  
Broilers .....25@35  
Squabs, doz. ....2.50@4.00  
Ducks .....14@18  
Geese .....18@19  
Belgian Hares, live, 14@17; dr. ....17@20  
Turkeys .....22@30

### LIVE STOCK

Prices gross weight:  
Cattle: The following prices are for  
grass fed stock. Hay fed brings 1/2 to 3/4 c  
more.  
Steers, lb., 6@9 1/2; cows and heifers,  
4@7 1/2; calves, 7@9 1/2  
Sheep: Wethers, 10 1/2@11 1/2; ewes, 9 1/2@  
10  
Hogs—Hard grain-fed, weighing 100 to  
150 lbs., 14 1/2; 160 to 300 lbs., 16 1/2; 300 to  
400 lbs., 16.

### POTATOES

Wholesale selling prices at wharf:  
Wholesale selling prices at wharf:  
Salinas Burbank, cwt. ....3.15  
Ora. Burbanks .....2.50@2.60  
River .....1.75@2.35  
Sweets, lb. ....2 1/2@3

### ONIONS

Wholesale selling price on wharf:  
Australian Brown, cwt. ....2.50@2.60  
Yellow .....2.25@2.50  
Garlic, lb., new .....4@5 1/2

### VEGETABLES

Wholesale selling price:  
Beets, sk. ....1.50@1.60  
Beans, string, lb. ....5@7  
Fy. Garden, 6@7; Lima .....7@9  
Carrots, sk. ....1.00@1.25  
Celery, doz. ....40@70  
Cucumbers, lug .....35@50  
Pickling, lug .....60@1.50  
Egg Plant, lug .....1.00@1.50  
Onions, bx. ....35@50  
Peas, lb. ....5@8  
Parsnips .....1.50@1.60  
Peppers, Bell, lug, 65@75; Chili .....75@85  
Pumpkins, sk. ....60@75  
Rhubarb, bx. ....1.00  
Squash—Marrowfat, sk .....75@90  
Cream, lug .....90@1.00  
Hubbard, sk .....75@90  
Summer, lug .....75@1.25  
Mellon .....75@1.00  
Tomatoes, lug .....50@65  
Turnips, sk. ....1.50@1.60

### FRESH FRUITS

BERRIES—Strawberries, 8.00@10.00  
chest to the trade; raspberries, 7.00@8.00;  
huckleberries, lb., 11@12.  
PEACHES—Santa Clara peaches, in  
carriers, 1.25@1.50; large lug, 1.00@1.25;  
Oregon, Salinas, bx., 1.00@1.25.  
PLUMS and PRUNES—German and  
Grand Duke, cr., 1.00@1.25.  
FIGS—Black, double layer bx., 75@1.00.  
PEARS—Lake County Bartlett, wrap-  
ped, bx., 2.00@2.25; Winter Nellis, lug,  
1.00@1.50; bx., wrapped, 1.50@1.75; win-  
ter pears, 60@1.00; mountain Bartlett,  
bx., 1.00@1.50.

GRAPES—Malaga, cr., 75@90; lug, 1.00  
@1.25; Thompson seedless, cr., 1.15@1.25;  
big lug, 1.50@1.75; Muscat, lug, 1.25@  
1.35; cr., 75@1.15; black, lug, 75@1.00; To-  
kay, 75@1.25; Cornichon, cr., 85@90; lug,  
1.25@1.50.

APPLES—Bx.: Bellflower, 4 1/2-tier, 85  
@95; 4-tier, 85@1.10; 3 1/2-tier, 1.00@1.15;  
Spitzenberg, 4-tier, 1.75@1.85; 4 1/2-tier,  
1.00@1.25; B grade, 1.00@1.15; Red Pear-  
main, 85@1.00; white do, 4-tier, 1.00@  
1.15; Smith Cider, 4-tier, 1.00@1.15; 4 1/2-  
tier, 85@1.00; Jonathans, 4-tier, 1.00@  
1.15; 4-tier, 1.35@1.50; Baldwin, 1.25@  
1.50; 4 1/2-tier, 85@1.00; Wagner, 4-tier,  
1.15@1.25; 4 1/2-tier, 90@1.00; Hoover, 85@  
1.00; Newton Pippins, 3 1/2-tier, 1.35  
@1.35; 4-tier, 1.10@1.15; 4 1/2-tier, 90@1.00.  
CANTALOUPE—Turlock, cr., stand-  
ard, 1.25@1.50; ponies, 1.00@1.25; casabas,  
cr., standard, 75@1.00; flat, 50@75; Honey  
Dew, cr., 1.25@1.50; flats, 1.00@1.25; River  
megs, lug, 65@75.

WATERMELONS—Doz., as to size 1.00  
@3.00.  
CITRUS FRUITS—Bx.: Lemons, fancy,  
5.50@6.00; choice, 4.50@5.00; lower grades,  
3.00@3.50; lemonettes, 3.00@4.00; grape-  
fruit, fancy, 3.50@4.00; choice, 2.50@3.00;  
lower grades, 1.50. Oranges—Bx.: New  
Valencias, choice to fancy, 3.00@3.50;  
lower grades, 1.25@2.00.

TROPICAL FRUITS—Bananas, Hawa-  
lian, 5 lb.; 1.25@2.00 bunch; Eastern, 4 1/2  
@5 lb.; red bananas, 5 1/4 lb.; pineapples,  
3.50@4.00 doz.; Hawaiian coconuts, 80  
doz.

POMEGRANATES—Cr., 75@85; one-  
half orange bx., 1.75@2.00.

PERSIMMONS—Bx., 75@1.25, accord-  
ing to size and quality.

CRANBERRIES—Bx. of 33 1/3 lbs.,  
4.25@4.50.

Bananas, lb. ....2.50@3.50  
Pineapples, doz. ....2.50@3.50

### DRIED FRUITS

Manager Niswander of the California  
Peach Growers advises that a limited  
quantity of peeled peaches, either in as-  
sortments or carload lots, will be sold.

Peaches—Unpeeled, lb. standard, 9 1/2;  
choice, 9 1/2; extra choice, 10; fancy, 11.  
The Peach Growers' Association has dis-  
posed of all stock and is not offering.

Figs—In 50-pound boxes, per pound.  
White Adriatic, standard, 8 1/2; choice,  
9 1/2; extra choice, 10 1/2; fancy, 11 1/2; Cal-  
myrna, fancy, 15 1/2; extra fancy, 16 1/2.

RAISINS—The California Associated  
Raisin Company announced on August 22  
new 1917 crop prices effective at once:

Muscats, Package Seeded, ca. of 48 lbs.,  
\$4@4.20; ca. 36 lbs. Sun-Maid and Fy.  
\$3.15. Ch. \$3.00; ca. of 48 lbs. Fy. \$2.35.  
Ch. \$3.10. Bulk Seeded, 25 lb. bx. Baker's  
Sun-Maid \$1.75, Fy. \$1.90. Ch. \$1.75. Loose  
Muscats, 50 lb. ca. 1 cr. Recleaned and  
Floated, \$4.15, 2 cr. \$3.40, 3 cr. \$3.65, 4  
cr. \$3.90. Layers and Clusters, 30 lb. bx.  
3 cr. London Layer \$1.60, 4 cr. \$1.85, 5  
cr. Imperial Cluster \$2.70.

Thompson's Seedless, Package, ca. of  
47 lbs. Sun-Maid Seedless \$4.65, ca. of  
35-42 lbs. Recleaned, \$2.80, other brands, ca.  
of 48 lbs. \$4.75, ca. of 50 lbs. \$4.00. Bulk  
Recleaned Baker's, 50 lb. ca. \$4.90.

Sultanas, Package, 48 lbs. \$4.75, 50 lbs.  
\$4.00. Bulk Recleaned, 50 lb. ca. \$4.50.  
Bleached Thompson Seedless, Northern,  
50 lb. ca. Ex. Fy. \$5.37 1/2, Fy. \$5.12 1/2.  
Ch. \$4.87 1/2, Soda Dipped, \$4.75; San Jo-  
aquin Ex. Fy. \$5.50; Fy. \$5.25, Ch. \$5.00.

Regular California dried fruit contract.  
Pacific coast rail shipping points prices  
on all but bleached and dipped raisins,  
guaranteed against our decline (sales to  
United States government excepted) to  
January 1, 1918.

All Muscates, October-November, sell-  
er's option; also November or December,  
buyer's option.

Thompsons and Sultanas, September-  
October, seller's option; also November  
or December, buyer's option.

No rebate allowed on export sales.  
Prices subject to change without notice.

APRICOTS—Lb., bulk basis: Standard,  
14 1/2; ch. 15; ex. ch. 15 1/2; fcy. 15 1/2;  
ext. fy. 17 1/2; fy. Moorpark, 17 1/2; ext. fy.  
18 1/2.

PRUNES—60s to 90s, 6 1/2 basis; 50s to  
60s, 5 1/2 premium; 40s to 50s, 1 1/2 prem-  
ium.



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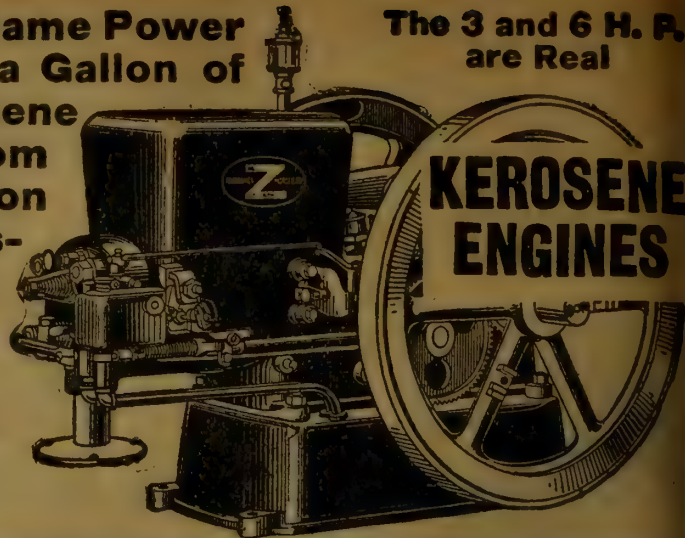
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The 3 and 6 H. P. are Real



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THERE are engines that cost more money—but you can't buy a better farm engine at ANY price than the Fairbanks-Morse Type "Z," or one that operates more economically.

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6 H.P. \$156.00  
Both With Throttling Governor

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# CALIFORNIA CULTIVATOR

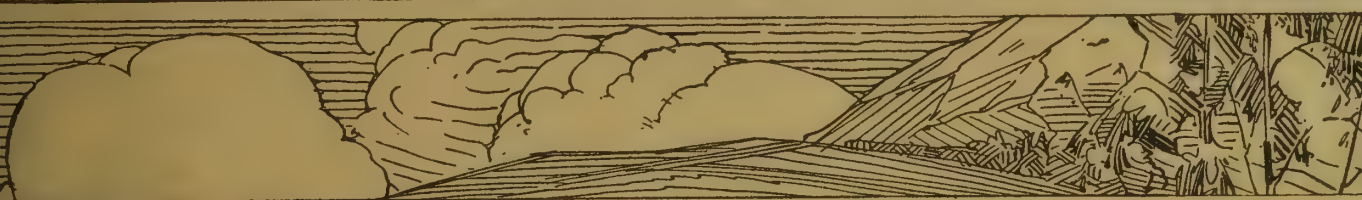
*THE LIVESTOCK and DAIRY JOURNAL* Combined with **CALIFORNIA CULTIVATOR**

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

November 3, 1917

SAN FRANCISCO



Apiaries of Tulare County near Dinuba



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Can  
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Wouldn't you like to have a fine pony like this?

Just the  
Christmas  
Prize  
Every  
Boy and  
Girl  
Wants

## How to Get a Shetland Pony

The California Cultivator, the big agricultural and live stock weekly of California, is going to give away some more Shetland ponies, and you might just as well have one as anybody. Send in your name and address today so we can tell you all about it. It costs no money to enter or take part. Already the Pony Man has given away 157 Shetland ponies to boys and girls for doing a little work that you or any boy or girl can easily do during spare time. Many other boys and girls say it is easy, and I believe you will say it is too.

These Shetlands we give away are fine, valuable little horses, all trained for children to ride and drive. Read the letters we are printing and see what the other boys and girls say who have won our prize ponies.

A Shetland pony is the nicest pet and playmate any child can have. They are fine to ride and drive to school for they are perfectly safe and by nature are great pets and very strong, useful animals, too. Many boys and girls who have to walk to school have sent to California Cultivator for a Shetland pony.

The Pony Man had never heard of any of these other boys or girls until they sent him their names and addresses so he could write and tell them how to go ahead.

Three more Shetland ponies will be given away Saturday, December 22, 1917, just in time for Christmas presents, to boys and girls who do some work that will be easy to do. Wouldn't you like to have a fine Shetland pony for a Christmas present? Why not work for one of these?



Each Pony is Gentle and Broken to Ride and Drive

### WAS OFFERED \$200 FOR HIS PONY AND OUTFIT

Here is a letter from Earl Frederick, who won first prize pony and outfit about a year ago. He was offered \$200 for his prize, but would not sell it. "Dick and his pretty outfit are just as nice as Earl's pony and outfit. Here is Earl's letter:

"Dear Pony Man: I received 'Bingo' and the buggy and harness which I was fortunate enough to win, and I am well pleased, as it is a better outfit than I really expected. I have been offered \$200 for it, but of course it is not for sale. I want to thank you for it and advise any boy who wants a Shetland pony to enter and work and earn one, for it is sure a pleasure to ride or drive a pony like the one I got. I will have my picture taken with the outfit and send you one. Again thanking you, I remain, your friend,

EARL FREDERICK."

### A PRIZE FOR EVERY BOY AND GIRL

And here is another important point. If you send us your name and address at once you will be entitled to take part in the Extra Prize Awards and you can sure earn a fine camera and gold watch or other valuable prize. You cannot lose, everyone taking part will receive a prize or cash for the work done.

"Dick," a beautiful young Shetland and pretty outfit consisting of a fine four-wheeled pony runabout and nickel mounted leather pony harness is the first prize, and that is the one you want and you might just as well have "Dick" as anybody. Send us your name and address right away so you can get started at once and get a pony for yourself. Besides "Dick" we are going to give away two other fine Shetlands, "Fleet" and "Jerry," and a pretty saddle outfit with each one. As soon as we hear from you we will send you pictures of other boys and girls and the ponies they got and tell you how to go ahead. If you already have a pony and know some other boy and girl who would like to have one, please tell them about these ponies we are going to give away.

### DELIGHTED WITH THEIR PONIES

I have already given away 157 Shetland ponies and pony rigs to boys and girls and if you haven't a pony now is your time to get one. You will be just as well pleased as the others. I have not the space here to print all the nice letters the boys and girls have written me, but I will send many more when I hear from you. Some have been offered \$200 for their ponies and outfits, and would not accept it, so you see these are valuable prizes we give away.

Pony Man, California Cultivator.

I take pleasure this morning in writing you a few lines for Percy, thanking you for the nice prizes he received. He certainly was delighted with them. If the other contestants were as pleased as Percy they certainly were a happy lot on Christmas morning.

Yours truly,

MRS. W. F. FOWLER.

Rialto, Cal., December 27, 1916.



These Ponies Are Fine to Ride to School

### TAUGHT HIS PONY TRICKS

"I am sending you a picture of myself and 'Colonel' and his outfit. I was sure glad to get him, for I think him peaches and cream. He drives fine and I ride him also. He will lie down, shake hands, jump over a stick, stand on his hind legs, and try to do most anything I tell him. He seems to understand what I say. Again thanking you for 'Colonel' and the outfit, also those who took the paper, I remain,

"ELMER LINDSTY."

### WINNERS OF OTHER PONIES RECENTLY GIVEN AWAY

Beulah DeWitt, Ventura County.  
Raymond Moyer, Riverside County.  
Margaret Roe, San Bernardino County.  
Marguerite Rini, Sacramento County.  
Gertrude Fawcett, San Joaquin County.

### WINNERS OF PONIES GIVEN AWAY MARCH 24, 1917

Earl McAllister, Kern County.  
Torance G. Spike, Jr., Fresno County.  
Verna Cole, Ventura County.  
Wm. L. Armstrong, Napa County.  
Conle M. Slikker, Kings County.  
George Armsby, San Mateo County.

Marina, Cal., January 14, 1917.

Dear Pony Man:

I am very much pleased with my watch. It keeps accurate time. I have only had to set the hands once. I feel very well rewarded with it for the little work I did for you. I feel as though I have not done enough for you. I would like to enter any other campaign that you have, so please let me know about it.

Very truly,  
THOMAS SAMUELS.

Sacramento, Cal., February 12, 1917.

California Cultivator, Los Angeles.

Dear Sirs—I wish to thank you very much for the way in which you conducted the recent campaign in which I took part. Your paper is very well known throughout the country which makes soliciting much easier and encourages one to work harder. The system you have in keeping the contestants informed as to their standing could not be improved upon.

I worked as hard as I knew how and although I was not fortunate enough to carry off the first prize I am very well satisfied with the second, which at present I would hate very much to part with.

The pony is just great. I am growing more fond of her every day and she is as gentle as a kitten. So far I have been riding her but as she either drives or rides I intend to get a small cart so that I may give some of my interested friends a ride.

Again thanking you for your kind treatment during the contest and dandy pony and saddle I received, I remain

Yours very truly,

JACK HENDERSON.

Address All Communications to  
**THE PONY MAN, CALIFORNIA CULTIVATOR**  
115-117 No. Broadway, Los Angeles, Calif.

## Sign This Blank and Mail Today:

Pony Man, California Cultivator,  
115-117 North Broadway, Los Angeles.

Please tell me how I can become the owner of one of the Shetland or Hungarian ponies you are going to give away.

My Name \_\_\_\_\_

My Address \_\_\_\_\_

R. F. D. or St. Address \_\_\_\_\_ State \_\_\_\_\_

My Father's or Mother's Name \_\_\_\_\_

(BE SURE AND FILL THIS BLANK OUT COMPLETELY  
AND CAREFULLY AND MAIL TO THE ABOVE ADDRESS.)



# California Cultivator

Vol. XLIX No. 18

LOS ANGELES: November 3, 1917

One Dollar Yearly

## Bee Culture in California

Ralph de Ong Writes Especially for Cultivator Readers of Opportunities and Some of the Requisites of Successful Bee Culture in This State. The World Needs Sweets as Never Before. Beemen Will Do Their Share

**T**HE high price of honey has made bee keeping a very profitable business. Two years ago extracted honey was selling for from three to five cents a pound. Today it brings from 12 to 13 cents a pound wholesale and beeswax shows almost as great an advance. This has led many people to consider this industry as a possible means of livelihood. Beekeeping may be taken up as a side line or as a profession. For the man or woman with small capital and a desire for outdoor work it offers very fine opportunities, for there are few communities in which a thriving stand of bees will not gather at least a small surplus of honey. The work is not heavy except in large apiaries and the bees may be kept almost any place where they will not interfere with other people; an unused corner of the ranch, a backyard or even a house top will answer the purpose. Many a man started with a few colonies and has become violently interested and finally devotes all or a large part of his time to the work. In California the trend is decidedly towards the professional rather than a small number of colonies scattered among a number of owners. All people are not beekeepers, and unless one finds that there is an inborn love for the work and the ability and patience to give time to every detail, the work will be like any other—a failure. Start with a few colonies and if the work prospers and time and opportunity offers expand the holdings.

There are many good opportunities for profitable beekeeping in the state and especially in the alfalfa regions of our great valleys and on the slopes of many of our low ranges of hills. It is seldom that a crop can be grown one for the nectar it will yield. Nectar is the raw product gathered from the flower by the bee and from which honey is made, the usual practice among beekeepers being to rent a quarter or a half acre from a landowner where good bee pasture is available. This should be at a little distance from the house and barn to minimize the danger of annoyance to man or stock. Often this site may be gotten free or at least by the gift of some honey. Sometimes five or ten dollars is the price of a good location for a year and one of these apiaries may have from 100 to 300 or 400 hives "stands" of bees.

### Apiary Site

The most important point in beekeeping (aside from the beekeeper himself) is the choice of a location with reference first of all to the amount of bee pasture present, and secondarily, nearness of market. There are other important features such as the race of bees, the style of the finished product, type of hive, close neighbors and so on. But the thing to always keep in mind is that we propose to convert a raw material, i. e. nectar, into a finished product—honey. In doing so we are converting

a substance which would be utterly lost into one of the most delectable and useful foods known to man. To do this we must be in a region where there is an abundance of nectar produced over a period of at least two weeks time and preferably two months or more. This need not all come at once but there may be two or three good flows of nectar through the year and a light flow through the remainder of the summer. During these periods the bees store more honey than is needed for their own consumption. This is known as a "surplus." Only when sufficient honey is produc-

The able-bodied man who refuses to work these days is not only personally contemptible but he is a public menace and should be treated as such. To one who has watched the long lines of khaki-clad men winding through the streets to the railroad stations en route to the front; to one who has seen men congregate at the railroad stations with their little paper bundles in their hands containing all they are taking with them from the world they knew as they go into another life, that of the training camp, there is little excuse for soft treatment of the loafers who drift around the country too lazy to work themselves and too malignant to see others work.—Sugar Magazine.

ed to satisfy their own needs and those of the brood that is being reared will there be any honey produced for the beekeeper. If you encroach on the amount of honey needed for their own use during the winter or a dry summer the colony must be fed or starve.

Since the supply of nectar is the issue upon which it is possible to make the business profitable or otherwise, it becomes necessary for the beekeeper first of all to learn the nectar producing plants of his vicinity, their relative abundance and the nearness of other beekeepers. A strong apiary will usually occupy at least one mile of the territory on each side of the apiary and sometimes two miles, and unless the site is extremely favorable it is not well to crowd in any closer to other apiaries. Study the flowers upon which the bees are working. Note the length of time they are producing; watch the pollen producing plants, especially the early ones, such as willow, cottonwood and acacials, for pollen is necessary to stimulate the rearing of the brood, i. e. young bees. Consult with local beekeepers and supply houses. These people are nearly always willing to assist beginners and their advice will be very valuable. The included list of the principal honey plants of different regions will give an idea as to the more common ones found in the state. This is very brief and many have been omitted which are of value in limited areas.

### Migratory Beekeeping

Where the nectar flow is of short duration or irregular on account of rainfall it is sometimes possible to move the entire apiary from ten to a thousand miles, once or even two or three times through the season. This is called migratory beekeeping. This practice however should be left to experienced beekeepers. To give an example—in Southern California the season may open with sage in April, at the close of the blooming season, the apiary may be moved to the bean fields and then possibly to later

blooming natural pastures as in Nevada. Migratory beekeeping is especially valuable in regions dependent on rainfall, in dry seasons the apiary can be moved to more productive sites and by securing a good location, the year's run may be changed from one of a heavy loss to a profitable season. Such tracts as the foothill regions of the Coast and Sierra and the Antelope Valley are especially liable to a shortage of nectar from insufficient rainfall. The usual practice on temporary sites is to extract all honey at the end of the season's flow and market it before moving, thus effecting a

saving in freight and the loss caused by moving honey in the hive.

### Honey Plants of Interior California

Alfalfa is the most dependable honey plant in California although in the Coast regions it is not considered as good a yielder as in the interior valleys. The Imperial Valley and San Joaquin have for years been heavy yielders of a fine quality of honey. Good pasturage is to be found in many places in Sacramento Valley and in many of the smaller valleys through the mountains as far north as Modoc County. It is true that alfalfa is often cut before coming to bloom but there is always more or less on ditch banks and the roadside. When pastured or grown for seed nectar is produced in great abundance.

Supplementing alfalfa in the great valleys is wild mustard, especially black and English mustard. Wild radish is also of some value. Alfalfa and burr clover are both common plants beginning to bloom in February and lasting into June. This carries the season through the first crop of alfalfa, which is usually a light yielder, the second, third and fourth crops being the heaviest yielders. In many regions in the interior there is just about enough honey to carry on brood rearing and build up the colonies through the spring months. By the last of June honey is coming in freely and continues until September or the middle of October.

Almonds and peaches yield a very early nectar but as it is bitter in flavor it should never be mixed with any marketable honey but be used solely for brood rearing. Horehound is a common plant of waste places, blooming in May and June, a heavy yielder of dark, rather strongly flavored honey. This plant is a perennial, very common in pastures, fence rows and waste places.

Lippia (nodiflora), commonly called carpet grass or mat grass, is becoming a prominent honey plant along rivers and in low, overflowed land. It is a low creeping plant, covering the

ground with a dense mass of foliage, smothering out other weeds and grasses and gradually taking entire possession of the ground. When desired it can be destroyed by cultivation. It is being used along the river fronts to protect levees against erosion and is spreading slowly over much of the overflow country in these counties. Another species of lippia, but of less value as a honey plant, *Lippia lanceolata* is occasionally found in the muddy lowlands. It is a more erect grower, sometimes ten to 14 inches tall and lacking the dense mass that *nodiflora* has. *Lippia* blooms from May until October, yielding a large amount of honey of good quality. It favors moist soil but may be found growing on dry roadsides throughout the summer. Starts readily from cuttings except during cold weather.

Sweet clover, especially the white variety (*Mellilotus alba*), is abundant through the lowlands of the Sacramento and San Joaquin Valleys. This plant is especially valuable to sow in waste places as a forage plant for bees, the yellow variety (*Mellilotus indica*) is not considered as good a honey plant. The seed of the white variety may be gotten off the market and started with little or no care. The honey yield is abundant and of good quality.

Peppermint, tarweed and star thistle often yield a good surplus in Sacramento, Yolo and Solano Counties during the months of August to October. Blue Curl, alsike and spike weed are considered valuable in the lower San Joaquin valley.

### Coast Honey Plants

Eucalypti are the heaviest yielders of honey during the winter and spring months from the Bay region south, nearly all species of the eucalyptus being heavy yielders but on account of their wider distribution the blue and red gum are the most important ones commercially.

Mustard, alfalfa, and bur clover begin blooming in the winter or very early spring, so that the heaviest yield of honey is often gathered by the end of May. Acacia and willow provide an abundance of pollen for brood rearing during the early spring, from the Bay region south. Following the early spring bloom comes a large group of hardy shrubs, the sages being the most important from Alameda of all the species. Manzanita is an early bloomer, followed by oak, locust, buckeye, poison oak, and Christmas berry. Horehound, tarweed, blue curl and wild buckwheat are the summer and fall plants. In some regions orchard fruits and beans are important.

Native vegetation in the vicinity of Lancaster and eastward into Inyo County yields a good quality of nectar in favorable seasons but in dry years the beekeepers may have to resort to feeding to save their colonies.





## Decrease your fire hazard!

The one big risk on the farm is danger from fire. You can cut a big slice off this risk by using California Redwood.

Redwood is made *fire resistant* by Nature—the inflammable pitch is left out. It is hard to set Redwood on fire; it burns very slowly and is easily put out.

## California Redwood

### Resists fire and rot

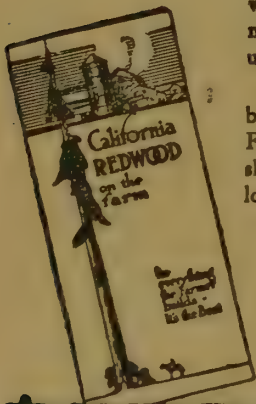
Using Redwood is real safety-first protection. Protection from fire and also from rot, for Redwood contains a *natural* preservative which permeates every fibre of the wood and insures unusually long life.

**FREE.** Write for free copies of "The Test by Fire" and "California Redwood on the Farm"—valuable information every farmer should have. Please give us the name of your local lumber dealers.

### CALIFORNIA REDWOOD ASSOCIATION

770 Call Building San Francisco, Calif.

Ask for the child's story of the "big tree" of California; there's a copy for every child in the nation.



## Alfalfa Seed

When you think of Alfalfa Seed you say: "Well, I won't need any until spring; so I will wait until then and buy." Not so fast, Mr. Rancher; maybe you will and maybe you will not.

Times have changed. Seeds, like other staples, have advanced. And this very advance and demand means with a small crop in 1917, that things will buzz later on. Note the big advances on Alfalfa Seed the past month; what will it be later on?

We handle this seed in great quantity, both retail and wholesale. Years of experience have made us the Alfalfa kings of the west. We know what you need, if you will tell us what your soil is. California grown seeds are our hobby, as well as our business, while,

ALFALFA SEED IS OUR SPECIALTY

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V. A. Peterson Alfalfa Seed Co.

Arbuckle, Cal.

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## Keep Poultry in the Orange Grove



**SUBSCRIBER** at Adelaide, South Australia, L. McIntosh, sends to the Cultivator an interesting article published in the Murray Pioneer, an irrigation publication. It tells of the benefits to the orange trees and to the owner of keeping a flock of chickens in the orchard. The article is written by A. S. Henderson:

One thing all citrus growers must recognize is that when trees attain the bearing age they require feeding, or, rather, we must return to the soil (our capital) the plant foods which the crops take out. At the same time it is best to be careful in our fertilizing, especially in citrus culture, as an overfeeding generally results in large coarse skinned fruit, the kind of fruit the trade does not like, as retailers have to charge so much more per orange for it. This applies more to oranges other than navels. It is much better to get a good crop of No. 3 or No. 4 than a smaller crop of No. 1.

In Mildura I had three-quarters of an acre of Late Valencia, Mediterranean Sweets and Jaffas, and finding I could not get as much organic manure in the shape of stable manure as I wanted, I thought I would wire net the plot in and start fowl breeding. I put six foot netting round the three-quarters of an acre, and then consulted the best breeders of fowls in Victoria as to the most profitable breeds, which resulted in my beginning my breeding with a pen each of White Leghorns, White Orpingtons, White Plymouth Rocks and White Runner Ducks, and after five years of breeding I unhesitatingly say that White Leghorn and Runner Ducks are the best proposition in every way.

I netted off part of the trees in breeding pens, laid water on to a whole lot, so as to have cool clean water in every pen, and by so doing reduced the labor to a minimum, even with three incubators going the season, I still worked my acres of vineyard.

For six years these trees had manure except from about 200 fowls I did not have scale on the trees, a fowls did most of the cultivating, and in the last year I was in Mildura 1914, I made £85 net from the oranges on a low market, and £3 per week from the eggs and chickens during the season.

I cannot advise growers too strongly to try running fowls in their citrus orchard. The land will be practically giving you a double crop, and fowls will help materially in fertilizing the trees and keeping insect down. Whatever breed you determine on keeping, get the best procurable as they are most profitable, and pride to their owner.

### EATS CITRUS SCALE

An insect resembling the Australian ladybird has been discovered in the orange groves of the Porterville district by A. A. Jenkins.

Specimens of the insect have been identified by J. Eliot Coit, professor of citriculture at the University of California, as the "twice-stabbed ladybird." The insect is said to be voracious and to feed on a variety of scale found on citrus trees. Professor Coit urges its propagation, saying it will greatly aid in eliminating the scale pests that infest citrus groves. Martha L. Baker.

## What Causes Citrus Dieback?



**DIEBACK**, or exanthema, is a disease of citrus trees that is characterized by the production of gum in different tissues of the developing parts. It is a disease of the growing tissues of the citrus tree. Its five primary symptoms are the gum pockets, the stained terminal branches, the marked or ammoniated fruits, the bark excrescences, and the multiple buds. The mere dying of the limbs backward is not dieback. The disease can be identified only in the presence of one or more of its primary symptoms.

The secondary symptoms of dieback are an exceptionally deep green color of the foliage, a distorted S-shaped growth of the immature angular terminal branches, frenching of the foliage, and thick, coarse and somewhat peach-leaf shaped leaves.

The absolute cause of dieback is not known. It is thought to be in some way connected with organic matter which has been added to the soil, or which is residual therein. The soil conditions known to be favorable for the development of dieback in citrus trees are the presence of excessive quantities of organic ammoniates, a lack of drainage, hardpans too near the soil surface, excessive cultivation, and irregular moisture conditions.

The disease is more prevalent in trees planted in certain locations, such as near stables, outhouses and cesspools; on slopes, and "sand-soaked" areas; and on spruce pine, shell, quina and rocky lands.

The disease is controlled by certain preventive and curative methods. The preventive methods consist in correcting the soil conditions that are favorable for the development of the disease. The curative methods consist in the use of bluestone—copper sulphate—on the soil and beneath the bark of the trees; and for spraying the trees with bordeaux mixture. Bulletin 140, Florida Experiment Station.

### PLENTY OF NITRATE

I should like to draw your attention to an error made by G. W. Waterbury in your issue of October 6 in an article entitled "Concerning Fertilizers," page 348. In this article it is stated that the Chilean saltpetre will be available for some 20 to 25 years yet, whereas there is in reality a supply of nitrate of soda in Chile sufficient to last 300 years from now. This estimate is given in the Journal of the Society of Chemical Industries, Volume 36, No. 2, page 52 (January 1916).—W. Lambert Myers.

## The Food Situation in France

By Fred B. Pitney

Completing the series of articles on the food situation in France, Mr. Pitney tells of the great need in France for meat supply.



**THE** French government is very bureaucratic, but the French people do not like to be overgoverned. They object seriously to anything that savors to them of meddling in a man's private affairs. For this reason it has been extremely difficult to get a workable income tax law in France. The people immediately rose against the proposal to give the government the right to examine their books and find out if they told the truth about their incomes, or find out what their incomes were if they failed to make a return. So a scheme was figured out for taxing a man on seven times his rent if he made no income tax return or one the government thought too low.

Saying how much or what a man shall eat is, also, getting pretty close to private affairs, and therefore, the French government, knowing immediately the people it has to deal with is slow in coming to such measures even in face of the only too evident food shortage in the country. They have been efforts at price fixing, but they have not worked satisfactorily, one reason being that they have not been national but local. Paris, for example, has tried fixing the price of butter, but it has been found that the result has been to drive butter away from Paris to localities where it could be sold for what the market would pay.

National Price Fixing to be Tried

A scheme of national price fixing to be tried now with beans and potatoes. Both of these crops are far below the requirements of the country.



ve seen many days when potatoes did not be bought in Paris, and it is a common thing last winter to see to run half over the city to find market where green vegetables could be bought. The national price scheme for beans and potatoes divide the country into districts, fix the price for each district, and a penalty for sending either commodity out of the district without permission.

o far meat has withstood all efforts to control its consumption—there has been no attempt to control price—and yet it is vitally necessary either to control the consumption of meat in France or to increase the supply. Otherwise the end of the war will see the country so reduced in its food that it will take many years to get them back again to the point where France will be once more self-sufficient.

#### Supply Must be Increased

Of course the thing to do is to increase the supply. When a country has its bread stuffs cut down to the extent to which France has suffered, the people naturally fall back on what they can get. One might think they would turn back on vegetables, but the same conditions that have deprived them of meat have deprived them of vegetables. There have not been the hands to cultivate the ground. They could not raise vegetables than wheat, but they have fallen back on beef, mutton and pork. The herds existed, but they have been eaten up. The people had to have something to eat. To what extent the herds have disappeared is shown by the cutting down of the meat ration of the soldiers at the front. At the beginning of the war they were allowed one pound of meat a day. Twenty per cent has been cut from that allowance. I will point out again that only the necessity will countenance reduction of the food allowance of soldiers at the front.

#### Meat Shortage Serious

For civilians, naturally, were the first to suffer when meat became scarce. The price went soaring. Retail prices for consumers doubled and trebled. The poor cut down in quantity, one understands, and the very poor went without entirely. But those who could pay could have meat if they were willing to give the price.

When the time came, however, when there had to be an attempt to control consumption. The army requires 400 tons of meat a month, or 432,000 tons a year. France's herds suffered enormously at the very beginning of the war. A total of approximately 2,500,000 cattle, sheep and pigs from the French herds were seized by Germany in the invaded provinces. Coming immediately on top of the loss France found herself compelled to find food for some millions of German and French refugees. This had to be done at once and the herds slaughtering had to be slaughtered without stopping to ask questions about the future. One does not say to a

starving man, "What will I do tomorrow if I give you this crust of bread today?"

England, therefore, undertook to supply France with 250,000 tons of meat a year, and this supply was kept up at the rate of 20,000 tons a month until February of this year. At that time the English supply stopped. England was having then all she could do to feed her own people on reduced rations.

Thus since February France has had to supply from her own resources 432,000 tons of meat a year to her armies; 1,428,000 tons for the civilian population and another 350,000 tons for refugees, making a total of 2,000,000 tons of meat a year demanded by France.

#### Herds Depleted

What are the herds she has to do this with? At the beginning of 1914 her cattle herds comprised 14,787,710 head; sheep, 16,131,390 and hogs, 7,035,850. By the end of 1914, after five months of war, her cattle were reduced to 12,668,243, her sheep to 14,038,361 and hogs to 5,925,291. Today her cattle herds are cut down more than 20 per cent while her sheep number no more than 10,000,000 and her hogs 4,000,000, a loss of nearly 50 per cent of her hogs and three-eighths of her sheep on top of the loss of 20 per cent of her cattle.

Cattle feed is short in France and the cattle are poor and under weight. More of them have to be killed in proportion to supply the needed quantity of meat. Milk cows have been killed and the shortage of proper feed has reduced both the quantity and quality of milk. I have seen the time when it has been next to impossible to get milk for my little baby in Paris. I have gone from store to store, begging some one to sell me as little as two cents worth of milk for my baby.

#### Crying Need for Meat

The government is trying to conserve the meat supply and save the herds now, by limiting the use of meat to one meal a day. The endeavor is made to accomplish this purpose by forbidding the sale of meat after 1 p. m. and ordering the butcher shops closed at that hour, while hotels and restaurants can serve meat only with the noonday meal. But this measure has had little effect on the use of meat as it serves only against the restaurants. Housekeepers can buy all the meat they want before 1 o'clock, and they do it, as there is no restriction in the amount that can be bought. Moreover, in the restaurants one can eat all the meat one wants at midday and thus make up for having none at night, and this, also, is the practice.

There is only one real solution of the problem. France must have more meat. Her herds are disappearing rapidly. They are today far below the danger point. Soon they will have to be reconstituted entirely. Meat, meat and again meat is a pressing need for France.

## Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper, sign full name and address. Unedited communications receive no attention.

#### Along Street

owns row of walnut trees which planted on his land near boundary line running parallel with country road. The branches extend over the road and across part of roadway. To remove the nuts on these branches, those which drop into the road, belong to—Subscriber, Winters.

the government surveys 640 acres, or a section one mile square, and divides up each parcel. In laying out city or state roads the lands are partitioned an equal distance either from the division line, but they are patented or deeded to the settler, so practically all lines go to the center of the street. Even in the subdivision of Mexican grants this custom has obtained, hence the property owner owns to the center of the street. Such trees as he may plant inside the nine foot curb line are his to

care for and all the fruit or nuts which may grow on those trees are the property of the land owner, and of course it goes without saying that trees growing inside of the line or branches hanging over the street are under the control of the same common law. However, if the branches from one's fruit trees overhang a neighbor's line fence such fruit becomes the property of the land over which it hangs. In case of the street, if passersby or others trespass and take the fruit or nuts the procedure would be to appeal to the township officer, or one may swear out warrant for the arrest of trespassers.

#### Some Beans

I have been informed that Blackeye beans will grow pods two feet long, containing 40 to 50 beans to the pod. If one should plant this variety at the proper season would there be any assurance of getting such results?—Subscriber.

We do not believe we would plant the beans with the expectation of getting two-foot pods. However, Black-

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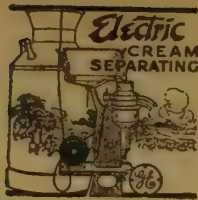
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Remarks or special questions \_\_\_\_\_

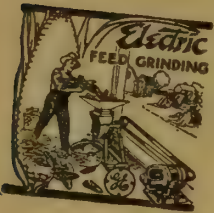
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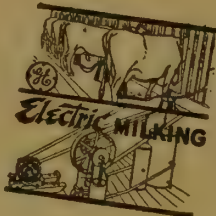
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eyes have proved very productive in many sections of California. Beans grown in our garden this year had pods 12 inches or even longer, but even with the aid of fertilizer we did not succeed in getting pods two feet long. The state university reports for this state a good yield to be 1200 pounds, the usual yield being about 800 pounds per acre.

### Wood Cuttings for Fertilizer

Living near the river where there is a quantity of willow and alder brush, as well as drift wood, would like to ask if there is some method of cutting this up for scattering over the orchard. Would it make good fertilizer and where would one procure machine for cutting?—Subscriber, Lemon Cove.

The prunings from orchards, especially smaller tips, have been cut in this way and left on the soil, and it has been thought a degree of benefit was secured, but this has usually been considered insufficient to cover cost of handling such coarse fertilizer. The driftwood and larger material, in consideration of the length of time required to decay, would be in the same class with sawdust and shavings, regarding which there has been question as to advisability of their use on land.

### Blight of Beans

A subscriber writes: “I send bean pods which were gathered from healthy looking vines with plenty of fresh, well filled pods on them. The blossoms were still coming on these vines when these shrivelled pods were picked. What is the cause of their not filling?”—Subscriber.

D. F. Reichard answers: “Probably blight or a blast of hot weather came at blooming time.”

### Gum Disease

I have some early plum trees, set out three years ago, which bore well in the spring. Now gum is coming out all around the body of the tree. What would cause this and is there a cure for it?—Subscriber, National City.

The gum exuding from the tree may be caused by the physical condition of the soil, by the souring of the sap or by some other unhealthy condition of the tree. There is being conducted at the present time a series of investigations by experts of the state university along this line. Regarding these a report will be made later. Assuming that the trouble is caused by the poor physical condition of the tree pruning and cutting away the affected parts so far as possible is about the only remedy.

### Nematodes and Fusarium

I send roots of muskmelon, tomato and squash. What is the cause of large knots on the roots and the dying of the squash roots?—Subscriber, El Cajon.

These roots were forwarded to the pathological laboratory of the citrus experiment station at Riverside. Prof. C. O. Smith answers: “I find that the muskmelon and tomato are affected with nematode galls. The specimen of squash seems to be affected with a fungus in the smaller roots. I have not made cultures of this but think it is probably caused by a species of fusarium. There is no very satisfactory control for either of these troubles. In the case of the nematode gall I would suggest planting of some crop not affected by this trouble.” In a list of plants susceptible to root knot, which Prof. Smith sends with the above, is given a number of plants which are least susceptible to nematodes and which may be planted in rotation in order to starve out this pest. The least susceptible: Oats, rutabaga, mustard, turnip, sunflower, parsnip and field peas.

Nematode abundant but injury apparently not great: Onions, asparagus, cabbage, kale, chrysanthemum, strawberries, Jerusalem artichoke, sweet potato, alfalfa, garden peas, radish. Such plants as celery, beets, watermelons, muskmelons, cucumbers, squash, pumpkins, carrots, soy beans, lettuce, sweet peas, lentils, tomatoes, egg plant, potatoes, etc., are seriously affected.

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## PEARS IN THE SACRAMENTO VALLEY

Written for California Cultivator  
By J. W. Mills



N the area planted to deciduous fruit trees in the Sacramento Valley and the Bay region, pears stand fifth.

There are about 16,000 acres all told, constituting about six-sevenths of the total area of pears in the state.

Pears are the most remunerative of the deciduous fruits when properly handled, but the numerous pests and diseases which prey upon this variety of fruit, together with the late bearing tendency, cause many to hesitate in planting it.

### Favorite Areas

The rim lands of the lower river areas are the most popular for planting and it is there that the most productive orchards are found. The trees grow to large size, often bearing 1000 pounds or more per tree. Larger tracts are planted to pears in the upper lands.

### Pear Blight

Pear blight has been the arch enemy of pear growers in nearly all sections of the state, but of late years this disease seems to have lost much of its virulence. This is particularly true in the Bay regions. It has been determined to the satisfaction of many growers that the Bay climate is not conducive to the spread and development of pear blight and in such sections the blight gives little or no concern to the pear grower. This is the case in that section of Suisun Valley lying next to the marsh lands. Suisun Valley is practically free from pear blight and has been for the last few years. Going up the side valleys and the Sacramento River the blight becomes more serious, equally so in the hot dry interior and the moist river lands where the growth is most vigorous. It would seem from this that climatic conditions enter largely into the development of pear blight, more so than soil or growing conditions. We have never heard of a case of blight on the marsh land islands, and there are several orchards growing there.

### Pruning for the Blight

Branches showing blight should be cut out as soon as observed. Never allow it to remain in the tree till pruning time comes around or spores may be scattered all through the orchard. When small branches are affected it is an easy matter to remove the affected wood by cutting it off several inches below the point where it is visible, never less than six inches unless it is close to a large branch, in which case remove all infected bark and wood. When large branches or the roots are partially affected, the bark and wood should be removed well beyond the affected area. All surfaces thus exposed should be painted over so as to protect the wounds from becoming reinfected with blight or other diseases.

It is important that all pruning tools should be disinfected between cuts as contact with the germs of blight make the tools carriers of the disease. A bottle containing a solution of corrosive sublimate with a sponge tied over the mouth and hung to the ladder is a good arrangement. After each cut wipe the shears or saw on the sponge. A thorough final inspection should be made in the fall to remove any infected parts which might be overlooked.

### Future Planting

The high prices pears have brought during the last few years have caused a considerable area to be planted throughout the state. Much of this is destined to failure due to the fact that blight is a difficult and expensive disease to handle. Many new plantings now show deterioration on account of this feature. This makes the venture a more promising one for the men who understand handling the blight and follow it up religiously.

### WESTERN WALNUT ASSOCIATION

The third annual meeting of the Western Walnut Association will be held at McMinnville, Oregon, November 7-9. In connection with the convention will be featured a display of walnuts, filberts, chestnuts and almonds. The secretary of the association is H. V. Meade, Orenco, Oregon.

# TRACTOR CHISEL

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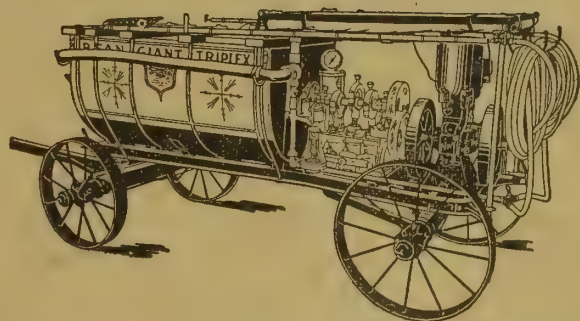
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## November Vegetable Planting Calendar

### Northern California

Written for California Cultivator By A. R. Gould

**W**HILE many may have taken every opportunity offered last month to clean up the various plots ready for next season's crop there may be still later bean crops and bean straw to clean up, and much of the ground will be easier to dig after the first rains. The tomato crops will have been collected ere this and the old plants should be removed. Special care must be taken to see that no diseased fruits are left lying on the ground as they will cause trouble another year. These should all be collected and buried deeply with a quantity of quicklime. Keep the hoe busy between the rows of growing crops as the weeds will make great progress if allowed to get a start, especially after the first rains.

#### Broad Beans

These are known here generally as horse beans and are frequently grown by the farmers in the orchards. They are of excellent flavor and may be served up in several different ways. Being easy to grow and the earliest to mature and very hardy they are welcome in the early part of the year. A sowing of the Broad Windsor variety should be made at once. After careful preparation of the soil trenches should be opened up three or four inches deep and the seed sown four to six inches apart. Make the rows or trenches two feet apart and cover in.

#### Asparagus

It will be necessary to give the beds a light forking on the surface and they should be given a coating of farmyard manure. This will serve a double purpose of protecting the crowns and supplying plant food for the coming season.

#### Rhubarb

These beds should be treated as advised for asparagus. Towards the end of the month some of the larger clumps may be dug up and divided for replanting.

#### Radish (Winter Varieties)

Another later sowing of the varieties mentioned last month may be made, and keep the ground well cultivated between the rows of those sown last month.

#### Carrots

To keep up a winter supply of these continue to sow Danvers Half-long and French Shorthorn. Hoe between the lines of those previously sown and dust with soot or wood ashes.

#### Peas

Owing to the absence of very early

rains many will have been held back from sowing this very important crop but those who sow on a small scale could use the sprinkler and would be ahead, but where a large area is sown this is hardly practical. However the most favorable opportunity must be taken advantage of this month, as the varieties we advised last month should be sown.

#### Onions

It will be necessary to have the onion beds thoroughly prepared, deeply trenched with manure as they are gross feeders. Immediately after the first rains make a sowing of the early varieties such as Early Red, White Bermuda and others mentioned last month. The main crop varieties can be sown at the end of this month in December. Good varieties are as follows: Ailsa Craig, Morse Brown Globe, Prizetaker and Yellow Globe Danvers. The latter variety is a heavy cropper and very popular on the market, as also is Prizetaker, while the first named is practically the largest in cultivation. A heavy dressing of wood ashes or soot well raked in the surface of the onion bed will prove very helpful. The seed should be sown in rows about 18 inches apart. It will take half an ounce for a 10 foot row.

#### Lettuce

Thin out and transplant the varieties sown last month and keep the plot free from weeds and slugs.

#### Strawberries

These are generally grown in the vegetable garden and should receive attention this month. New plants have been formed by runners from the parent plant, and these may now be transplanted and other beds formed. They may be planted in rows two feet apart, and in the case of new formed beds lettuce may be grown between the rows. The soil should be of a retentive character and liberal manured. Those who have a garden glass frame may grow a few in flower pots. The most popular varieties grown here are Everbearing, Oregon Improved, Gold Dollar and Malinda.

#### Storing Crops

This month should see a final clearing up of matured root crops such as beets, turnips, carrots, etc., and everything which is sound should be stored away in the cellar to help out the food supply. In our issue of August 4 (Calendar notes) we gave full instructions, and we would urge our readers not to allow anything to stay in the ground to rot. Tomatoes may be canned and even the green ones used.

## Ornamental Planting in November

### Northern California

Written for California Cultivator By A. R. Gould

**I**N this department much activity will commence with the rains and the busy planting season will be at hand.

Already the nurserymen are getting booked up for ornamental trees and shrubs, which means that this is the time to study our garden closely. We may wish to replace subjects which died out or make some additional changes. By mistake some very fine trees may have been planted much too close and these may have to be shifted into an open space to allow of proper development. The writer constantly meets instances of careless planting. Only today we saw Cedrus atlantica, planted eight or ten feet apart, a dozen or more of them, when the proper distance should have been at least 25 to 30 feet apart. The great thing is to start right. After the first rains there will be parts of the garden between shrubs, etc., which will need digging. Gather up all leaves and either stack up to make leaf soil when decayed or dig in the soil where the ground is heavy.

#### Sweet Peas

There are now quite a few winter flowering varieties of sweet peas which our growers have been perfecting for quite a long time. In this section the varieties which have impressed us most are Early Snowflakes, Ear Melody, Early Morning Star, Yarrow Red Orchid and Apricot Orchid. These may be sown at once and should flower in 100 days. Prepare trenches at least two to three feet deep and dig in plenty of manure leaving six inches of pure soil at the top in which to sow the seeds. Soak the seeds about 12 hours before sowing. As soon as the seedlings appear keep a lookout for slugs.

If early flowers of the Standard Spencer types are required sow the following now: Asta Ohn, Barbara Dobbies Cream, Helen Lewis and King White.

#### Early Flowering Gladiolus

Plant the following in well manured soil four or five inches apart: The Bride, Blushing Bride, Ackermann and Peach Blossom. A few of these may also be grown in pots.



There are quite a number of groups of these and practically all are worthy of cultivation. The following varieties may be planted now: English Mont Blanc, Argus and King of Blues; Spanish Iris, King of the Iris, Reconnaissance, British Queen, Cajanus; Mourning Iris, Susiana; man Iris, Isolene, Glory de Hille and Kochii.

The English and Spanish types are best and should be planted in fairly

rich soil six inches apart and three inches deep. The German and Mourning iris are rhizomes and should be planted 12 inches apart.

#### Seeds for Fall Sowing

Several subjects of the hardy annuals may be sown now in the open and will flower early, among which are the following: Lupins, blue, white and pink; collinsia, gilia, nemophila, eschscholtzia, clarkia, all suitable for the wild garden.

## Storage of Potatoes

By Lou D. Sweet, Head of Potato Division, United States Food Administration

IT IS of great importance that all the potatoes raised this year should be stored under proper conditions. Even when every precaution is taken the wastage of potatoes during winter is considerable.

In order that the best methods may be adopted those who have not had experience should know the chief causes of wastage.

Overheating and heating occur if the newly dug potatoes are piled in too high piles so that the air cannot circulate between the tubers. The risk of loss from this cause is greatest in fall immediately after the tubers have been dug, and it is therefore important that potatoes when dug should be put in unnecessarily large piles kept in an ill-ventilated room.

Selection of seed. Seed for next year's planting should be selected from hills that produce all nice, true to type potatoes. These should be selected at the digging time and stored separately in crates or boxes, and by storing them in a well lighted room where the temperature can be held at from 34 to 40 degrees, with a little ventilation and this seed planted next spring, the grower will make a start toward improving the quality of his potatoes instead of as in the past simply planting the culls or runouts.

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There are several diseases of the potatoes which destroy the

tuber, and if diseased tubers are mixed with the sound ones the disease spreads rapidly; therefore it is necessary to sort the potatoes carefully, eliminating all of the disease, the cuts, culls, and dirt before placing them into permanent storage for the winter. All of the cuts, culls, misshapen and diseased tubers should be fed to the poultry and live stock but should be steamed or boiled before being fed, as in this way you increase the food value and destroy the germs of the disease so that it will not get into the manure and thence into the land.

By proper ventilation of the cellar or storage room and by holding the temperature as near 35 degrees Fahrenheit as possible, you keep the potatoes from sprouting.

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## Using Water in Tamping Stump Blasts

Written for California Cultivator By J. R. Mattern

SUCCESSFUL blasters have a trick which often helps to take out a stubborn stump, and makes two sticks of powder do the work of three.

Light, dry ground there is a tendency of the gases of powder to blow the dirt away, or to blow out through the dirt rather than to pull the roots loose from their anchorage. When the crevices of the ground are filled tight with water there is no tendency of this tendency. The gases do seem to get a start through the water; they find it easier to force the stump out.

Recognizing this condition, men do a lot of work make a practice having at least one bucket of water, whenever it is possible to get it without too much trouble, to pour down the hole after about six inches of tamping has been put in and before the rest of the hole is filled up. If

the water stands in the hole to the top no other tamping is needed.

This practice should be followed in all soils that are not soaking wet anyhow at the time of blasting. It should be particularly valuable where the soil is light loam or sand. In fact, it is hard to blow out a stump in sandy soil unless you do wet things up well just before the charge is set off.

You of course must use a fuse that is water proof when making use of this method, and it is well to apply a little soap or tallow round the place where the cap goes into the stick of powder. It is not likely that much water will get down to the powder, but in case it does you are all right if you have prepared for it. When an electric blasting machine is used, with electric fuses, there is less danger of misfire from the cap getting wet, but it still is well to apply the soap or tallow.

## Look Before You Buy a Tractor

Most tractors now on the market are good tractors; the engines are powerful and reliable; they are, as a rule, practical and with intelligent use, entirely satisfactory. That is why they are satisfactory if the purchaser looks carefully to his own particular needs before he bought.

Here's the point; the best, most fully designed, most carefully made tractor in the world would prove an expensive luxury if it did not fit our own particular requirements. For instance, the farm of 1000 acres requires a type of tractor entirely different from that required by the small farm of 80 to 250 acres.

The powerful tractor made to turn great quantities of dirt in plowing great acreages would most certainly not be fitted for the small farm where a light tractor must be used which will do a wide variety of work, where, in order to be profitable, it must cultivate as well as plow, disk, harrow and pull the mower,

binder and wagon as well as fill the silo and do many other belt work jobs.


The small farm tractor in order to be profitable must do enough of the things that horses now do, so you will feel safe in eliminating a large percent of your horses. Therefore, the farmer who "looks before he buys" will look first to his own farm power needs, then look for the tractor which most completely fits those needs.

There are now on the market tractors to "fit" the small as well as the large 1000-acre farm, and no farmer need make the mistake of buying a misfit tractor.

#### STATE BEEKEEPERS

The annual convention of the State Beekeepers is being held at Sacramento this week, November 5-6. This is one of the first meetings to be held north of Tehachapi, the local association being composed almost entirely of Southern California beekeepers.

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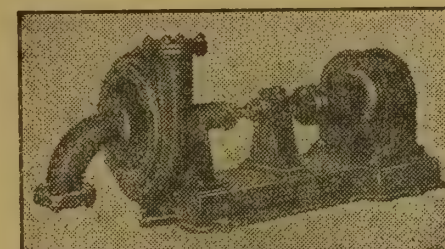
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Saturday, Nov. 3, 1917

OUR ADVERTISERS RELIABLE

We guarantee our subscribers against  
loss through dishonesty of any adver-  
tiser in the Cultivator. We do not at-  
tempt, however, to adjust trifling differ-  
ences between subscribers and honest,  
responsible advertisers, nor will we pay  
the debts of honest bankrupts. Notice  
of complaint must be sent us within 30  
days from date of the transaction, and  
the subscriber must have mentioned the  
Cultivator when writing the advertiser.

THIS WEEKS COVER

They have not handed us our  
sugar cards yet, but for fear they may  
it might be well for readers of the Cul-  
tivator to establish a little one colony  
apiary in their own back yards. Pre-  
sumably the choicest honey will not  
be produced, but it will be honey, and  
the experience will be worth some-  
thing.

California is now the country's  
greatest honey producer, and there  
are apiaries which cover literally  
acres and send honey "back to the  
States" in carloads. A little apiary  
like the one on the cover may be  
found, not only in Tulare County  
where this one was planted, but in  
many sections of the state.

Let's produce more honey.

LIBERTY LOAN

It was a great victory—the Lib-  
erty Loan. Greatly oversubscribed,  
practically every section exceeded its  
quota, and the farmers may well be  
proud, for little Ventura, strictly an  
agricultural county, was the first to  
meet its quota in California. Ana-  
helm, a settlement among the vine-  
yards and walnut orchards of Orange  
County, many of the residents Ger-  
mans, loyal to the core, claims the  
greatest per capita subscription of any  
section of the United States. Other  
agricultural communities proved fully  
as loyal.

Now we are ready for the next.  
Meantime, let's produce more.

SHY IN FLORIDA

The East will be compelled to  
Hooverize on oranges in the next 12  
months. Not only are California na-  
vels going to be an exceedingly short  
crop but Floridas of all kinds will be

short. This is, as expressed in "The  
Packer" because of "disastrous freeze  
last winter which has cut the orange  
and grapefruit crop short this sea-  
son." The estimate for Florida's out-  
put of citrus fruit for the coming year  
is only 4,000,000 boxes. This will be a  
smaller crop than for many years. In  
1914 the citrus output was 7,651,514  
boxes; in 1914-15, 9,700,800; 1915-16,  
8,202,775; 1916-17, 6,960,000. In 1917-18,  
as noted above, the estimate is for  
4,000,000 boxes. How much the cold  
of last winter had to do with this de-  
crease, and how much citrus canker  
and other troubles, we do not know,  
but certain it is the citrus grower suc-  
ceeds only by eternal vigilance. If  
the present thrift of the California cit-  
rus tree gives opportunity for estimat-  
ing the following year's crop, Califor-  
nia will have an immense output in  
1918-19. Florida's 4,000,000 boxes is  
divided as follows: Oranges, 2,800,-  
000 boxes; grapefruit, 1,000,000; tan-  
gerines, 200,000.

JOHN HOWARD HALE

Attendants at the November,  
1914, convention of the State Fruit  
Growers at Los Angeles may recall  
the genial and witty peach grower,  
John Howard Hale, who came and told  
us methods of peach growing in the  
East and criticized in a most good na-  
tured way California methods of pro-  
ducing them. Everyone who heard  
him enjoyed to the full his witty talks.

Mr. Hale is dead. He was born in  
1853 and at 14 went to work as a  
farm hand at \$14 per month. At 21



he took his father's farm, covered  
with mortgages, and converted it into  
a peach orchard. He made good.  
Later in life he organized the great  
concern which financed the Hale  
Georgia Orchard Company which  
planted the largest peach orchard in  
the world, 350,000 trees. Mr. Hale was  
for several years president of the  
American Pomological Society, head  
of the Connecticut state grange, trustee  
of the Connecticut state agricul-  
tural college, and occupied many other  
positions of trust.

SELECTIVE DRAFT

We believe the farmer is doing  
his full share, and even better, in sup-  
port of the war. Incidents have been  
cited where farmers have refused to  
sell wheat at prices established by the  
government. On the other hand, an  
incident may be recalled in the con-  
gress of the United States where large  
interests appeared and defeated, to a  
degree at least, the excess war profits  
measure. Also large manufacturers  
have been found who have been charg-  
ing abnormal prices for some of the  
munitions of war. The wheat seller  
and large manufacturer perhaps had  
no idea of doing anything to embar-  
rass the government in its moment of  
trial. There is generally an honest  
desire to secure so far as possible just

distribution of the burdens and costs  
of the war, but the farmer thinks he  
has cause to believe that he at times  
bears more than his just proportion.

For instance, as to the draft, an edi-  
torial in Wallace's Farmer, published  
in Iowa, refers to investigations made  
in a strictly agricultural county of  
that state. The investigator found:  
"that the population of the county is  
49.2 per cent in the towns and 50.8 per  
cent in the country. The enrollment  
for the draft was 39.2 per cent from  
the towns and 60.8 per cent from the  
country. Of the number of men called  
for examination, 31.7 per cent were  
from the towns and 68.3 per cent from  
the country. The number of single  
men enrolled in the entire county was  
940, and the number of married men  
804. The number of single men who  
were drafted was 192 and of married  
men 114. Of 100 single farmers who  
were farming for themselves, 26 were  
rejected for physical reasons and 74  
accepted. Of 83 single farm hands, 21  
were rejected and 62 accepted. Of  
149 married farmers who were farm-  
ing for themselves, 37 were rejected  
and 112 accepted; but 41 of these  
were granted exemptions, making 71  
married farmers who were farming  
for themselves, who have been or will  
be called to the camps. Of 19 married  
hired hands, five were rejected and 14  
accepted, but 10 of these 14 were  
granted exemption, making four mar-  
ried farm hands who were called. It  
will be noticed that the percentage of  
exemption granted hired hands is  
much greater than among married  
farmers who were farming for them-  
selves, probably because of depend-  
ents."

We know of no such investigation  
made on the Pacific Coast, but from  
general knowledge and the plan of  
exemptions we believe that should  
such investigation be made it would  
be fully as favorable to the farmer.

The exemption boards have had a  
great task which they have perform-  
ed nobly and without compensation,  
and we doubt not in 99 cases out of  
100 have done their best to render just  
decisions. It has been a problem in  
the solving of which they have had no  
precedents to guide them. At the  
time of the passage of the selective  
draft law it was announced often that  
it was to be truly selective. The er-  
rors which England had made in tak-  
ing some of her best mechanics and  
food producers and placing them in  
the trenches were to be avoided, but  
so far as we have heard in California  
the agricultural calling, as such, has  
received no exemptions.

More than ever we are becoming  
aware of the food shortage; more than  
ever the food commission is appealing  
for greater production and conserva-  
tion; more than ever the shortage of  
labor is being impressed upon the  
farmer and he is turning every way  
he can to secure labor saving appli-  
ances which enable maximum produc-  
tion at minimum labor expenditure.

If the farmer can serve his coun-  
try best by going to the trenches, he  
is a slacker if he remains at home and  
raises hogs and grows corn; if he can  
serve his country best by raising hogs  
and hominy, he is a slacker if he goes  
to the trenches. Everyone should be  
required to have a part in the defense  
of our liberties. Therein is where the  
selective draft should operate, and  
thousands of young men who are en-  
gaged in non-productive industries  
may well be chosen to fight, while  
producers of food may also be chosen  
to remain on the farm. If such a plan  
is not followed then the "selective"  
draft is not selective, but simply the  
old-time draft of all of military age.

CHISEL TEETH FOR THE CULTIVATOR

That liberty bond U bought may get a U-boat.

Local Paper in Most Any District: "Many sugar beet farmers are consid-  
ering putting in beans this year instead of beets." Will the beans beat the beets?  
beets or will the beets beat the beans?

The Cultivator received today a letter written in French from a Turkish  
gentleman residing in Italy asking addresses of dealers in farm implements, trac-  
tors, seeds and nursery stock. We have subscribers in Africa, Australia, India,  
South America, Europe and the Islands of the Sea, not to mention some 31,000  
right here in California.

To waste your strength just a talking is as bad as a horse a balking.

When the radiant dawn of Christmas broke  
And The World to a giftless sock awoke,  
He stretched and said: "O My, O Me!  
I must give the kids a jolly spree  
And the boys at the front some chewing gum  
And nice warm socks and a letter from him,  
And I reckon I'll find along the way  
That I've given myself A Regular Day!"

Agricultural News Not

The Texas pecan crop is now on  
ing on the market. It is the heavy  
for several years.

The United States shipping bo  
has requisitioned all steam vessels  
2500 tons capacity.

One hundred seven counties  
Texas have been released from qu  
antine for sheep scabies.

Thousands of cattle and hogs w  
burned to death in last week's fire  
the Kansas City stockyards.

Chicago potato dealers have al  
ished the bushel; hereafter they  
buy and sell by the 100 lbs.

The American Red Cross has  
shipped 5000 bags of flour for feed  
Serbians in Austrian camps.

Peanut buyers in Texas are rep  
ed offering \$1.50 per bushel; 40 ce  
higher than opening prices last  
year.

The Eastern apple crop is below  
erage in most sections, while  
Northwest, including Colorado, show  
an increase of 19 per cent over  
year's output.

Food Pledge Week was postpo  
from the week beginning October  
to the week beginning October 23  
as not to conflict with the libe  
loan campaign.

Italy has requisitioned all crops  
rice and maize, except such amou  
as are needed for feeding the fa  
er's family and stock and for sow  
next year's crops.

Food Commissioner Hoover  
nounces that the turning point in  
high retail prices of foodstuffs  
has been reached. Especially does he  
pect lower prices on meats, flou  
beans, potatoes, sugar and oth  
staples.

Poultry, butter and egg men held  
big conference in Chicago last we  
One thing they did was to appropri  
\$50,000 a year for the coming  
years to a publicity campaign for  
educating the American public to  
value of cold storage products.

A company operating canning  
tories in Evansville, Indiana  
Owensboro, Kentucky, has decided  
can rabbits as a war measure. The  
surrounding country will provide  
abundance of rabbits, it is believ  
Business men in the Green River  
rity in Western Kentucky ha  
agreed to provide from 50,000 to 6  
000 rabbits yearly.

Honey is finding a new war ti  
use; it is employed as a substitute  
glycerine in pharmaceutical prepa-  
tions. A new dressing which is plac  
with remarkable results over scab  
burns, and general wounds is almo  
two-thirds honey. Glycerin has  
come almost prohibitive in price  
cause of having been commandeered  
by European governments for man-  
ufacture of explosives.



# Agricultural News Notes of the Pacific Coast

## Northern California

Sutter County's warehouses are full of beans.

"Kill every squirrel" is Butte County's slogan.

The California State Grange recently met in annual session at Napa.

Solano County reports that the antrax outbreak has been checked.

There will be extensive plantings of almond orchards in Colusa County.

Sacramento has an ambition to be a rice and bean shipping center of the state.

Arrangements are being made in Mendocino County for a farm bureau campaign.

Occasional new outbreaks of antrax are reported in different portions of the state.

Eldorado County has organized a farm bureau. Eight local centers have already been formed.

Sonoma County is still lacking in number of names necessary for organization of a farm bureau.

Representatives of rice interests met at Oroville recently and discussed methods of drainage of rice lands.

The Humboldt County Stockmen's Association recently met in annual session and at banquet in Ferndale.

The newly organized state cattle protection board is being besieged with applications from cattlemen to register brands.

The olive harvest season began late and is now in full swing. It is thought that 50,000 people will be employed in harvesting and curing.

Cloverdale's wool sale resulted in a price of 50 cents per pound to the producers who came from Northern Sonoma and Mendocino County sections.

It is probable that the predicted dollar butter will not materialize. Managers of some of California's larger canneries think the present prices are not worth the trouble.

Rice growers of the Sacramento Valley have disposed of large quantities of rice straw for beds for the winter, one contract for 10,000 tons was recently signed up.

President Swett of the California Grape Protective Association assures grape producers that the campaign will be continued until sufficient measures are secured to put the Rominer bill before the voters at the November, 1918, election.

An Almond orchard in Woodland, Yuba County, which has been interplanted with alfalfa for the past few years this year produced a 100 per cent crop while neighboring orchards produced much below. This production is attributed to the beneficial effect of the alfalfa.

Deputy Horticultural Commissioner Hoyt, who has recently returned from making investigation of citrus canker epidemics in Florida last week met with growers of Butte County at Oroville and told them of the serious situation in Florida and of the steps necessary to control the canker.

Importation of Asiatic labor and the closing of saloons were advocated as means of improving the labor situation in California at a meeting last week in San Francisco of the agricultural production board. This board has been selected by Food Commissioner Ralph P. Merritt. Dean Hunt of the University of California presided.

## Central California

San Joaquin's bean crop is reported in the very best of condition.

Tulare County says: "We must triple our sugar beet production this year."

It is reported that plantings of cotton will be made in the Tulare Lake bed next season.

The entrance of Idaho potatoes into the market has depressed price on San Joaquin stock.

During September Manteca, Stanislaus County, shipped out 400 carloads of grapes, tomatoes, beets and hay.

The new packing plant of the Universal Packing Company at Calwa, Fresno County, has begun operating.

J. A. Benson of Union Island, San Joaquin County, has contracted anthrax from skinning an animal dead from the disease.

Lodi has been shipping 51 carloads of Tokays a day and if it were not for the car shortage would have shipped double the amount.

Dairymen of San Joaquin Valley have organized the San Joaquin Milk Producers' Association with headquarters at Fresno.

W. N. Birch has been appointed adviser for Madera County in place of T. C. Mayhew who recently resigned to care for his own ranch property.

The cooperative creamery at Visalia paid to its members the highest price for butterfat in October in its history. It was between 50 and 51 cents per pound.

The Tulare Cooperative Creamery, in its returns for sweet cream sales, netted to the dairymen as high as 56 cents. The total receipts for the month were \$147,650.45.

The California Peach Growers and the California Associated Raisin Company have lined up with the California Federation of Farmers' Cooperative Marketing Associations.

The mass meeting of milk producers recently held at Dinuba, Tulare County, launched a campaign for a complete organization of dairymen of the state in one large central body.

At the recent auction sale held by the Kern County farm bureau at Wasco several carloads of stock were sold, bringing a total of \$11,800. The highest price was paid by a Los Angeles packer, \$16.65 per hundred.

An expert in grain smut eradication has been working in collaboration with the farm adviser of Fresno County. The Huron farm center of that county is investigating means of treating seed in immense quantities.

The top notcher of the dairy cows tested by the Stanislaus County farm bureau during September was B. L. Hayden's Daisy, who averaged 2.02 pounds butterfat per day. Mr. Hayden also took first place for best average herd.

The California Creamery Operators' Association, which recently held its annual meeting in Petaluma, will meet next year at Visalia. N. J. Beck, manager of the Visalia Cooperative Creamery, was elected president of the association.

The Orange Cove Citrus Association, at its recent annual meeting elected the following directors: J. F. Wright, O. R. Barber, W. C. Howorth, E. A. Flanders, R. J. Fleming, C. R. Whittington, S. M. Peet, George Dundas and E. M. Sheridan.

## Southern California

One car of walnuts recently netted Orange County shippers \$12,900.

Redlands is making exhibits at the apple show this week at Yucaipa.

The Riverside County Fair Association closed up its affairs \$7000 to the good.

Brawley, Imperial County, is to hold an auto show the week of November 12-17.

Victorville, San Bernardino County, is launching an immense irrigation project.

Over 100 carloads of canned tuna have been shipped from Long Beach this season.

Live stock trains out of Imperial Valley for Los Angeles are run on Mondays and Fridays only.

The Fullerton-Placentia Walnut Growers' Association has recently shipped about 350 tons of first quality nuts.

Farm Adviser Bauhmeier of San Bernardino County, has an assistant, Harry E. Drobish having been recently appointed.

At the recent meeting of the Hemet Cured Fruit Association A. E. Goodrich, Ben Wiersen and Wm. Sheppard were elected directors.

The various citrus shipping associations are now making refund of moneys not required for season's packing house expense.

San Diego County is now finding that it possesses a great sugar beet section in the lands along the Tia Juana and Otay Rivers.

Serious damage was visited upon the potato and vegetable truck farms near San Bernardino by frost and severe north wind last week.

The recent windstorm near Yuma, Arizona, caused much damage to cotton. There is an effort to find method of handling "windfall" of cotton.

The Riverside-San Bernardino County Beekeepers' Club held a convention during the Riverside County fair. "Standardization of Honey" was the main subject considered.

The Charter Oak Citrus Association received within the last year 387,807 field boxes of fruit. It shipped out 636 cars of fruit. The total paid to the growers was almost \$380,000.

Work at the Kingsbury evaporating plant at Redlands will be continued throughout the winter. The business of processing by-products from cull apples and oranges has been very largely extended.

P. J. Dreher, who recently resigned as manager of the San Antonio Fruit Exchange, has been chosen to represent the exchange in the California Fruit Exchange and the Fruit Growers' Supply Company.

The directors of the Southern California Sugar Beet Growers' Association have asked for a conference with owners of the various sugar factories in Southern California relative to securing better prices for sugar beets the coming year.

Manager Churchill of the California Lima Bean Growers' Association announces the sale of beans at \$14 a hundred, which is the highest price recorded this year. Adolfo Camarillo of Camarillo is accredited with the biggest bean sale thus far for the season, having disposed of 10,000 sacks at \$13.50, or \$135,000 for the single deal.

## The Coast

Arizona's state fair is to be held at Phoenix, November 12-17.

Medford, Oregon, hopes to get a \$750,000 beet sugar factory.

Idaho is rejoicing over a soaking rain after continued drouth.

The Oregon state fair held at Salem reports total receipts of \$64,000.

Sheep valued at \$30,000 were sold at the Washington state fair sheep sale.

Women of Portland are working in mills manufacturing boxes for apples.

"Hooverize pea straw" is the slogan of farmers of Spokane County, Washington.

Waterville, Washington, recently paid out \$5000 for one day's delivery of grain.

The Rogue River Canning Company is running full capacity, turning out 10,000 cans of tomatoes daily.

The late spring caused late harvest in the wheat fields of Eastern Washington. Harvesting is still in full blast.

Boise, Idaho, is suffering from hay shortage and fears a return of the enormous prices of last year when hay went to \$60.

The potato crop of Yakima and Puget Sound is now being harvested and growers assert that unless they get \$30 a ton they will store.

The campaign against rodents in Kootenai County, Idaho, has resulted in cleaning up some 6000 acres of farming land and 3000 acres of vacant land.

Arizona has made no pretensions as to being an apple state but is now making plantings in Graham, Greenlee, Yavapai, Navajo and Apache Counties.

Owing to the fact that apples have colored so slowly growers of the Wenatchee district of Washington will be compelled to make two or three pickings.

Cotton growers of the Yuma Valley of Arizona have ordered 52 cotton pickers from Mexico through Farm Labor Agent Davenport for the Imperial Valley.

Beet producers and manufacturers of Utah recently met in Salt Lake City and discussed contracts for next year's output and methods of production.

As a result of a wool pool formed by small flock owners of Ada County, Idaho, growers received an average of 47½ cents per pound. Forty-four ranchers contributed to the pool.

Farmers of Bellingham, Washington, are cooperating in the marketing of practically all farm products, and double returns are being received from straw because of their cooperation.

The Farmers' Union of the three states of Washington, Oregon and Idaho are discussing amalgamation of the organizations of the three states in order to more economically handle the grain crop.

Dates of the Pacific National Dairy Show at Portland have been changed from November 16-23 to November 7-15 so as not to conflict with the Pacific International Live Stock show which will be held November 19-24.

Gifford Pinchot, chairman of the live stock branch of the national food administration, will be present at the Northwest Live Stock Show to be held at Lewiston, Idaho, November 8-15, and will deliver an address to the stockmen.



## Breed Leaders

Every breed of livestock has its outstanding character the same as the human kind. A great dairy cow has proved her ability to produce anywhere up to 15 tons of milk annually; the trotting horse has secured his record around two minutes; the beefmaker has shown his ability to make the least amount of feed into the greatest amount of food; swine, sheep and others of the livestock family have shown themselves great characters. In addition—and here is where their worth is proven—these animals can transmit their productive power to their offspring.

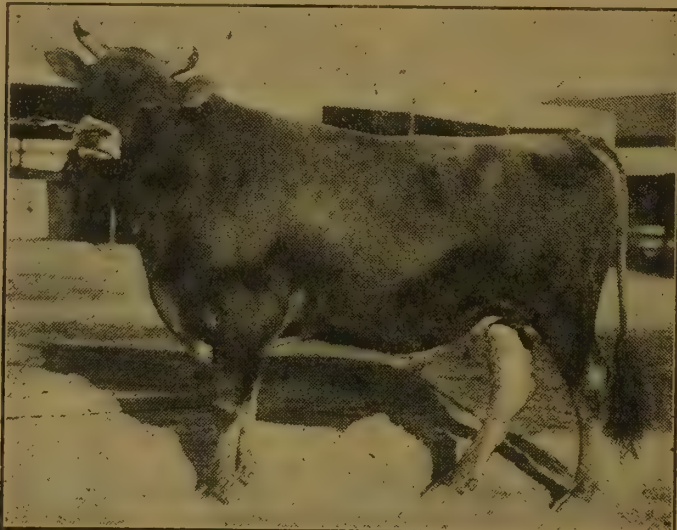
Beginning with the issue of August 4 the Cultivator gave an account of Pietertje Bloom of the university farm dairy herd. Some things she has done and more that her daughters have done were chronicled. She was a most worthy leader in this series of articles. Others of her kind follow. More of the "handsome is as handsome does" type of animals will be given in the columns of the Cultivator during the next few months.

Written for California Cultivator By C. A. Briggs



**G**OLDEN Maidikins Boy, 127-408. All the Jersey men say that the butterfat test on a basis of cost of production is the only true test of a cow. They agree with breeders of dairy cat-

blue ribbons as evidenced by the fact that last year (1916) he was reserve grand champion at the Sacramento state fair, winning the same distinction at the Live Stock Show at Modesto, and being made grand cham-



Golden Maidikins Boy

tle of all breeds that the bull with daughters that can face the butterfat test is a good bull and should be at the head of a good herd. Judged in this way S. F. Williams of Orland has a bull worthy of notice by the practical dairymen. Judged by the showing standard, he always is seen and considered by the man who ties the

pion at Fresno. He carried off these honors in the face of hot competition. Golden Maidikins Boy was sired by a splendid animal, Alva Lady's La Foss Boy, Imported. His dam, Golden Maidikin, was a well bred cow and a fine individual, having very strongly marked dairy points. "The proof of the pudding is the eating," and the off-

spring of Golden Maidikins Boy is the proof that he is a true leader of his breed.

DAVID A. VAUGHN

David A. Vaughn, one of the well known cattlemen of Central California, died at his home in Porterville Saturday, October 6, following an illness of a little more than two weeks. He would have been 70 years old the day following his death. He was a native of Rhode Island and was one of those hardy pioneers who endured the hardships of frontier days and helped make of our state the golden land and beauty spot that it is. He has been a

resident of the state about 50 years and of Tulare County 45. During the early period of his residence in Tulare County he engaged in the sheep business and used to drive his sheep over land to San Francisco to the market. In later years he engaged in the cattle business in which he has been eminently successful. He owned several thousand acres of grazing land in the foothills in the eastern part of Tulare County. His cattle were always of good quality as he annually added to his herd a number of fine Herefords for breeding purposes. Always rugged in health he rode after cattle on his ranches until shortly before his death.—Martha L. Baker.

## September Record State Dairy Cow Competition



**T**HE state university, in charge of the state dairy cow competition, reports record of cows in the contest producing over 40 pounds of butterfat during September. There are 113 of these cows. The Cultivator would like to give record of each one, but lack of space prevents. Therefore we publish only the top-notchers of each herd. They are:

Mabel Wytje 2d, Holstein, nine years old, 182 days in milk, owned by Anita M. Baldwin, 1603.5 pounds milk, 3.89 per cent butterfat, 62.376 pounds butterfat.

Irene, Jersey-Holstein, six years old, 123 days in milk, owned by Floyd Beebe, 1053 pounds milk, 4.5 per cent butterfat, 47.385 pounds fat.

Leda De Kol Ormsby, Holstein, four years, nine months, 127 days in milk, property of A. M. Bibens, 1788.4 pounds milk, 2.73 per cent butterfat, 48.823 pounds fat.

Tillie, grade Holstein, seven years old, 102 days in milk, owned by Bohnett Bros., 1415.3 pounds milk, 3.49 per cent butterfat, 49.390 pounds fat.

Pansy, grade Jersey, 152 days in milk, owned by J. M. Bomberger, 1002 pounds milk, 5.5 per cent butterfat, 55.110 pounds fat.

Beauty 1st, grade Jersey, eight

years old, 180 days in milk, owned by J. W. Coppini, 951 pounds milk, 6.31 per cent butterfat, 60.674 pounds fat.

Clementine Mabel, grade, 11 years, 11 months old, 221 days in milk, owned by Dr. J. W. Henderson, 906.6 pounds milk, 4.56 per cent butterfat, 41.341 pounds fat.

Number 458, grade Guernsey, five years, two months old, 157 days in milk, owned by Hollow-Hill Farm, 820.5 pounds milk, 7.58 per cent butterfat, 62.194 pounds fat.

Roan Cow, grade Guernsey, seven years old, 164 days in milk, owned by Iver Iversen, 1167 pounds milk, 5.11 per cent butterfat, 59.634 pounds fat.

Number 66, grade Holstein, two years, 11 months old, 191 days in milk, owned by F. J. Kell, 951 pounds milk, 4.7 per cent butterfat, 44.697 pounds fat.

Eminent's Miss Pratt, Jersey, six years, four months old, 68 days in milk, owned by McLouth and Dada, 1119 pounds milk, 3.92 per cent butterfat, 43.865 pounds fat.

Goldie of Venadera, Jersey, seven years, one month old, 272 days in milk, owned by Guy H. Miller, 824 pounds milk, 5.26 per cent butterfat, 43.342 pounds fat.

Miss Valley Mead De Kol Walker Holstein, three years, four months old

## PERFECTION MILKER

"I Milk Thirty Cows An Hour, Alone."

**THAT'S** what farmers who use the Perfection are saying from coast to coast.

The Perfection is the friend who comes in without grumbling or complaining and does the milking. He milks each cow carefully and quickly. He keeps the milk clean. He doesn't howl and swear at the switching of the cow's tail. His quiet businesslike ways seem to please the cow better than those of the hand milkers. With one good man he can milk 30 cows in an hour. And he never quits his job.

The Perfection milks nature's way, with a gentle suction, a spiral downward squeeze, followed by a period of complete release. The

suction is adjustable to exactly suit hard or easy milking cows. The Perfection teat cup fits all sizes of teats. It is easy to clean. If your son or your hired man has been called to the colors, you will still be able to get your milking done easily, if you have the Perfection to help you. You can even increase the size of your herd, if you wish and thereby do your share in increasing the production of dairy foods of which the country really is in need.

C. F. Andrews of Richmond, Vermont, says:

"I milk 32 cows with my Perfection Milker in a satisfactory manner in about an hour. I see no change in the amount of milk we get. We have no teat or udder trouble. I know of 40 Perfections in this State, each one of which are satisfactory, and if I were to install another outfit, it would be a Perfection."

T. P. Peterson of Blooming Prairie, Minn., says:

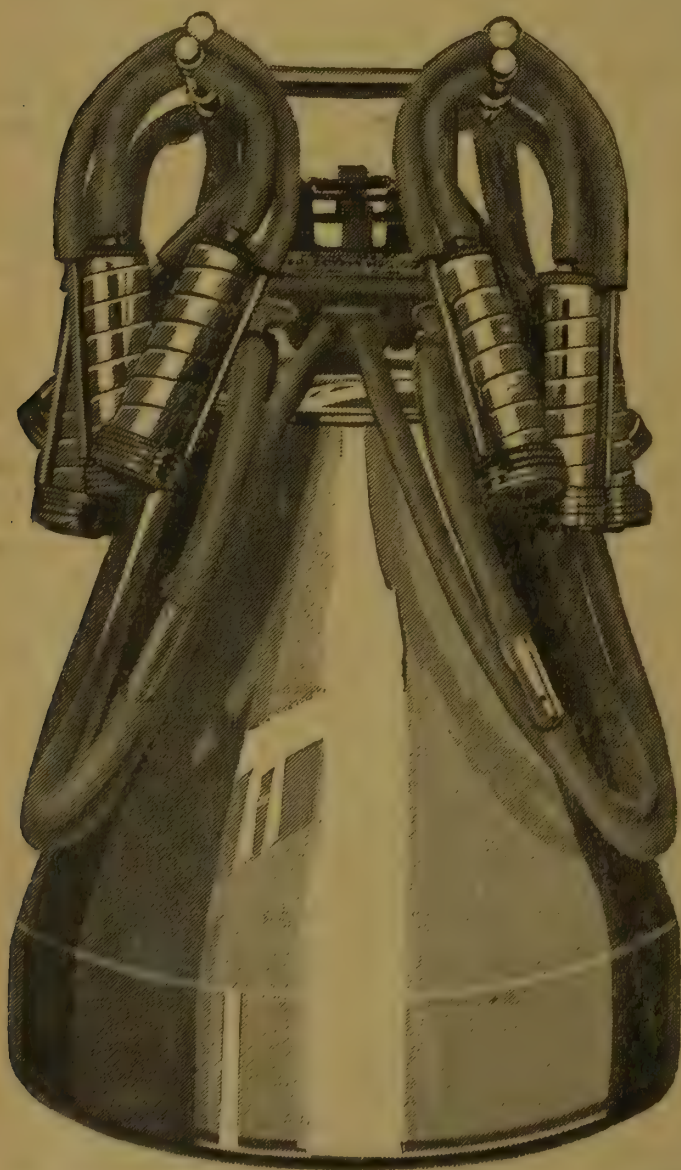
"I use two double unit Perfection Milkers, and with them milk 27 cows in less than an hour. My cows made more butterfat per cow last year, milked with a Perfection Milker, than they ever made before. I bought another Perfection Milking Machine last fall for my other farm. I prefer the Perfection to any of the other makes that I have seen, and I believe it is easier on the cows, and the expense of keeping it in repair is very small. I am satisfied that it has no bad effect on the cows if properly operated. I would not be without a Perfection Milker as long as I milk cows."

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Minneapolis, Minnesota





26 days in milk, owned by A. W. Morris & Sons, 2137.5 pounds milk, 48 per cent butterfat, 74.385 pounds fat.

Ninette Aine Pauline, Holstein, five years, two months old, 115 days in milk, owned by Palo Alto Stock Farm, 1444.9 pounds milk, 3.49 per cent butterfat, 85.327 pounds fat.

Number 28, grade Holstein, 212 days in milk, owned by State Hospital, Patton, 1285.5 pounds milk, 3.60 per cent butterfat, 46.278 pounds fat.

Alice, grade Holstein, five years old, 72 days in milk, owned by F. Stenzel,

1829.4 pounds milk, 3.40 per cent butterfat, 62.2 pounds fat.

Betsy, grade Jersey, 11 years old, 96 days in milk, owned by G. E. Trigg, 1404 pounds milk, 5.27 per cent butterfat, 73.991 pounds fat.

University La Polka Lady II, Holstein, five years, three months old, 122 days in milk, owned by University Farm, 238.7 pounds milk, 3.03 per cent butterfat, 72.326 pounds fat.

Fern's Silver Ray, Jersey, seven years, 11 months old, 227 days in milk, owned by F. H. Van Derpoel, 903.2 pounds milk, 5.36 per cent butterfat, 48.321 pounds fat.

Completed Ten Months Records

No.	Name of Cow	Age	Milk Start of Record Days in Milk at End of Record	Butter Pounds	Fat Ave. Pct.	Total Credit for Butterfat.....
1	Aaggie Acme of Riverside 2d, H.	6-1	22,088	928.813	4.21	928.813
2	Aralia De Kol Pontiac Mead, H.	2-7	15,925	628.270	3.95	779.055
3	Hartog Creamelle De Kol, H.	7-5	24,202	758.086	3.13	758.086
4	Aralia De Kol 3d, H.	6-2	21,244	753.126	3.55	735.126
5	Imp. Brittleware Mistletoe, G.	4-9	12,691	651.408	5.13	683.973
6	Linden Spofford Walker, H.	2-1	14,448	508.615	3.52	661.200
7	Abbie De Kol of East Bank 2d, H.	5-3	18,361	656.606	3.58	656.606
8	No. 15, Gr. H.	6-	17,279	605.724	3.51	605.724
9	Aralia Mead Pontiac De Kol, H.	2-7	15,534	484.412	3.11	600.671
10	Kitchener's Clementine of Belle Vista, G.	2-1	11,337	445.220	3.93	578.786
11	Cobossie Korndyke Burke, H.	2-3	13,834	441.716	3.19	574.231
12	Spot, Gr. J. H.	5-	10,136	566.669	5.59	566.669
13	Mousie De Kol Lady 2d, H.	5-8	18,640	540.329	2.89	540.329
14	No. 29, Gr. H.	5-	14,474	526.479	3.64	526.479
15	Rosie, Gr.	11-	13,710	485.623	3.54	485.623
16	Pedralda, J.	15-2	8,089	439.282	5.43	439.282
17	Rancho Morning Rose, G.	4-8	9,048	406.207	4.49	426.517
18	Hope of Green Gold, J.	2-10	6,719	334.509	5.85	414.792
19	Stella of Venadera, J.	3-1	6,290	319.472	5.08	376.977
20	California Juliana De Kol, H.	2-9	7,319	286.506	3.91	355.267
21	Butter Valley Tulip, J.	2-8	4,903	283.931	5.79	352.074
22	Old's Golden Eminent, J.	3-11	5,005	304.048	6.07	349.655
23	Butter Valley Maggie, J.	2-8	4,609	259.157	5.62	321.355
24	Fairy Lad's Mahel 2d, J.	3-11	4,042	276.639	6.85	318.135
25	Marian 2d De Kol, Gr. H.	3-10	7,010	238.487	3.40	274.260
26	Marian 1st De Kol, Gr. H.	5-	7,254	269.450	3.71	269.450

Owners of Cows: 1, 2, 3, 4, 6, 9, 11, A. W. Morris & Sons, Corp.; 5, Hollow Hill Farm; 7, A. M. Bibens; 8, 14, Napa State Hospital; 10, 17, Dr. J. W. Henderson; 12, Schott Bros.; 13, Palo Alto Stock Farm; 15, Floyd Beebe; 16, 18, J. M. Bomberger; 19, Guy H. Miller; 20, University Farm; 21, 22, 23, 24, Dr. H. G. Gross; 25, 26, J. M. Christen.

San Francisco Stock Show to be Annual Event

Written for California Cultivator By F. F. Stonerod

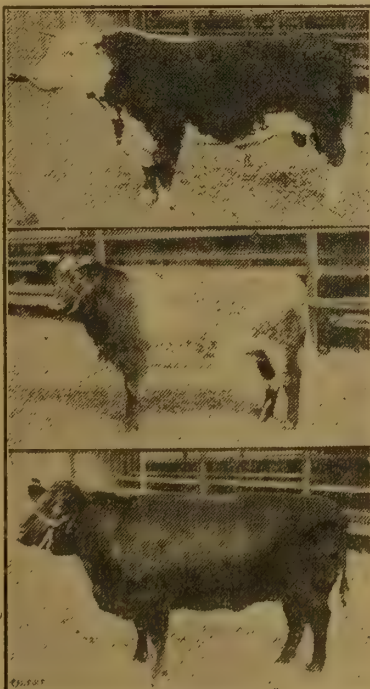
IF AN attendance of more than 400,000 people during the two weeks of San Francisco's big Land and Live Stock Show is an indication of California's interest in this kind of an exposition then it should be made an annual event, and in all probability it will be.

Last week the beef cattle, world's champion hogs, university farm sheep, and a few stylish Arabian-Welch ponies replaced the dairy exhibits of the previous week. Interest in the show increased rather than decreased. Most of the cattle which showed at Sacramento in September met in the ring at San Francisco to be passed upon by Frank Brown of Carleton, Oregon, one of the very best judges of beef cattle in America. His work was a revelation to the ringsiders. Mr. Brown had much more difficult class to judge in the Shorthorns than in the Herefords. W. M. Carruthers brought up his 1916 champion bull, Count Glory, and walked away with the senior and grand championship. This bull was not shown at Sacramento as he was sick at the time and in poor condition. But he was certainly showing well at San Francisco. To win he had to beat two mighty fine bulls in T. T. Miller's Diamond Choice and the Jack London Ranch entry, Roselawn Choice. Count Glory's superior covering, smoothness and mellowness of flesh won his own purple ribbon.

Mr. Miller's Greendale Sultan easily won the senior yearling bull prize but lost to Count Glory for the championship. The great Miller cow, Brandsbys Jinny 18th, won first prize aged cow and championship. This maroon is getting better all the time and those who have seen her at the different shows this year know what that statement means. She is a hard cow to beat in every way except possibly in her hind quarter which will in all probability fall out after she becomes accustomed to the coast conditions of climate and feed.

The Pacheco Cattle Company won first in the two year old cow class, the best filled class in the Shorthorn show. There were six entries and the judge studied a long time before making his decision. Pacheco Lass 80th,

a daughter of Trudale, bred and owned by Mr. Hawkins, finally won the blue. Mr. Brown said she had the sweetest Shorthorn character, the best topline, and was more evenly fleshed than the two heifers placed below her. The Miller heifer placed third, Golden Queen, gave both animals above her a hard run. The Ormondale heifer, Mayflower 4th, who won first in a larger class at Sacramento, was placed second chiefly because she has put on flesh too rapidly since that time and was a little too rough and patchy. However she had more covering over the loin and was much



Three Winners at the San Francisco Land Show

At top: Sonoma, 625000, first prize aged Hereford bull, owned by Chas. Rule.  
Middle: Pacheco Lass 80th, first prize two-year-old Shorthorn heifer, bred and exhibited by Pacheco Cattle Company.  
Bottom: Mayflower 4th. First prize Shorthorn two-year-old heifer at Sacramento, 1917, owned by Ormondale Company.

Jerseys for Net Profits



You're in the dairy business for profit—the net profit that your herd has made you at the end of the year will determine the size of your bank account. Jerseys yield the largest returns from every ounce of feed—proved by tests at two great expositions. Jersey milk averages 5.3% butter fat, 9.1% solids not fat—highest of all breeds. Buy a Jersey bull.



Write the breeders advertised below for prices, pedigrees, etc.

The American Jersey Cattle Club, 356 West 23rd Street, New York City

Young Jersey Bull

of excellent breeding at a fair price. Write for particulars to

W. G. GURNETT  
ORLAND, CAL.

Member Orland Jersey Cattle Club.

Jersey Bull

FOR SALE

A fine straight one, bred right, priced right

S. F. WILLIAMS  
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ANCHORAGE FARM

Jerseys

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Fuimus Farms - Jerseys

Herd Headed by You'll

Do Oxford's Lad

Write Us Your Wants

J. E. Wherrell

1581 Sedgwick St., Riverside, Cal.

Venadera Herd

REGISTERED JERSEYS

Young bulls from proven dams in Register of Merit

GUY H. MILLER

MODESTO, CAL.

ALL MY RECORDS are made under ordinary dairy conditions. The farmers cow is

The Jersey

YOUNG BULLS FOR SALE

C. D. HAYWORTH

MODESTO, CAL.

Young Jersey Bulls

FOR SALE

One at the head of your herd will pay big dividends on his cost. Write to

W. J. HACKETT

MODESTO, CAL.

STOP THE LEAKS!

"Wastes, the leaks in a nation's strength"—if true indict many a dairyman. Have you a "boarder?" Send her to the block then head your herd with a pure bred Jersey bull from a known producing strain.



Santa Anita Rancho

Anoakia Breeding Farm



ARABIAN THOROUGHBREDS: Two-year-olds, sired by Imported Stallion Ibn Mahruss, head of our Arabian stud. Dams are the choicest thoroughbred mares on Santa Anita Rancho.

SADDLE HORSES: Some of which were sired by Ibn Mahruss, world renowned Imported desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle stallion. These horses are mostly three-year-olds.

POLAND-CHINA AND BERKSHIRE BOARS: Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the best blood lines. Meet all these animals have winnings at World's Fair. Write for catalogue.

HOLSTEINS: Prince Gelsche Walker, and bulls from one World Record sow and two California State Record Cows. Write for details.

Correspondence Invited

Anita M. Baldwin

W. H. TAYLOR, Superintendent

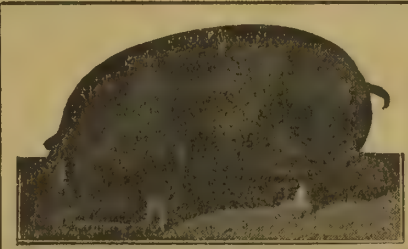
Santa Anita, Cal.

Poland Chinas, Medium Type

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain; 12 firsts, Junior Champion and Reserve Grand Champion Boar. Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

M. Bassett

Hanford, Kings County, Cal.



Hauser's Digester Tankage

GIVES GREATEST VALUE FOR LEAST MONEY. IT MAKES THEM FAT.

Hauser Packing Co.

Los Angeles

10  
2 Year  
Old  
BULLS

SHORTHORNS

H. L. & E. H. Murphy

Perkins - - - California

8

BULL

CALVES



## Shorthorns

Bred for Range Purposes and of Pure Scotch Blood Lines.

Show Herd won highest honors in 1917.

Visitors welcome — information cheerfully given.

**T. T. Miller**

So. Normandie St., Los Angeles, Cal.

## HOLSTEIN-FRIESIAN CATTLE

Registered young bulls from best families. Some of serviceable age.

### REGISTERED BERKSHIRE PIGS

Masterpiece, Longfellow and Robin Hood Strains. Fine individuals of both sexes—we pay registration fee.

Careful attention given to mail orders.

**Whittier State School**

WHITTIER, CALIFORNIA

## Holstein Friesians

Herd of over 200 head to select from headed by King Mead Acme, whose dam, Sadie De Kol Acme, made 885 pounds butter in one year. We breed for high production and high testers.

Will sell bulls that give satisfaction to the buyer and at reasonable prices.

**Frank Helm**

Fresno - - California

## BLACKLEGGOIDS



### A RELIABLE PROTECTION FOR CATTLE AGAINST BLACKLEG.

NO DOSE TO MEASURE.  
NO LIQUID TO SPILL.  
NO STRING TO ROT.

Each Blacklegoid is a measured dose of vaccine ready for use.

DON'T TAKE CHANCES.  
VACCINATE WITH BLACKLEGGOIDS.  
SIMPLEST, SAFEST, SUREST.

Write for Free Booklet to

Department Animal Industry of

**PARKE, DAVIS & CO.**

DETROIT, MICH.

thicker than the Hawkins heifer. She should made the Ormondale Company a wonderful breeding cow.

The Hereford section was an attraction to spectators all week. Chas. Rule of Duncan's Mills sent over his Denver prize winner, Sonoma, more to help out the breed exhibit than to win, as the bull was in poor show condition. He was the only aged bull in the class and will show next year at close to 2500 pounds weight if he is properly fitted. He is the rough, rugged type so popular with the range men and has both scale and bone in abundance. Superior finish won the championship for the Lively bull, Bertram Fairfax. He is a typical Fairfax bull with thick smooth flesh, beautiful head, is wide, and set low on the ground. The coarseness of the shoulder makes his heart girth appear smaller than it is in reality. His remarkable development of loin and quarter offsets the above mentioned defect, and this will probably fill out as he matures.

Alexander and Kellogg, and Thos. Harrison exhibited their milking Shorthorns before an admiring crowd. Lady Beatrice, the cow that was sen-

## SAN JOAQUIN COUNTY COW TESTING ASSOCIATION

Following five herds led in milk production during the last testing period of 31 days, September 24 to October 25, giving name of owner, number cows in herd, average pounds milk: Gottshall & Magruder, 24, 951; County Farm, 34, 918; Brum & Thorp, 14, 764; F. J. Kell, 21, 738; W. T. Miller, 21, 716.

Following five herds led in butterfat production, giving name of owner, number cows in herd, average test, average pounds butterfat: County Farm, 34, 3.4, 35.9; Brum & Thorp, 14, 4.6, 34.5; F. J. Kell, 21, 3.9, 32.9; Gottshall & Magruder, 24, 3.7, 31.5; R. W. Fisher, 17, 4.2, 29.4.

Following cows produced 45 pounds or more of butterfat, giving name of owner, name or number of cow, breed, pounds milk, test, pounds butterfat: County Farm, 14, G. H., 1860, 4.1, 76.2; County Farm, 32, G. H., 1541, 4.5, 69.3; Gottshall & Magruder, Lady, H., 1568, 4.0, 63.5; O. Fowler, Jane, G. J., 1052, 5.7, 60.1, County Farm, 126, G. H., 1661, 3.2, 53.1, Oak Grove Dairy,



At the Poland-China Sale

Some of the people gathered at the Kings County Poland-China Sale at Hanford last week.

ior and grand champion at Sacramento, duplicated her winnings at San Francisco. Island Buttercup, also owned by Alexander and Kellogg, won the junior champion heifer. Thos. Harrison showed a splendid cow in Lady Sunshine, a cow with wonderful udder development and of ideal dual purpose type. She was handicapped by the fact that she was just freshening. Golden West beat Westward Ho for the bull championship, reserving the state fair decision.

The special herd prize offered by Hale Bros., Inc., for the four best beef animals in the show was won by T. T. Miller on Diamond Choice, Brandsby's Jinny 18th, White Mayflower, and Greendale Sultan. Both Herefords and Shorthorns competed for this coveted prize, and the line-up in the ring was the piece de resistance of the entire show.

Frank Brush shipped his world champion Berkshires direct to the stock exhibit as soon as they arrived from Omaha. They were a sensation from the time they arrived till the close of the show. California's ability to go out and win in any competition has been demonstrated once more, and Mr. Brush deserves all the high honors he has won because he went to the great expense of shipping across the continent to fly the California colors at America's biggest swine show. A more detailed account of the Brush Berkshire herd will be published in an early issue. It showed at Sacramento, Salem, Oregon, and Omaha before returning to San Francisco.

& Thorp, Sweet-Lips, Jersey, 1183, 4.8, 51.0; W. J. Miller, 17, G. H. 1017, 4.8, 49.0; Gottshall & Magruder, H. Peterji, H., 1111, 4.4, 48.9; W. T. Miller, 19, G. H. 1476, 3.3, 48.7; J. De Carl, Blucher, G. H., 1200, 4.4, 52.8; Brum 225, G. H., 1060, 4.5, 47.7; W. E. Vandever, Colorado, G. J., 853, 5.5, 46.9; N. H. Locke Company, 115, J., 912, 5.0, 45.6; Mrs. E. C. Clowes, 53, G. H., 1062, 4.7, 49.8; Brum & Thorp, Miss B., J., 990, 5.0, 49.5; W. T. Miller, 21, G. H., 1468, 3.3, 48.4.

A good thrifty condition in breeding animals keeps the cost of maintenance at a reasonable level and insures maximum production. Such condition may be had by a judicious use of roughage and pastures.

Red Crown's continuous chain of boiling points insures maximum power and mileage.

Standard Oil Company (California)

*The Gasoline of Quality*



**POWER**

## ABORTION IN CATTLE

PREVENTED AND CURED PERMANENTLY

YOUR COWS MADE PROMPT, REGULAR BREEDERS BY

**STERILOID**



### STOP LOSING CALVES

**TREATMENT:** If STERILOID is used at the first sign of have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use STERILOID. Cows get with calf after only one treatment. Write today for FREE BOOK. It explains the causes and symptoms of Abortion and tells how to cure Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

**GUARANTEE:** We will refund money in every case when STERILOID FAILS to make good. Price \$1.00. Mail postpaid. In plain wrapper. Dept. L. 398-408 Columbus Ave., New York City. Reference, Colonial Bank.

**MARTIN REMEDY CO.**

## The Cow's Health—First of All

To think of the milk yield first and the cow's health afterward is putting the cart before the horse. Many "poor milkers" only need to have their systems working properly to become good producers.

**KOW-KURE**, the great cow medicine, makes cows healthy and keeps them healthy. Working on the digestive and genital organs, it is a prompt, sure remedy for Abortion, Barrenness, Retained Afterbirth, Scouring, Lost Appetite and Bunches. Try KOW-KURE; druggists and feed dealers sell it—50c and \$1.10 packages.

Write for "The Home Cow Doctor," free.

DAIRY ASSOCIATION CO.,  
Lyndonville, Vt.



### AIN'T IT THE TRUTH?

While the weather's really hot, And we puff and blow a lot, Some fellow hollers for a little rain. But if the sun does hide his face, Back of the clouds for a short space, Someone says, "This weather sure gives me a pain."

When a small boy does not hate soap and water it is just as well to put drosses on him.

Warranted to Give Satisfaction.

## Gombault's Caustic Balsam



Has Imitators But No Competitors.

**A Safe, Speedy and Positive Cure for** Curb, Splint, Sweeney, Capped Neck, Strained Tendons, Founder, Wind Puffs, and all lamenesses from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.00 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circular, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.



LIVE STOCK SEED SELECTION

Written for California Cultivator  
By W. S. Guilford



ELECTION of seed corn, barley, wheat and other grains is being urged by state and county councils of defense as one of the most effective means of increasing the production of food. It is quite as important that the same care be used in the production of livestock. It is just as unpatriotic at this time to use a scrub boar as it is to plant seed of 70 per cent germination or of a variety that produces small heads.

In order to make the greatest possible amount of meat or milk a breeder must have at the head of his herd or flock a sire with the ability to transmit these characteristics to his offspring. These sires can be secured from California breeders of pure bred livestock. A large number of these are represented in the advertising columns of the Cultivator. Make a study of the advertisements a part of your war duty—and be sure that your next crop of livestock is "sired" right.

A NEW GRASS

A San Diego County subscriber, G. D. Stead writes regarding "Oryzopsis milaceae," a grass which for 30 years has been growing and doing well in San Diego County. As Oryzopsis is somewhat of a tongue twister he has looked for a more pronounceable name, and it has been suggested that San Diego grass or "Smilo" grass be used. Regarding it Mr. Stead says:

"I inquired about the grass of the former owner, Mr. Steele. He said he received a small package of the seed from the University of California about 30 years ago, and planted it on a hillside.

"I then wrote to the university for information regarding it, and upon looking it up, they found that a small lot of seed had been received from southern Europe in 1886, and the agricultural department had sent packages of the seed to different parts of the state. A small plot on the university campus was also planted with the seed and although neglected all these years, it is still thriving. The university gave it the scientific name of "Oryzopsis milaceae," which, translated, means "many flowering millet."

"On one plot, two-year-old roots, we cut an average of over six tons of hay per acre at first cutting, and where the ground was irrigated we made three cuttings in one season. On one plot from seed planted the previous October three cuttings were made. The three cuttings totalled about seven tons."

WINTER RAPE FOR PIGS

Rape offers the means of an economical gain in pork and at the same time a saving in the more concentrated feeds.

Sown in the fall rape makes an excellent supplementary feed for pigs during the winter months. When sown in any of the states in the Cotton Belt during September or October, usually it is available for pasturage in about 50 days. If seeded broadcast, use about five pounds per acre. The more satisfactory method, however, is seeding with a drill and cultivating; this is especially true if the ground is poor. The rows should be at least 24 inches apart in order to give sufficient room for a horse and plow.

Pigs do best when changed from one place to another for pasturage. Convenient lengths of woven wire are quite handy as portable fences to divide portions of the rape field. In this manner the pigs will clean up the rape more thoroughly.

We may add that some Californians are investigating as to possibility of raising rape for seed for manufacture of oil. A good rape seed will run 26 per cent oil. This oil is used for illuminating or in Europe as a bread oil, i. e., for brushing over freshly baked loaves; in this country for salad oil; also in steel works for tempering. There is a dearth of this oil because of the war.

The largest number of cattle ever received at the South Omaha market in a single day was received on September 24, 24,500 head, comprising 950 carloads.

# The Holstein Event of 1917

## Bulls of Equal Breeding and Individuality:

—A son of King Korndyke Pontiac out of the 36 pound junior three year old daughter of Prince Gelsche Walker, Miss Valley Mead De Kol Walker. Highest record bull ever offered at public sale in California.

—A son of King Valdessa out of the world's record heifer FINDERNE Soldene Hengerveld, 35.33 pounds butter in seven days at first calving.

—A son of King Mead of Riverside out of a 33 pound cow that made over 1000 pounds butter in one year. A show bull mostly white in color.

—A son of a great 32 pound cow that will make around 1200 pounds butter this year.

—A son of Spring Farm King out of a 31 pound dam that is a promising candidate for a higher record.

—A beautiful young grandson of King Korndyke Sadie Vale out of a 29 pound dam that has a 34 pound three year old daughter.

—A grandson of Prince Gelsche Walker out of a 25 pound three year old daughter of a 34 pound cow.



## Six 30 pound Cows

Fourteen daughters of 30 pound cows.

- A 29 pound four year old.
- Two daughters of 29 pound cows.
- Two 28 pound cows.
- Six daughters of 28 pound cows.
- Two 27 pound cows.
- Four daughters of 27 pound cows.
- Two 26 pound cows.
- Four daughters of 26 pound cows.
- Twelve cows and heifers with records from 20 to 25 pounds.

## Yearly Record Females

- A 1000 pound cow.
- A daughter of a 1000 pound cow.
- Two 800 pound cows.
- Four daughters of 800 pound cows.
- Six daughters of 700 pound cows.
- Three 600 pound cows.

—A son of Prince Gelsche Walker out of a 27 pound dam.

—A son of King Morco Alcartra out of a 23 pound two year old daughter of Prince Gelsche Walker.

—A son of King Valdessa out of a 30 pound dam.

## Selected from Among the Top of 15 California Herds

A. W. Morris & Sons, Woodland.  
McAlister & Son, Chino.  
Santa Anita Rancho, Santa Anita.  
Bridgford Company, Knightsen.  
Gotshall & Magruder, Ripon.  
Toyon Farm Association, San Jose.

Fred W. Kiesel, Sacramento.  
The J. S. Gibson Co., Williams.  
Rosamaines Rancho, (Stalder Bros.)  
Riverside.  
Palo Alto Stock Farm, Palo Alto.

W. J. Higdon, Tulare.  
Alex Whaley, Tulare.  
R. F. Guerin, Visalia.  
Frank Hatch, Modesto.  
Dr. E. J. Weldon, Sacramento.

## DAUGHTERS OF GREAT SIRES

The splendid females include daughters of King Korndyke Sadie Vale; King Segis De Kol Korndyke; Tidy Abbecker Prince; Prince Gelsche Walker; King Mead of Riverside; King Segis Pontiac; Segis Pontiac De Kol Burke; Korndyke Queen De Kol's Prince; It; Annie De Kol Lakeside Model; King Walker 5th; King Segis Pontiac Alcartra; Fairmont Spofford Pietje; Prince Gelsche Walker Korndyke; Spring Farm Pontiac Cornucopia; King Korndyke Pontiac; King Morco Alcartra; Admiral Walker Prilly; King of the Pontiacs Small Hopes; Arcady Pontiac Wayne Hengerveld; King Pietertje Hartog.

## BRED TO GREAT SIRES

The high record females in this offering are bred to some of the greatest bulls of the breed, including: It, son of the first 37 pound cow and first 1200 pound cow; Prince Gelsche Walker, sire of a 36 pound junior three year old and a 34 pound junior four year old; King Mead of Riverside, sire of a 35 pound cow and a remarkable list of high testing yearly record daughters; Sir Aaggie De Kol Acme, son of a great 35 pound cow that will make around 1350 pounds butter this year; King Morco Alcartra, son of Tilly Alcartra, the world's greatest dairy cow; King Segis Alcartra Prilly, son of the \$50,000 bull and a 30 pound four year old granddaughter of Prilly; King Segis Alcartra Abbecker, son of the \$50,000 bull and a 30 pound daughter of Tidy Abbecker Prince; King Korndyke Pontiac, one of the best sons of King of the Pontiacs; Prince Gelsche Walker Korndyke, \$4000 son of Prince Gelsche Walker; King Pontiac Netherland Segis 3d, 34 pound grandson of King of the Pontiacs; King Pontiac Segis Korndyke, 30 pound proven son of King Segis De Kol Korndyke; King Korndyke Pontiac 20th, 36 pound son of King Korndyke Pontiac; Prince Alcartra Korndyke, son of Tilly Alcartra; Sir Veeman Korndyke Pontiac, 30 pound son of Sir Veeman Hengerveld; Segis Pontiac De Kol Burke Luit, 32 pound son of Segis Pontiac De Kol Burke.

The offerings in this sale were selected by a committee of three from among the greatest animals of the Holstein-Friesian breed in California, and the occasion was made possible only with the broad spirited cooperation of the fifteen breeders represented to make an offering of eighty head, every one of which is an individual attraction.

**This is the opportunity of a lifetime to secure a foundation herd of the first rank and a bull fit to head such a herd**

It is worthy of consideration also that aside from the advantages of making your own selections from this group of cattle that has been painstakingly selected by a committee of three, you are buying in a sale backed up by the strongest livestock selling organization in the west whose contract with sellers is an added safeguard to the buyer.

**Every Animal over Six Months of Age Tuberculin Tested and Guaranteed Against Tuberculosis for Sixty Days**

**EVERY ANIMAL SOLD IS GUARANTEED TO BE A BREEDER.**

**Catalog mailed only on request.**

### COMMITTEE of SELECTION

FRANK L. MORRIS, Woodland  
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C. L. HUGHES, Sacramento

### AUCTIONEERS

COL. BEN A. RHOADES, Los Angeles  
COL. J. E. MACK, Ft. Atkinson, Wis.

### SALE UNDER MANAGEMENT OF

## California Breeders Sales and Pedigree Co.

J. M. HENDERSON, Jr., President  
C. L. HUGHES, Sales Manager

Sacramento, California

### FARMERS NOT A POISON POWERFUL DISINFECTANT



#### FOR CALF SCOURS

Breeders testify that B-K stops scours. It is powerful in killing germs, yet mild and healing. Relieves irritation, stops infection. Easy, simple and cheap treatment. Write for evidence from users. Get our free book "Save Every Calf" from your dealer. B-K is on sale at drug and general stores. Dealers wanted in every town.

General Laboratories, Madison, Wis.  
3110 So. Dickinson St.

### KENDALL'S SPAVIN TREATMENT

—has saved thousands of dollars and thousands of horses. The old reliable treatment for Spavin, Ringbone, Splint or Lameness. For sale at all druggists. Price \$1 per bottle, 6 for \$5. "Treatise on the Horse" free at druggists or write to Dr. B. J. KENDALL'S COMPANY, Enosburg Falls, Vt., U. S. A.

### Rossmead Farm POLAND-CHINAS

Won second on boar and sow P.P.I.E. 1915. Champion sow at Fresno and Hanford 1916. Young stock of this breeding for sale.

F. D. ROSS

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We supply any height wheel to fit any kind of an axle. Guaranteed to fit or money back. Put a set on that old gear. Write today for list and measurement blank. ARNOTT & COMPANY, Inc. 112-18 So. Los Angeles St., Los Angeles

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Breeding Stock For Sale

G. A. Murphy - Perkins, Cal.

## BOYS! Make Money

and have fun TRAPPING

Skunk, coon, fox, etc., are bringing high prices. Write for price list and our 36-page free book, TRAPPING FOR PROFIT. Tells how to trap, and how to handle furs to bring the most money.

### E. R. SKINNER & CO.

Largest direct fur merchant on the Pacific Coast  
1121 Front Street  
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### DUROC JERSEYS

Sows, gilts and a few boars of the best breeding FOR SALE

E. P. Slocum & Son R 1 Willows, Cal



My Stock Tonic  
is never peddled.

25-lb. Pail,  
\$2.25; 100-lb.  
Drum, \$7.00.

Why Pay the  
Peddler Twice  
My Price?

**Dr. HESS**  
**Stock Tonic**  
is a  
**Conditioner**  
and  
**Worm Expeller**



## Keep Your Animals in Condition

Now is when your stock need special attention because the change from pasture to dry feed is one of the most critical periods of the whole year.

You can lose more pounds of summer gain through November neglect than you can get back all winter. Keep up the good condition—keep up the summer thrift—keep out the worms.

## Dr. Hess Stock Tonic

Drives Out the Worms. Makes Stock Healthy

Keep the animals' systems right and you need have little fear of disease. Stock Tonic tones the stomach and the digestive organs, gives better action to the bowels, improves the blood, purges of worms, and gives real life and vigor. The *Nux Vomica* in it aids digestion. *Quassia* is a true tonic and a worm expeller. The *Sulphate of Iron* is a blood builder and worm expeller. There is *Epsom Salts* for a laxative, and *Nitrate of Potash* to act on the kidneys.

### Why Pay the Peddler Twice My Price?

You buy Dr. Hess Stock Tonic at an honest price from a responsible dealer in your town.

25-lb. Pail, \$2.25; 100-lb. Drum, \$7.00  
Smaller packages in proportion

Dr. Hess & Clark, Ashland, Ohio

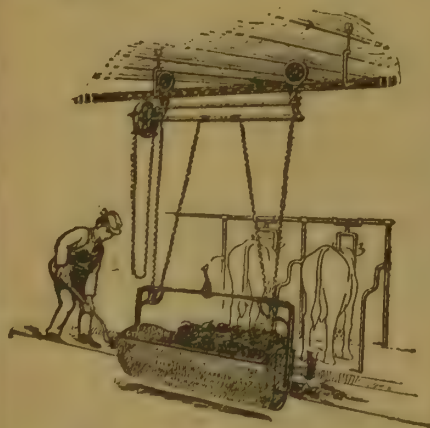
Dr. Hess Poultry Pan-a-ce-a  
Will Start Your Pullets and  
Moulted Hens to Laying



## Dr. Hess Instant Louse Killer Kills Lice

## LESS WORK And a Much Cleaner Barn

Get the manure out of your barn in half the time, with half the work. Keep barn cleaner, stock healthier; save all the valuable liquid manure. Our up-to-date



### Manure Carrier

unlike others. Has at least 12 features that make it years ahead. The simple I-Beam track can be bent without heating right in the barn; the "button-on" hangers makes outfit easy to erect; quick and easy hoist and rapid lowering device; friction brake and clutch; big, durable, self-dumping tin, a real labor saver that will pay good dividends for years to come.

Easy to Install in Any Barn  
Send for Complete Description.

## DE LAVAL DAIRY SUPPLY CO.

61 Beale Street, San Francisco, Cal.

## Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count Glory 426982, grand champion at the California State Fair, 1916. Berkshire herd won Premier Exhibitor's banner at P. F. L. E.

513 Hearst Building  
San Francisco

CARRUTHERS FARMS  
Mayfield, Cal.

## Field Notes From the Live Stock Men

Material declines have been made in beef cattle and hog prices during the past week.

The newest fair to appear this fall is the Pan-Handle state fair, held at Amarillo, Texas.

The 46th annual of the Wisconsin Dairymen's Association will be held at Janesville, November 20-22.

Over 1100 entries were made in the Columbus horse show which was staged at the same time as the National Dairy Show.

The American Tunis Sheep Breeders' Association recently met in annual session and elected G. C. Kreglow, De Graff, Ohio, secretary.

H. J. Waters, president for many years of Kansas agricultural college, has resigned and taken the position of managing editor of the Kansas City Star.

The seventh annual Pacific International Live Stock Exposition will be held at North Portland, Oregon, November 19-24.

Entries have closed for the great International at Chicago. An effort is being made to excel if possible the record of 1917, which was the most remarkable show ever pulled off in Chicago.

Dean W. L. Carlisle, formerly of Colorado, more recently of Oklahoma agricultural college, has removed to Calgary, Alberta, and is associated with one of the largest Percheron studs in the world.

The Breeders' Gazette is discussing a separate show for Percheron horses. There will be practically no importation of Percherons for years to come, and every step should be taken to encourage conservation of stock now in America.

At the Tri-State Fair at Memphis beef and swine classes were filled far better than the dairy classes. The surprising feature was the immense number of Polled Durhams. There were more than one dozen exhibitors in this class.

Wool values are going higher under great demand. The stock in warehouses has shrunk rapidly. A shipment of 4000 bales is now afloat from Australia. Fine Ohio wools are now selling at 68 cents, Washington delaines at 85, Michigan delaines in Boston, 75.

The Breeders' Gazette refers to one small farmer in the Middle West who keeps a flock of ewes, likewise keeps account of expense and returns from the flock. Each of the old ewes during the past year produced \$35 worth of lambs and wool and they were fed very little grain.

Final returns from the awful fire in the Kansas City stockyards indicate that around 10,000 cattle and 3000 swine were burned. The value of this stock is estimated around three-fourths of a million. Damage to pens and buildings will carry the loss far beyond the million dollar mark.

Carnation Holsteins go by express to National Dairy Show at Columbus, Ohio. The show herd of 27 registered Holsteins belonging to the Carnation Stock Farms of Seattle, and which have won the majority of blue ribbons at the Chehalis, Spokane, Yakima, Puyallup, Washington, and Salem, Oregon state fairs, were exhibited at the National Dairy Show, in Columbus, Ohio, held October 18 to 27, 1917.

A. D. McCarty, owner of the Riverina Farm at Modesto, has joined the ranks of Poland-China breeders. While at the state fair he bought some very fine gilts from the university farm at Davis, sired by a son of the great breeding boar, Big Bob. He commissioned Prof. J. I. Thompson to purchase an Eastern boar for him, and word has just been received that Prof. Thompson selected Kansas King, by King of All, paying \$300 for him. This boar was first senior yearling at the recent Kansas state fair and has already made an enviable reputation for himself in the East. Mr. McCarty is buying the right kind of foundation stock and undoubtedly will develop a fine herd.



## The Higher the Price of Butter the Greater Your Loss without the Best Cream Separator

BUTTER prices are going higher every week.

Even at present butter prices no cream producer can afford to be without a cream separator or to continue the use of an inferior or half-worn-out machine another day.

And the higher the price goes the greater your loss.

Even if you have only two or three cows a De Laval would pay for itself in a few months.

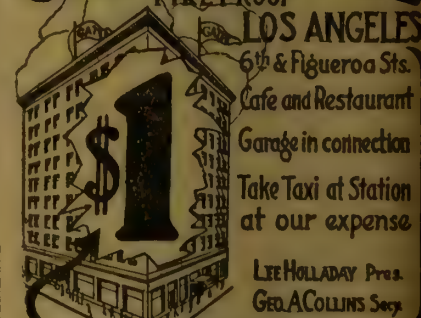
If you have a larger herd your need of the best cream separator you can buy is just so much more urgent.

A De Laval Separator bought now will more than save its cost by spring. It can be bought for cash, or if preferred, on such liberal terms that it will easily pay for itself in its actual savings over any other separator or creaming system.

See the nearest De Laval agent right away and let him show you what the De Laval will save for you. If you do not know the De Laval agent, write direct for any desired information.

De Laval Dairy Supply Co.  
61 Beale Street, San Francisco, Cal.

## STOCKMEN: Stop at the GATES HOTEL



TOM W. LOW, Assistant Manager  
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## SHORTHORNS

PAICINES RANCH COMPANY

offers for summer and fall delivery both registered and unregistered weanling bull and heifer calves. For prices and particulars apply to Paicines Ranch Co. Telephonic and Telegraphic address Hoillater, Cal.

Post Office Address: Paicines, Cal.  
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## Rhoades & Rhoades

Expert Live Stock Auctioneers  
Pure Bred Stock Sales a Specialty  
Sales conducted in all parts of California and Adjoining States. Twenty-five Years' Experience

BEN A. RHOADES, Auctioneer  
1501-3-5 So. Main St., Los Angeles, Cal.

Correspondence with the advertisers in the California Cultivator will convince you that their articles will save you money.

When writing advertisers, mention The Cultivator.



# Keep the Hen That Lays

By Prof. T. E. Quisenberry

**T**HE good hen is now paying better than ever, while the poor hen is losing more than ever. The main trouble lies in the fact that all hens are not good hens. In fact, if we use as a standard of a good hen a production of 150 eggs per year, we find a large portion of all hens in America fail to qualify. It seems to be a recognized fact, based on the last census figures, that the average farm hen lays about 75 eggs. We believe this is perhaps too low a figure for the present, the 1917 average hen. We believe that the increase in breeding from standard bred stock in the past five to ten years has already made an improvement in the egg production of the average hen.

In these days when every ounce of food should be conserved by feeding it only where it will produce its like, or more, in food value, and also in these days of high priced grains, we should take steps which insure the keeping of all hens with good laying ability while the non-producers should be culled out and sold for meat.

The present American Egg Laying Contest and former contests have proven the following methods profitable, especially under present conditions:

Keep the birds with rather large plump combs and wattles.

Hens with pale vents, pale beaks and pale legs have been good layers.

Keep the late molters.

Keep the pullets which mature quickly and start laying first. Those which start laying when less than 200 days old, or nearest that age, are the best layers if they have had the right environment.

Market those which have been slow to feather or seem to lack vitality.

The skin of the best layers should be rather loose and flabby on the abdomen between the vent and breast bone.

The pelvic bones must be thin, straight, flexible and wide apart.

Market the hens which are bagging

behind and which have a heavy, fat, thick abdomen which hangs below the point of the breast bone.

Keep the hustlers and heavy eaters that go to bed late and with full crops.

Birds that have long toe nails that show no signs of being workers are usually unprofitable.

If a bird meets the above requirements it should have a broad back, long body, stoutly built and be in good flesh.

If a bird is not molting and still has a small dried-up comb, covered with a sort of whitish substance, or if a bird has thick or crooked pelvic bones which will be found on each side of the vent and above the point of the breast bone, these are always money losers.

## American Egg Laying Contest Report

The hens in the American Egg Laying Contest finished September with a very good average, considering that many were just finishing the molt and that many of the hens with the best laying record also proved medium late molters, the result being they were still in the molt at the close of the month. Two pens tied for leading honors for the month in egg production, each pen of five hens producing 83 eggs. They were of Barred Plymouth Rocks from Maine and of White Wyandottes from Indiana.

Forty-one different hens produced 20 or more eggs each during September, while 11 produced 25 or more eggs each.

A Black Rhineland from California leads all the hens in the contest with a record of 247 eggs for 11 months.

The six leading pens in total egg production since the beginning of the contest up to October first are as follows:

First pen, Illinois, White Wyandottes, 955 eggs; second pen, Pennsylvania, S. C. White Leghorns, 921; third pen, Missouri Barred Plymouth Rocks, 901; fourth pen, Arkansas, White Wyandottes, 875; fifth pen, Missouri S. C. W. Leghorns, 875; sixth pen, California, R. C. Black Rhinelanders, 858.

## Demand for Guineaas on Increase

**I**NCREASING demand for guineas, a specialist of the department of agriculture says, comes from hotels and restaurants in the

large cities, which are always eager to buy prime young stock, guineas being a good substitute for game birds such as grouse, partridge, quail and pheasant. The present supply comes largely from small farm flocks of ten to 25 fowls. Such flocks require little care and expense to raise; consequently the marketing price is largely profit.

And as for that undesirable cry of the guinea, admitting that this is a rather objectionable habit, it might often be listed as an asset. It gives warning of marauders and also, backed by a pugnacious disposition, constitutes an effective show of fight against hawks and other enemies. In fact, some farmers raise a few guineas with their turkeys and allow them to roost together so that a warning will be given if any theft is attempted during the night.

One poultryman near a New England summer resort has raised as many as 400 guineas in one season, selling them in August when they

weighed about one pound each at \$1.25 a pair. Wholesale prices in New York usually range from 75 cents to \$1.00 a pair for dressed guineas weighing two pounds to the pair, and from \$1.25 to \$1.50 a pair for those weighing three to four pounds to the pair. Old guineas are not wanted and seldom bring more than 50 or 60 cents a pair.

Of the three varieties; Pearl, white and lavender, pearl is by far the most popular. It has a purplish gray plumage regularly dotted or "pearled" with white and is so handsome that frequently the feathers are used for ornamental purposes. Breeding stock of the various varieties usually sells for \$2 to \$3.50 a pair, or from \$3 to \$5 a trio. Eggs from purebred birds for hatching can be obtained for 75 cents to \$1.00 for 15. During the last few years a limited market for guineas has developed among commercial hatcheries which have an outlet for a few day-old guinea chicks along with their ordinary chicks, ducklings, goslings, and turkey poults. While guineas can be kept in the best condition upon free range, they can be confined if necessary and satisfactory results obtained.

The marketing season for guinea

fowl is during the latter part of the summer and throughout the fall. At about 2½ months of age guineas weigh from 1 to 1½ pounds, and at this size they begin reaching the markets in August. As the season advances the demand is for heavier birds.

The usual practice is to place them on the market unplucked. They are more attractive with the feathers on and sell more readily. When dressed the small size and dark color of the guinea are likely to prejudice the prospective customer. For hotel and restaurant trade, however, guineas should be dressed in the same way as common fowl. Before shipping any birds to market, it is advisable to inquire of the dealer to whom they are to be shipped whether the feathers should be removed.

If the guineas are to be marketed with the feathers on, all that should be done is to bleed them by severing the vein in the roof of the mouth, allowing them to hang head downward until bleeding is complete. If the feathers are to be removed, this should be done by dry picking. The vein in the roof of the mouth is severed first to insure thorough bleeding, and the knife then thrust through the groove in the roof of the mouth into the brain. When the brain is pierced the feathers are loosened by a convulsive movement of the muscles and can be removed easily.

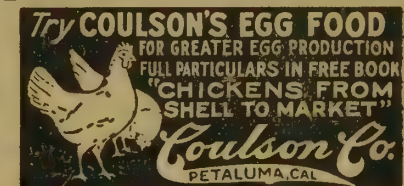
## DRY MASH



### The Best Feed on the Market

Has the highest protein at the lowest price \$2.80 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or

The Globe Mills, Los Angeles



Make the reading of advertisements in the California Cultivator a habit. They will broaden your knowledge of the manufacturing improvements.



Science has made a discovery of great importance to poultrymen—LEARN ABOUT IT.

It will only take a minute to address two postal cards. Two cents is not much money, but it may mean the difference between success and failure.

Invest one cent in a postal to the Dept. Agriculture, Berkeley, Cal.; ask for bulletin 162 (sent free) it is of great importance to all who keep poultry. Find out what buttermilk means to your poultry's health and your poultry success.

Invest one cent in a postal to Globe Mills, Los Angeles, for a free sample of GLOBE A-1 BUTTERMILK MASH and valuable feeding information.

GLOBE A-1 BUTTERMILK MASH costs but little more than ordinary mash. Learn why it's worth a great deal more.

You can stop Chick Funerals. Get more Eggs. Keep your flock in GLOWING HEALTH; let us tell you how.

Spend two one cent stamps today; write the government, and write the Globe Mills.

GLOBE MILLS, Los Angeles

Your dealer will supply you with Globe A-1 Buttermilk Mash.



## Produce Eggs at 17¢ a Doz.

The U. S. Dept. of Agriculture at the Experimental Farm, Beltsville, Md., during the past year has proven conclusively that if you make your hens LAY instead of allowing them to LOAF you should be able to produce eggs at a food cost of about 16½¢ per dozen, even at present feed prices—AND YOU CAN MAKE THEM LAY.

You may not do quite as well as the Government's experts but you can come mighty close to it by mixing

### Pratts Poultry Regulator

daily with a good egg-making ration, at a cost of one cent a month per hen. Do this and we guarantee your flock will produce the extra eggs that bring the big profits.

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By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator. The cost is only 3 cents per word per issue, with a minimum of 35 cents.

For Sale—2000 Eureka lemon trees. 3000 late Valencia, 4000 Washington navel, 2 year old stock. Fine condition. Sell all as a whole or in lots to suit purchaser. L. O. Rutherford, 3301 S. Main St., Los Angeles.

For Sale—Valencia trees, extra fine yearlings, straight, thrifty, sour root, high buds, not fertilized, fine soil for balling. Will contract for spring planting. S. R. Coate, Anaheim, Cal.

For Sale—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 c. b. Randall Bros. Nursery Co., Whittier, Cal.

For Exchange—Nursery trees, lemon, orange, grapefruit and olive, for horses, wagon, implement, hay tools. F. H. Snyder, 303 So. Hill St., Los Angeles.

Olive Trees — Mission, Manzanillo, Ascolano. Propagated by me from trees of known bearing qualities. Guaranteed. L. T. Schwacofer, Hemet, Cal.

Citrus Trees — All kinds, any quantity. Butler's Morning Side Nursery, Lomanda Park, Cal.

Citrus Nurseries, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

### WANTED

Wanted—Single man, not subject to draft, with farm experience and farm school training, to build up ranch of cattle and hogs near San Diego. \$50 per month and found. Apply to San Diego Land Corporation, 402 Southern Title Bldg., San Diego, Cal.

Wanted—Hogs of all sizes, weights or colors, large and small lots considered. What have you? Phone, write or call Durbin & Forbes, 722 San Fernando Building, Los Angeles.

Wanted—Position as tractor engineer and blacksmith - machinist or as ranch manager. References exchanged, or would rent dairy on shares. Box 20 Cultivator, 112 Market St., San Francisco.

Farmers! — I want to buy potatoes, onions, good or broken beans, peas and Egyptian corn from ten sacks to carloads. Write J. H. Johnson, 1460 Home Ave., Fresno.

Beans! We Buy All Kinds of Beans—Send samples. Also Sudan Grass. WESTERN SEED COMPANY, 116 East 7th St., Los Angeles.

Man With Years' of Experience would take charge of large wheat farm, good with all farm machinery. Single. Address Good, care Cultivator.

Wanted—3 gang 12 inch P. and O. Oliver, or Deere tractor plow. Power lift. Geo. Small, Porterville, Cal.

Wanted—Position as foreman on dairy or stock ranch. Good references. L. D. Christy, San Jacinto, Cal.

### SEEDS AND PLANTS

Alfalfa Planters, fill your fall requirements NOW with GREEN-GOLD seed. High quality because of personal field selection. Low price because of direct dealing. Send for samples and prices. Bomberger Seed Co., Modesto, Cal.

ORDER YOUR SEEDS NOW — If you are going to need any seed for next season now is the time to render your order. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbuckle, Cal.

ALFALFA SEED OUR SPECIALTY — Alfalfa Seed—Common variety, hairy and smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. E. F. Sanguinetti, Yuma, Arizona.

Rhodes Grass—The strongest and best seed. Most drought resisting forage known. Will grow on hard alkali ground where nothing else will grow. Imperial Valley Nursery & Seed House, El Centro.

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Mr. Alfalfa Grower—If you want good seed at the lowest price, write me for samples and prices. Smooth Peruvian a specialty. O. C. Nordahl, Bard, Cal.

Vetch Seed—New crop clean seed, \$4.00 per 100 lbs., on car. Alsike, Red Clover. Price on application. Carlton Nursery Co., Carlton, Ore.

New Crop Alfalfa Seed now ready. Not the lowest in price, but high in quality. Leo Turner, Yuma, Arizona.

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### HOGS

Registered Durocs—We offer for sale a choice service boar out of a daughter of Mesto King and by a grandson of Burk's Good E Nuff; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col.; three young boars out of a great sow of Crimson Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. Derryfield Farm, I. O. O. F. Building, Sacramento, Cal.

Chester Whites, the Billiken Brand—The big winners at the California State Fair; Billiken was Grand Champion boar; a son was Reserve Grand Champion and a daughter was Grand Champion sow. Do you want some of this strain? Twenty gilts bred to farrow during October and November. Fifty Billiken pigs, both sexes—March and April farrow. Every animal is cholera immune. Write for prices and booklet on Chester Whites. C. E. Cunningham, Mills, Sacramento County, California.

Grape-Wild Farm Berkshires — World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

Berkshires—First prize junior boar; first and second senior boar pigs including junior champion; fifteen spring and fall open gilts sired by Ames Rival 115, champion boar; and two junior yearling bred sows priced cheap for immediate sale. F. D. Hall, Ferris, Cal.

Duroc-Jersey Boars 1 Year Old—For Sale — Sons of Burk's Good-E-Nuff, Grand Champion Illinois State Fair, 1914. Out of Queen Is Rite, Grand Champion California State Fair, 1916. A. A. Trueblood, P. O. Box 582, Sacramento.

Rancho Rubio Durocs—Some extra good gilts sired by Orion Model and California Keen 5th and out of my best sows. Write for prices bred or open. Weaned pigs either sex. Elmer Lamb, Ceres, Cal.

Duroc-Jerseys — Five, four months past. Thrifty and fat. Price \$100 for the bunch. One Berkshire, bred for second farrowing, \$50. Exceptional bargains. Jersey Queen Farm, San Jose.

For Sale—50 Poland-China sows from this litter, others to farrow soon. One registered Poland-China boar. Mrs. Ina M. Randolph, Administratrix, 865 Glendale Ave., Glendale. Phone Glendale 1291W. Bernstein Sells 20 head of choicest Poland-Chinas at the Big Sale October 19 at Hanford, Kings County, W. Bernstein.

Duroc-Jerseys—See our Gold Models at Riverside, October 9th to 13th. Peters, Lamson & Walker, Devore, San Bernardino County.

Duroc-Jersey Spring Boar — Sire, dam, dam's dam, and three litter mates of dam were 1916 Riverside winners. A high class boar priced to sell. H. C. Withers, Palo Cedro, Cal.

Big Type Durocs—Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

Most Money in Duroc-Jerseys — Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.

Large Type Poland-Chinas are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Cal.

Large Type Poland-Chinas — Very best stock. Prices reasonable. Weanlings my specialty. C. R. Hanna, Riverside, Cal.

Durocs—P. & L's Defender by Defender heads herd. Joseph Prendergast, Route 2, Box 87A, San Bernardino, Cal.

Model Herd Berkshires bred for size and quality. Weanlings and gilts. J. L. Gish, Laws, Cal.

Carruthers' Farm Berkshire Hogs—Our herd won Premier Exhibitor prize at the P. I. E. Exposition, Mayfield, Cal.

Poland-Chinas — A few good breeding boars. S. E. Williams, Orland, Cal.

### LIVE STOCK

Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

For Sale or Trade—Registered Percheron stallion; black, age five years; sound; weight 1950 lbs., height 17 hands. Good breeder and fine action. Will trade for registered Holstein cows. Picture, price and pedigree on application. Address D. B. Adams & Son, R. F. D. 1, Modesto, Cal.

Registered Shires—Blackhawk Stock Ranch. Importers and Breeders. Easton & Ward, Burlingame, Cal.

### CATTLE

Pedigreed Bull Calves, Registered \$50.00, unregistered \$25.00. Service bulls \$75 and up. Good individuals from producers. Cows with yearly records at a profit, tuberculin tested. Write or come and select. Horses. N. H. Locke Co., Lockeford, Cal.

For Sale—As we are going into registered Holsteins exclusively, will sell or trade for steers 50 head grade Holsteins and Jerseys. All bred to registered bulls. An excellent opportunity to pick up a top string. Terms. Agee Bros., Brawley, Cal.

Registered Holsteins out of A.R.O. Dams. Grandsons of King Korndyke Hengerfeld Ormsby who has 20 A.R.O. daughters with records of over 29 pounds. Look up this sire. Geo. Kounias, Modesto Farms, Modesto, Cal.

D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield, Cal.

For Sale—A few head of registered Jerseys best blood in the country, few young cows, heifers and calves of both sexes. Prices reasonable. Tribble Bros., Lodi, Cal.

For Sale—Some registered A. R. O. Holstein cows. Write for pedigree or see them at my ranch. J. W. Benoit, Route C, Modesto, Cal. Ranch three miles out Muze Highway, one mile south.

Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

Vermont Stock Farm Pure Bred Herefords. Location Plumas County. Ideal for stamina and vigor. Bulls for sale. Address H. M. Barnegover, San Jose, Cal.

Registered Holstein Bulls from high producing dams for sale at reasonable prices. Also a few choice females. McAlister Sons, Chico, Cal.

For Sale—Fine registered Holstein three year old bull, dam's record 25.08 lbs. butter fat, 635.7 lbs. of milk. Call or write F. W. Bowdler, Hawthorne, Cal.

Sunshine Farm Jerseys—Bulls from officially tested dams for sale. E. B. Greenough, Merced.

Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Cal.

Registered Holstein Bulls of various ages for sale. Millbrae Dairy, Millbrae, Cal.

Registered Jerseys—both sexes for sale. J. R. Carhart, Fullerton, Calif.

Holstein Bulls from record cows. Prices right. A. M. Bibens, Modesto, Calif.

### MACHINERY

WHY BUY NEW? SAVE HALF — Material guaranteed. It's second-hand after used few times, but not worn out. Engine snags: 6 Stearns, \$89; 2½ h. \$39; 9 Focs, \$125; 18 Western, \$295; 34 Lambert, \$390. Many others.

NEW, USED WOOD, GALV. TANKS — All sizes; galvanized wagon tank, \$48; 3500 well corrugated galv. tank, \$12.50; 10,000 gal. redwood, \$75; 10,000 gal. galvanized, \$135; 16,000 corrugated galv., \$195; 5000 gal. redwood, \$48; 25,000 gal. redwood \$125; 8000 redwood and stand \$75. Complete gas plant for private home, \$75.

WINDMILLS, SPECIALLY PRICED — 8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel.

PUMPS, CYLINDERS, PIPE — 2½-in. two-stage hor. centrifugal pump, \$38; 2-in. rotary, 3 hor. cent., \$35; 5-in. two-stage B. J. hor. cent. pump, \$175; 8-in. hor. cent., \$150, pumps 200 in. water; deep well double-acting No. 2 Ames, \$145. Large Bulldozer Jacks, \$68. Small Bulldozer, \$42.50. Plunger pumps 5x6 air compressor, \$29. Pipe fittings; new complete gas plant for private home, \$75.

RANCH MACHINERY — Walking and riding plows, harrows, cultivators, scrapers; brand new ¾-in. cable, 6c; water troughs, \$4; bone grinder; feed mill, sprayer; mowers, rakes, belting; sundries. Down town office DEMMITT CO., UP-STAIRS, 120 N. Main. Yards, 816 Yale, Los Angeles.

Gasoline Engines, the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles.

For Sale Caterpillar Holt 30—Used two seasons on small ranch, \$2000. Also 1000 ft. seven-inch irrigating pipe at 40c per foot. H. N. Vaughn, Artesia, Cal.

For Sale—18 h. p. Peerless engine and No. 4 Byron Jackson pump. Engine needs some repairs. Will sell cheap. A. L. Wood, Indio, Cal.

### MISCELLANEOUS

Famous Hairy Peruvian Alfalfa Seed—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.

Prepare for Frost — For sale 7000 gallon galvanized tank, \$75; 410 gallon wagon tank \$30. 14 feet steel hose \$20. Frost alarm \$12. Brass lined pump \$10. Whole outfit \$125. E. Richard, Sunset 108R11, Natick, Cal.

Slacked Lime—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road, Pasadena.

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

For Sale—1915 Petaluma Brooder Stove (for distillate) cost \$27.50. Price \$15.00 good as new. Red Horse Shoe Poultry Farm, Box 163, Sierra Madre.

AUTOMOBILE STORAGE BATTERIES — Titan Batteries for service, get our prices before buying or having an old battery repaired. Call or write, Olive Street Electrical Co., 910 South Olive St., Los Angeles, Cal.

### TURKEYS

Our Geese and Turkeys Win Again—Grand Champion Sweepstake Special, for best pair of birds in show. For size, vigor and quick maturity, our stock are best. East or West. Stock and eggs in season, also Colic pups. Correspondence solicited. John G. Mee, St. Helena, Cal.

### FARM LANDS FOR SALE

1900 Acres — First-class stock farm in Douglas County, Oregon, about two miles by the Pacific Highway. A hard surface road now under construction from Oakland, a good little town on the main line of the Southern Pacific railway. All well fenced, with heavy woven wire, white oak post and subdivided into pastures, each with spring water. Beautifully timbered; scattered oak and fir. Suitable buildings, good repair. New modern sheep barn for large flock lambing ewes. About one-half tillable; 150 acres in cultivation; 50 acres seeded down to hay. Early pasture. Price \$27 per acre on reasonable terms. Farm is in capital condition and partly stocked. Sheep, horses, implements can be taken over at an appraised valuation. Wm. MacMaster, 701 Corbett Building, Portland, Oregon.

Lake County, California—Climate unexcelled. We have two 160 acre ranches; both have an abundance of running water, fruit, grain, wood and pasture land. Orchards of walnut, prunes, pears, peaches, apples, berries, etc. Three room cottage, five room house, barns and out buildings. Fenced and cross fenced. Three miles to good small town, one mile to school. Price \$7,000.00 and \$7,500.00. No exchange. Terms. Address Box 71, Kelseyville, Cal.

Arizona—Gila River bottom lands \$15 to \$40 per acre. On railroad. Power line and highway building. Two crops yearly rule—not exception, value \$150 to \$500 per acre. Splendid climate and water. Particulars. T. C. Davison, Box 101, Ontario, Cal.

For Sale—80 acres improved ranch 7 miles west from Bakersfield. Lots of buildings and plenty of water. One mile to store, school and half mile to boulevards. Price \$150 per acre. W. F. Marks, Los Angeles, Cal.

Oregon, California Government Lands. Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

### TO LET OR FOR SALE

To Let—Ranch at Bakersfield for term of three to five years. Ideal for dairy; 160 acres (all level) 80 acres in alfalfa, balance in wild grass. Ample ditch water for irrigation always available. Good well for stock and domestic purposes. Good two story eight room house, barn, shade and fruit trees, grapes, nuts and berries. Complete outfit of new farming implements, wagon and buggy. Rental (to tenant who will put in 20 additional acres of alfalfa each year) \$1200 first year, thereafter \$300 additional rental each year. Or will sell for \$30,000; terms one third cash, balance five years, interest 6 per cent per annum, with privilege of paying on account at any time. Owner, 636 Wesley Roberts Bldg., Los Angeles.

### POULTRY

Blue Andalusian Cockerels, Blue Orpington cockerels and Ancona cockerels. Large vigorous birds, for the shows or breeding pens. Write for prices. J. R. Huddleston, 342 Edgewood Road, Los Angeles.

Day Old Chix — Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Cal.

Poultry Wanted — We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

200-290 Egg Fall Chicks, Eggs, Stock, reasonable. Rocks, Reds, Wyandottes, Anconas, Leghorns. Few pens each breed sacrificed, make room. C. Beeson, Pasadena, Cal.

For Sale—Twenty pairs correctly mated Red Carneaux pigeons. Good workers and from best blood obtainable. Four dollars pair. Red Horse Shoe Poultry Farm, Box 163, Sierra Madre.

"Eastman's Bred to Lay" Barred Plymouth Rocks, Choice Cockerels, Fairmead Poultry Farm, Fairmead, Cal.

### PATENT ATTORNEYS

Patents that protect are secured through The PACIFIC COAST PATENT AGENCY, INC., Savings & Loan Building, Stockton, California; send for our little booklet on "PATENTS."

### LUMBER

Lumber—Sash—Doors — Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. "A" R.W. Shingles 50c per bundle. Send list for estimate. Dan E. Dolan, 1670 Mission Street, San Francisco, Cal.

### BUY A TRACTOR TO FIT YOUR FARM

The wise farmer will not buy a tractor because it is light or heavy, because it has two, three or four wheels, nor because it has any other mechanical feature which the salesman or advertisement claims makes it "better than the best."

The wise farmer will buy a tractor to exactly meet the requirements of his farm and one that will come within his means to buy and operate.

There are now on the market tractors to fit the small farm as well as the large; tractors which are economical enough to buy and operate so that even the 80 acre renter will find them a profitable investment.

The economies and the profit possibilities of a tractor which fits your farm are boundless, and it behooves every farmer to post himself on the different makes of tractors by writing for and carefully reading the literature which tractor manufacturers will gladly send upon request.

### BULB CATALOG

The Morris & Snow Seed Company is mailing its 1917-18 bulb catalog. It is small—cost pocket size—but full of information as to bulbs, wild flowers and hardy annual seed.



LAYNE & BOWLER  
PUMPS



Don't Wait

until Spring if you intend to install a new pump. Place your order immediately in order to insure prompt delivery. We manufacture pumps of every size capable of handling any amount of water from any depth, ECONOMICALLY.

Our field is as broad as the earth and as deep as we can bore.

Ask for Catalog No. 30

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Ruins Trees.  
Destroys Crops.  
Grafts often broken  
by wind.  
Limbs split and  
decay.



Our Method of Side Grafting



Remedies all this.  
Saves wax.  
Saves labor.  
Grafts grow better and mature sooner than by any other method.  
It will work over your Grapes and Citrus Fruits, with practically perfect results.

Full information sent free.

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LOS ANGELES

When writing advertisers, mention the Cultivator.

PLANTING WHEAT



SURVEY of the wheat conditions in both the great valleys emphasizes importance of timely planting.

In practically all instances where a wheat crop was poor the reason was found to be improper preparation of the land or late planting. Even where the rainfall was not up to normal and the season was cold, crops were good where the preparation of the land was good and planting timely. Barring a few exceptional conditions the best crops of wheat are produced from plantings made about December 1. If planted late in December or later the crop will not have sufficient time to develop its roots and crown before growing weather comes in the spring and its ripening will be delayed beyond the period of optimum moisture and climatic conditions.

The following figures show the influence of the time of seeding on the yield of wheat at the university farm, 1917. The land was prepared the same in both trials. The figures represent the average of three plots for each of the two varieties.

Yield, Pounds Per Acre

Variety	Seeded		
	Dec. 15	Jan. 19	Mar. 3
Defiance	3754	1467	1508
Sonora	3825	1742	1178

Sometimes wheat may be planted in the dry soil before the fall rains set in. The advantage of this practice is, especially on large areas, in getting the seed in before operations are prevented by the rains. The disadvantages are that more seed per acre is generally required and the stand and growth are not likely to be uniform. All things considered planting is best accomplished by the drill and should be done at a time when there is sufficient moisture in the soil to give the seed an even and quick germination. When the land is weedy planting should be delayed until after the first rain in order that by harrowing early, germinating weeds may be killed.

The above is from Prof. Jno. W. Gilmore's circular Number 172, "Wheat Culture." It may be had by writing Experiment Station, College of Agriculture, Berkeley. It gives most timely information at this moment when "more and better wheat" is the slogan. Everyone who expects to grow wheat this year should write for it.

We quote again as to main points in growing a crop of wheat as summarized in this bulletin.

Proper and timely preparation of the land for planting.

Importance and methods of maintaining the organic matter in the soil.

Choice of seed respecting both the variety and quality.

Timeliness and manner of planting the crop.

Time, methods, and kinds of fertilization.

Timeliness and methods of harvesting and handling the crop.

WALNUT PICKER

I notice on the cover of a recent issue of the California Cultivator walnut harvesting scene with picker stooping to pick up the walnuts. I suggest a mechanical method consisting of a tin cylinder three feet long, large enough to admit the nut at the lower end with a short funnel and four flat springs soldered at one end. This could be carried in one hand and pressed over the nut until the appliance was filled when the nuts could be emptied into a pail. I think this would be practical and less irksome.—G. A. Butterfield, Cook.

It appears to us that this would be altogether too slow for wartime harvesting. Nimble fingers could gather in many nuts before such an appliance could be fitted to gather in one. However harvesting of walnuts all day or all month is no rocking chair job, so we are ready for the economical harvester.

SAME OLD STORY

She—How did they ever come to marry?

He—Oh, it's the same old story. Started out to be good friends, you know, and later on changed their minds.

The best flagpole American farmers can erect is the silo. But why not put up a flagpole too?

FRUIT TREES

Dried Apricots This Season

Brought as High as 17½c. per Pound

We know of nothing that pays better than Apricots. One farmer in the Lemoore district, thirty miles south of Fresno, sold his crop of apricots this year on the trees for \$6,600.00. As he only had ten acres, this returned him \$660.00 per acre, without harvesting expense. While this is one of the best records for the season that we have heard of, many other growers have received large returns.

Throughout Southern California districts, the Tilton Apricot is quite a favorite. On account of its late bloom, it is more free from frost than many other varieties.

We received a letter recently from Libby, McNeill and Libby, canning people, stating that they believe the Tilton Apricot to be the best apricot for canning purposes, having canned this season 1100 tons of this variety at their Selma plant.

Descriptive Catalog Free

Our catalogue this year will describe more fully than ever before all varieties of fruit-bearing trees. Anyone contemplating planting an orchard this coming season will find this book very helpful to them. It is sent free on request.

Fresno Nursery Co.

Address  
Dept. A Fresno, California

FRESNO

Tree Protectors

THAT REALLY PROTECT

FITTED WITH GALVANIZED WIRE TIES WHICH GO ALL THE WAY AROUND THE TREE

10 Inch.....\$ 9.00 per 1000	18 Inch.....\$12.50 per 1000
12 " ..... 9.50 " "	20 " ..... 15.00 " "
14 " ..... 10.50 " "	24 " ..... 17.50 " "
16 " ..... 11.50 " "	30 " ..... 20.00 " "

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How About Your Fuel? Protect Yourself Now

If you read you know both wood and coal are scarce and high priced.

If you have burned either you know of the dirt and inconvenience.

Here is a fully tried and proven distillate burner with over eight years of public service. That's the real test.

Why not add this convenience and economy to your home?

BLUE FLAME DISTILLATE BURNER CO.

MAIL ADDRESS, P. O. BOX 202 330 Mountain View Ave. PASADENA, CALIFORNIA



Extra parts are always available without delay for standard advertised machinery. This class always found in the California Cultivator.



## Men, Snuggle Up to This Bang-up Underwear—It's a Downright Bargain

You can bet your last cent that Hanes will give you more real value for your money than any other buy. No frills, no fol-de-rols—just downright value and a heaping lot of it, too.

Hanes is form-fitting, elastic and comfortable. The fleecy-warm cotton is mighty fine protection from the cold—and it feels mighty good, too. Pre-shrinking keeps it true to size and shape.

Greatest Winter Underwear **HANES** Sold at Popular Prices  
ELASTIC KNIT UNDERWEAR

And just read about these special features over there in the illustration. No more high-priced underwear for the man who sees Hanes. It's just the popular price for everybody and the underwear everyone should wear.

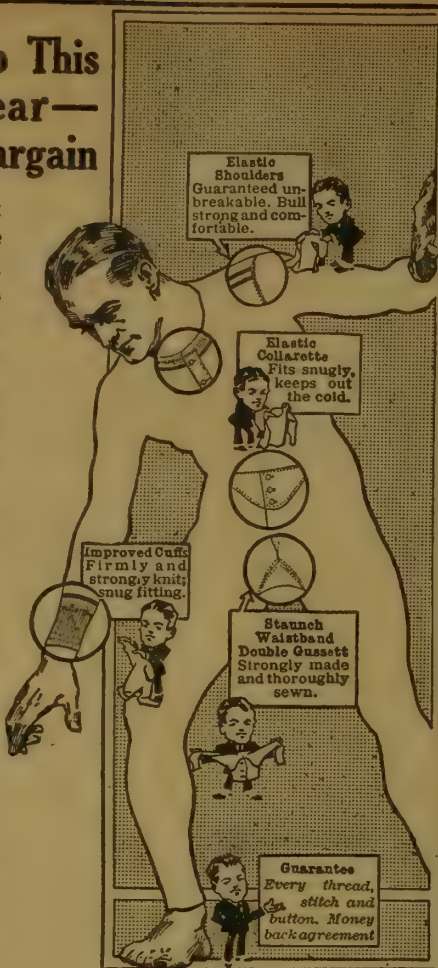
### Mothers, Fathers—Get this Big Bargain

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Warning to the Trade—Any garment offered as Hanes is a substitute unless it bears the "Hanes" Label.

This Label on Every Garment



## Household Department

### A STRANGE MISTAKE

My daddy says that once he was  
A little chap like me,  
So why he says the things he does  
I really cannot see.

He says he cannot understand  
Why I so dote on noise,  
And like to play that I'm a band,  
Deserting quiet toys.

He says he can't imagine why  
I stand upon my head,  
Instead of on my dignity  
Like boys who're better bred.

He says he cannot comprehend  
The reason why I can't  
When, up the stairs I mount, pretend  
That I'm a human ant.

Instead of stamping on the stair,  
As though I thought that I  
Were nothing but a lively pair  
Of hippopotami.

From all of which I greatly fear  
In days beyond recall  
My dear old daddy, it is clear,  
Was not like me at all.

But like some other little chap,  
Whose name I never heard,  
Who likes to sit on some one's lap  
And never says a word.  
—John Kendrick Bangs, in St. Nicholas.

### BO PEEP'S BLACK SHEEP

**T** HERE goes that girl again," said the Black Kitten. "She's been running up and down hill all morning, and now she's crying. Wonder what's the matter."

Nan got up and looked out of the window. It was the dining room window, where the window seat was, and the geraniums. Nan liked it best because it was sunny there, and the Kitten liked it because he could slap at the geraniums and make believe they were red grasshoppers. Not that the kitten had ever seen a red grasshopper, but that made it all the more interesting to make believe that there were such things.

"She seems to be lost," said Nan. "I don't remember her; do you, Kitten?"

"Well, somehow she looks as if I had seen her before," said the Black Kitten, wisely. "See her big flapping straw hat with the big blue bow in front, and her silly, frilly skirts, and the bunch of curls bobbing all round her face. And she's got a big hook in her hand."

"It isn't a hook," cried Nan. "It's a crook. I know who she is."

"Tell me," called the kitten, but Nan has jumped down from the window seat and was running up the hill, so of course the kitten had to run after her.

"Little girl, little girl!" called Nan, breathlessly, but the girl with the big bow on her hat never stopped running. There was a big blue bow on her crook, too, and Nan felt very much worried, because she knew who it was. All at once the Black Kitten dashed ahead and got right in front of her, and she tumbled down, crook and all. When Nan came up the kitten was sitting down looking aggravatingly important and its whiskers stuck out with importance. Nan always declared that she never, never saw such a small kitten in her life with such bristly, important whiskers; which, of course, made the kitten more vain than ever.

"I made her stop," he said triumphantly. "Did you see me trip her up?"

"You're a bad, rough kitten," retorted Nan, kneeling down beside the girl with the big hat. "What's the matter?"

"I can't find them," wept the girl. "They won't come home. They've been away all night and I've hunted everywhere, and called and called for them. There are 12 altogether, just the nicest sheep you ever saw. And I always took such good care of them."

"Where did they go?"

"How do I know? They were all of them playing over on the hillside, and when I came back they were gone."

"Where did you come back from?" asked the Black Kitten, wisely. "It's your own fault. You didn't watch them."

"I did, too."

"No you didn't; 'cause I watched you. You ran down the hill to look in the brook to see if your hat was on straight, and then you made clover chains and tied them around your hat, and you danced every single chance you got."

"Did you do all those things and for-

get to watch your sheep, Bo Peep?" asked Nan.

Bo Peep sobbed wretchedly. "I didn't think they'd run away," she said. "They've always been such lovely, gentle sheep—just the whitest, curliest sheep you ever saw—"

"Well, they won't be white any more," said the Black Kitten, comfortably. "All sheep who run away never come back white."

"Why not?" asked both Nan and Bo Peep.

"Night time," answered the kitten mysteriously, "turns them black as jet."

Bo Peep started to cry harder than ever, but all at once over the brow of the hill came the line of 12 sheep. They looked altogether too gay and frolicsome for sheep that had run away, Nan thought. First one peeked over the hilltop and baa-a-ed; then another one did the same thing, and finally all 12 came dancing and side-stepping all the way down the path as if they thought they had done something very clever.

But the kitten was perfectly right. They were all black now.

Oh, you mean things, you!" cried Bo Peep, crossly. "Where have you been?"

"Been to see the little boy that lives in the lane," said the head sheep, pleasantly. "And he's going to buy all our wool."

"I don't know any little boy in the lane," answered Bo Peep. Then all the sheep began to dance and sing quite sweetly:

"Baa, baa, black sheep, have you any wool?"

Yes, sir; yes, sir; three bags full.

One for my master,

One for my dame,

And one for the little boy that lives in the lane."

"What's his name?" asked Nan, inquisitively. "And where's the lane?"

Then the sheep all stood in line and hung their heads and looked sheepish and silly.

"I bet I know who he is," said the Black Kitten. "Bet it's that little Johnny Green that threw pussy in the well. He's the awfulest boy."

"We won't tell his name. We promised we wouldn't," said the sheep. "But he likes black wool the best, and it's getting scarcer all the time."

"What made you turn all black like that?" cried poor little Bo Peep, ready to cry again at seeing her pets in such a plight. "You are black as night."

"That's just it," said all the sheep eagerly. "We are night-time sheep now. First, we ran over the top of the hill to the sunset land; then before we could get back home, we got lost in the night and we couldn't see our way home. And all the clouds were black, and we got all black, too, from coming through them."

"Well, now listen to me," said the Black Kitten. "I'll tell you just what I'd do if I were you. I'd go straight back and get lost over again in the daytime, and see if the day clouds wouldn't make you nice and white again."

"We like to be black sheep," said the sheep doubtfully. "It's different."

"I don't care what you want!" said Bo Peep, crossly, stamping her foot at them. "You go right straight back and get washed in the daytime clouds."

Then all the black sheep turned and scampered back over the top of the hill, and Nan noticed that they all had blue ribbons around their necks and each one wore a little silver bell on the ribbon.

"I think that if they stay black sheep that pink ribbon would be more becoming," she said to Bo Peep; but Bo Peep was running after her sheep and the Black Kitten started after her. When Nan caught up with the kitten it was standing still on the top of the hill with all its hair standing on end in horror.

"Mercy sakes alive," it cried. "Did you see that girl, Bo Peep? She jumped right off the top of the hill into those clouds. Listen!"

Far away they caught the tinkle of the silver bells and the sheep singing:

"Baa, baa, black sheep, have you any wool?"

"I wonder what the little boy's name is that lives in the lane?" said Nan, wistfully, on the way back home. But the kitten refused to answer. It didn't like boys, anyway, and



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**Soil and Water Analyses**

Consultation on Agricultural Problems

**Clark Walker, B.S., 211 W. First St., Los Angeles**

it sat up on the window seat by the geraniums, watching until it was quite dark, with Nan, for the black sheep to come back over the top of the hill; but they never came. — Florida Times-Union.

**HOUSEHOLD QUERIES**

**Canning Veal**  
Is it profitable for a rancher having a veal calf to butcher it and can the meat for his own use? If so, please give receipt for preparing and canning. —Subscriber, San Fernando.

For the benefit of this inquirer and others who are interested in the same question we repeat method of canning given by Mrs. W. E. Borden of Ocean-side in the Cultivator of April 28. She writes:

"We butchered a six months old calf. This age we preferred because it is cheaper than regular veal and not so rich. Also there is more meat to can. The hide will bring a good price at present also. We first roasted a large portion of the meat, then sliced and packed it in jars, covered with gravy and sealed. Second, we cut strips about an inch square of all the suitable meat left and placed it in a strong salt water over night. Next morning we hung it on the line in the open air, if sunny, or over the kitchen stove. Cover with cheese cloth to keep off flies and dust. It will take from two to four weeks to dry thoroughly. It should then be placed in an unwashed flour sack to prevent mold. This is what the Mexicans call jerky, and there is no meat any sweeter than roasted jerky. Third, all bones and meat left were boiled in a fireless cooker with onion and salt. When done some of the meat was packed in jars and covered with stock. The rest we ground up and made into mince meat by adding salt and pepper to taste. This was also packed in jars, covered with stock and sealed. The surplus stock was also packed in jars and sealed to be used for soups and gravies. All of this meat and stock I canned in Economy jars as they are self sealing and the only jar I have had absolute satisfaction with in canning meats. After the jars are prepared as above I place them in a false bottomed boiler (wash boiler will hold 14 or 15 jars) with water to necks of jars and boil three hours. This insures their keeping."

Surely there was nothing wasted from that calf. We are glad to be able to repeat this helpful article and hope it may be found useful by many of our readers.

**WHALE MEAT NOW**

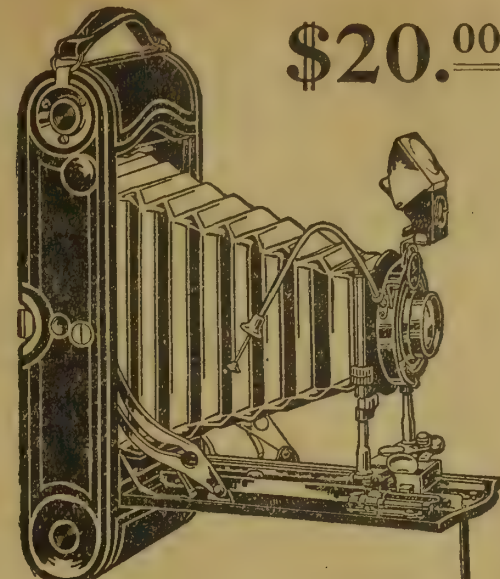
Whale meat has become a popular delicacy on railroad diners, according to a report made at the recent convention of railroad commissary superintendents at Chicago. How this new food product may be made particularly palatable is shown by this recipe invented by Otto Schiffner, steward on a Southern Pacific diner: "Cut the whale meat and pound it well. "Roll in bread crumbs and fry in fat. Season to taste." Dining car patrons proclaim the new dish delicious.

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**TO POACH EGGS**

If you want perfectly poached eggs, stir a teaspoon of vinegar into the water in which they are to be cooked. Cook in deep water, if you want the yolks to be covered with the whites; in shallow, if you want them to spread out and be uncovered.



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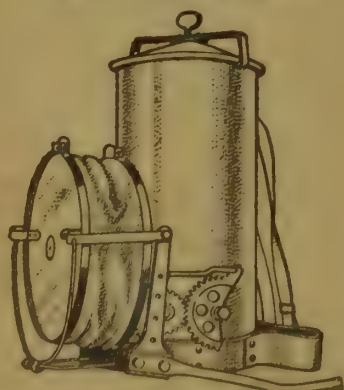
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6029 Pasadena Ave., Los Angeles

## Los Angeles Market

Los Angeles, Oct. 31, 1917.

### BUTTER

Produce Exch. Quotations.  
Price to trade 4c higher.  
California extra creamery.....44  
Dairy Exch. prices past week.  
Oct. 24 25 26 27 29 30  
'17 ... 46 45 45 45 44 44  
Rets. wk. ending Oct. 30, 284,000 lbs.

### CHEESE

Brokers prices:  
California fresh, lb. ....25  
Oregon Longhorn .....29  
Tillamook Trip .....28  
Domestic Swiss .....34

### EGGS

Exchange quotations. Prices include cases and fillers valued at 35c. Prices to retailers 4 cents above Exchange.

Fresh extras .....58  
Case count .....57  
Pullet .....46½

Dairy Exch. prices past wk.  
Oct. 24 25 26 27 29 30  
'17 ... 57 59 58 58 58 58  
Rets. wk. ending Oct. 30, 441 cases.

### POULTRY

We quote to producers:

Broilers .....81@32  
Fryers, 2½ lbs. and up .....28  
Hens—Leghorns .....22@23  
Roasters, 3 lbs. and up .....26  
Ducks, lb. ....16@21  
Squabs, doz. ....3.00@4.00  
Rooster, old .....14

### LIVE STOCK

We quote cwt. f. o. b. L. A.  
Corrected Wednesday morning, October 24, by the Cudahy Company.

Cattle—  
Beef steers, av. 1000 to 1100 lbs. 8.50@9.00  
Heifers, good .....6.50@7.00  
Cows, good .....5.50@6.50  
Canners .....4.50@6.00

HOGS—  
Av. 125 lbs. ....14.00  
Av. 150 lbs. ....15.00  
Av. 175-200 lbs. ....16.50  
Rough, docked 20 lbs.; piggy sows, 40 lbs., stags, 40 per cent. ....15.50  
Prime wethers .....9.50@10.00  
Ewes .....9.00@9.50  
Lambs .....13.50  
Yearlings .....10.00@10.50

### POTATOES

Wholesale selling price:  
Northern Burbanks, cwt. ....2.65@2.90  
Russetts .....2.75  
Rurals .....2.40@2.45  
Sweet, cwt. ....2.65@2.85

### ONIONS

Wholesale selling price:  
Brown, cwt., 3.00; white .....3.00  
Garlic .....8

### VEGETABLES

Wholesale prices:  
Artichokes, doz. ....1.25  
Beans—Wax .....10@11  
Limas, lb. ....10@11  
Ky. Wonder .....10@11  
Beets, sk. ....1.00  
Cabbage, lb. ....1½  
Carrots, doz. ....40  
Cauliflower, doz. ....1.00  
Celery, cr. ....3.10  
Corn, lug .....70@75  
Cucumbers, lug. ....1.25@1.35  
Egg Plant, lb. ....6@7  
Horseradish, rt. lb. ....15  
Lettuce, doz. ....40@45  
Leeks .....30  
Mint .....40  
Onions, green, doz. ....25  
Okra, lb. ....10@12  
Peas, lb., Telephone .....8½@9  
Peppers, Chill, lb., 6@7; Bell. ....6@7  
Paranips, doz. ....40  
Parsley, doz. ....20  
Pumpkins, lb. ....2  
Radishes, doz. ....20  
Rhubarb—Strawberry .....1.10  
Romaine, doz. ....60  
Spinach, doz. ....25  
Squash, Summer, cr. ....1.20  
Crockneck .....70@75  
Hubbard, lb. ....2  
Tomatoes, cr. ....1.10@1.15  
Turnips, doz. ....35

### FRUITS

Wholesale prices:  
Apples—Skinners Seedling. ....1.50@1.75  
Bellflowers .....1.10@1.25  
Greenings .....1.15  
Jonathan .....2.00@2.15  
King David .....1.75@2.00  
Avocados, doz. ....6.00@9.00  
Bananas, lb. ....4½@5  
Casabas, lb. ....2  
Cranberries, bbl. ....14 00  
Figs, bx. ....1.00@1.35  
Grapes—Black .....1 10  
Muscat, lug. ....1.40@1.50  
Tokays .....1.50@1.65  
Guavas .....6  
Peaches, lug. ....1.25@1.35  
Pears, Bartlett, lug. ....2.00  
Persimmons, lb. ....7@10  
Plums, lug. ....1.25@2.00  
Pomegranates, lug. ....1 50  
Quinces, lug. ....1.35@1.50  
Watermelon, lb. ....2

### DRIED FRUITS

These are not prices to producers but prices made by wholesalers to retailers.  
Apples—50-lb. bx., evaporated, 15c, extra ch., 15½.  
Apricots—Ch. 18, ex. ch., 18½, fy., 19.  
Peaches—Ch., 12, fy., 12½.  
Lemon and orange peel, lb., 25.  
Figs—Bulk, 25 lb. bx., blk., \$2.75, wh. 2.75.

### CITRUS

Lemons, 4.25@5.50; juice .....2.25  
Grapefruit .....3.25@3.50  
Limes, basket .....1.00  
Valencias .....3.50

### HONEY

Prices of wholesaler to retailer:

Extr. White, lb. ....14@15  
W. W. lb. ....15@16  
Comb. case, W. ....8 75  
W. W. case .....4.80

### NUTS

Almonds—Not growers' prices but prices

of wholesaler to retailer.

Nond. ....21¼  
I. X. L. ....21¼  
N. P. U. ....20¼  
Peanuts, raw .....12  
Pine Nuts .....20  
Pecans .....19  
Walnuts—Cal. Walnut Growers' Association named prices Oct. 1:  
No. 1 Soft Shell, lb. ....30  
No. 2 Soft Shell, lb. ....16  
Budded, Diamond Brand .....24  
Budded, Standard Brand, (same size as No. 1 Soft Shell) .....31  
Prices delivered in East 1½c higher.

### RICE

Wholesale quotations:  
Cal. ....7.50  
Broken .....5.60@6.00

### BEANS

These are prices made by wholesaler to retailer.

Lady Washington .....14.00  
Limas .....14.00  
Pinks .....10.50  
Manchurian Reds .....11.00  
Baby Mex. ....9.00  
Garbanzos .....10.50  
Small White .....14.00  
Blackeyes .....10.00  
Tepary .....9.00  
Lentils .....18.00

### HAY

Quotations by Nichols-Loomis Company. Wholesale prices to growers f.o.b. L. A. carlots.  
Tame Oat .....23.00@25.00  
Volunteer Oat .....17.00@19.00  
Wheat .....19.00@22.00  
Barley .....20.00@23.00  
Alfalfa .....20.00@23.00

The Alfalfa Growers' Association of Southern California writes:  
"At a meeting of the executive committee October 15, it was decided that market conditions justify association members asking \$24 f. o. b. per ton where the \$1.50 freight rate applies, and \$23 f. o. b. per ton where the \$2.50 freight rate applies. Demand exceeds supply. We are having a number of calls for hay."  
Straw .....7.00

### GRAIN AND FEEDSTUFFS

Wholesale cwt. f. o. b. L. A.  
Alfalfa Meal .....1.85  
Alfalfa Molasses .....1.90  
Barley, Rolled .....2.85  
Barley, Re-cleaned, Whole .....2.90  
Barley, Hulled .....3.45  
Beet Pulp .....1.80  
Bran, Heavy .....2.15  
Cocoanut Meal .....2.50  
Cottonseed Meal .....3.30  
Corn, Yellow .....4.35  
Corn, White .....4.45  
Corn, Cracked .....4.40  
Corn, Feed Meal .....4.45  
Corn, Egyptian .....3.40  
Middlings .....3.05  
Milo .....3.15  
Oat Chop .....1.90  
Oats, White .....2.35  
Oats, Rolled White .....2.90  
Oats, Hulled .....4.75  
Oats, Rolled Chicken Groats .....4.85  
Olecake Meal .....3.40  
Wheat, No. 1 .....4.00@4.05  
Wheat Cracked, No. 1 .....4.40  
Red Millet .....4.65@4.75  
Rye .....4.00  
Blood Meal .....5.00@5.10  
Bone, Green .....2.75@2.85  
Bone, Dry .....2.95@3.05  
Charcoal, 50-lb. sk. ....2.80@2.90  
Clam Shell .....70@80  
Grit, Granite .....65@75  
Oyster Shell .....1.25@1.35  
Sunflower Seed .....4.90@5.00  
Soya Bean Meal .....3.40@3.50  
Scratch Feed .....3.70@3.80  
Gritless .....3.80@4.00  
Rice Bran, ton .....40.00  
Middlings, ton .....45.00  
Rice Polish, ton .....49.00

## San Francisco Markets

San Francisco, Oct. 30, 1917.

### BUTTER

Dairy Exchange quotations, lb.:  
Fresh extras .....43¼  
Prime firsts .....43  
Dairy Exch. quotations past wk.  
Oct. 23 24 25 26 27 29  
'17 ... 44¼ 44 43¼ 43¼ 43¼ 43¼  
'16 ... 32¼ 32¼ 32 42¼ 33  
Rets. wk. ending Oct. 29, 361,500 lbs.

### CHEESE

Dairy Exchange quotations:  
Cal. Flats, 18@23½ Y. Am. ....22@25  
Cheddar .....23  
Ore. Young Am. ....25  
Jack Cheese, full cream. ....23@24  
Half skim .....17@18

### EGGS

Dairy Exchange quotations:  
Extra .....57  
Firsts .....66¼  
Selected. Pullets .....47¼  
Firsts .....46¼  
Dairy Exch. quotations past wk.  
Oct. 23 24 25 26 27 29  
'17 ... 56¼ 57 56¼ 55½ 56 57  
'16 ... 48½ 48 47¼ 46 46  
Rets. wk. ending Oct. 29, 7770 cases.

### POULTRY

We quote from producers, lb.:  
Hens, large, 26@27; Leghorns .....22@24  
Small colored .....23@25  
Broilers .....30@40  
Squabs, doz. ....2.50@4.00  
Ducks .....14@20  
Geese .....18@19  
Belgian Hares, live, 14@17; dr. ....17@20  
Turkeys .....22@30

### LIVE STOCK

Prices gross weight:  
Cattle: The following prices are for grass fed stock. Hay fed brings ½ to ¾ more.  
Steers, lb., 6@9¼; cows and heifers, 4@7½; calves, 7@9¼.  
Sheep: Wethers, 10½@11½; ewes, 9½@10½.  
Hogs—Hard grain-fed, weighing 100 to 150 lbs., 14½; 150 to 300 lbs., 15½; 300 to 400 lbs., 15½.

## Pull Big Stumps by hand

Clear your stump land cheaply—no digging, no expense for teams and powder. One man with a K can rip out any stump that can be pulled with the best inch steel cable.

Works by leverage—same principle as a jack. 100 pound pull on the lever gives a 48-ton pull on the stump. Made of the finest steel—guaranteed against breakage. Endorsed by U. S. Government experts.



## Once Over!

Think of what this means in saving of time and labor. You get a better seed-bed too, by using the famous

## Cutaway Double Action Disk Harrow

The rigid main frame makes the forged disks double cut, pulverize and level the ground. Closehitch. Lightdraft. Allsize.

Write for book telling how to raise better crops with less cost. "The Soil and Its Tillage," it's free, also new catalog. Ask for name of nearest dealer.

### The Cutaway Harrow Company

704 Main Street  
Higganum, Conn.  
Maker of the original CLARK Disk Harrows and Plows.



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**Clark's Harrows**  
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and Road Grading Machinery  
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Big demand in Denver for all western raw furs—Coyotes, skunks, muskrats, wildcats, sell here for big money. Denver, closest and best market on earth for western trappers and furshippers. Stephens of Denver is the largest, exclusive buyer of western raw furs in the world. Charges no commission—saves you 25% on express or parcel post and you get your money two to ten days quicker. Every shipment personally graded and priced by a member of the firm. Stephens sells traps, animal baits, and all trappers' supplies at rock-bottom prices. Write today for big illustrated trap catalog, trappers' guide, fur price list and shipping guide. A. I. FREE. Write quick.  
**E. A. STEPHENS & CO.**  
Stephens Bldg., Denver, Col.

Free Illustrated Book Tells How!



## POTATOES

Wholesale selling prices at wharf:  
 Wholesale selling prices at wharf:  
 allas Burbank, cwt. .... 3.15  
 re. Burbanks ..... 2.50@2.60  
 liver ..... 1.70@2.00  
 weets, lb. .... 2.40@2.60

## ONIONS

Wholesale selling price on wharf:  
 Australian Brown, cwt. .... 2.40@2.50  
 yellow ..... 2.25@2.50  
 garlic, lb., new ..... 6@7

## VEGETABLES

Wholesale selling price:  
 eets, sk. .... 1.50@1.60  
 eans, string, lb. .... 5@7  
 y. Garden, 7@9; Lima ..... 7@10  
 carrots, sk. .... 1.00@1.25  
 elery, doz. .... 30@60  
 ucumbers, lug ..... 75@1.25  
 othouse ..... 1.00  
 Pickling, lug ..... 75@1.50  
 gg Plant, lug ..... 1.00@1.25  
 nions, bx. .... 85@90  
 kra ..... 65@85  
 Pickling, cr. .... 1.50@1.75  
 ees, lb. .... 12@13  
 arsnips ..... 1.50@1.60  
 eppers, Bell, lug, 1.00; Chili. .... 75@85  
 umpkins, sk. .... 60@75  
 ubarb, bx. .... 1.00  
 quash—Marrowfat, sk. .... 75@90  
 Cream, lug ..... 90@1.00  
 Hubbard, sk. .... 90@1.00  
 Summer, lug ..... 1.25@1.75  
 Italian ..... 75@1.00  
 omatoes, lug ..... 50@65  
 urnips, sk. .... 1.50@1.60

## FRESH FRUITS

BERRIES — Strawberries, 8.00@10.00  
 best to the trade; raspberries, 7.00@8.00;  
 uckleberries, lb., 11@12.  
 PEACHES — Santa Clara peaches, in  
 rriers, 1.25@1.50; large lug, 1.00@1.25;  
 regon, Salways, bx., 1.00@1.25.  
 PLUMS AND PRUNES — German and  
 rand Duke, cr., 1.00@1.25.  
 Figs—Black, double layer bx., 75@1.15;  
 ngle layer, 30@50.  
 Pears—Lake County Bartlett's, wrap-  
 ed, bx., 1.75@2.25; Winter Nellis, lug,  
 50@2.00; bx., wrapped, 1.50@1.75; winter  
 ars, 75@1.00; mountain Bartlett's, bx.,  
 15; single layer, 40@50.  
 Grapes—Malaga, cr., 65@80; lug, 90@  
 00; Thompson seedless, cr., 1.25@1.50;  
 g, lug, 2.00@2.25; Muscat, lug, 1.00@  
 25; cr., 75@1.00; black, lug, 75@1.00; To-  
 ay, 75@1.25; Cornichon, cr., 50@75; lug,  
 @1.00; Isabella, cr., 1.25@1.50.  
 Apples — Bx.: Bellflower, 4 1/2-tier, 85  
 95; 4-tier, 85@1.10; 3 1/2-tier, 1.00@1.15;  
 pitzenberg, 4-tier, 1.75@1.85; 4 1/2-tier,  
 00@1.25; B grade, 1.00@1.15; Red Pear-  
 ain, 85@1.00; white do., 4-tier, 1.00@  
 15; Smith Cider, 4-tier, 1.00@1.15; 4 1/2-  
 er, 85@1.00; Jonathans, 4 1/2-tier, 1.00@  
 15; 4-tier, 1.35@1.50; Baldwin, 1.25@  
 50; 4 1/2-tier, 85@1.00; Wagner, 4-tier,  
 15@1.25; 4 1/2-tier, 90@1.00; Hoover, 85@  
 1.00; Newton Pippins, 3 1/2-tier, 1.25  
 1.35; 4-tier, 1.10@1.15; 4 1/2-tier, 90@1.00.  
 Cantaloupes — Turlock, cr., standard,  
 25@1.50; ponies, 1.00@1.25; casabas, cr.,  
 andard, 75@85; doz., 75@1.00; flat, 50@  
 Honey Dew, 75@1.25; River megs, lug,  
 01.00.  
 Watermelons—Doz., as to size 1.00@  
 00.  
 Citrus Fruits—Bx.: Lemons, fy., 6.00@  
 50; ch., 5.00@5.50; lower grades, 3.00@  
 50; lemons, 3.00@4.00; grapefruit,  
 , 3.50@4.00; ch., 2.50@3.00; lower  
 ades, 1.50; Mexican limes, 2.25@2.50.  
 Oranges—Bx.: New Valencias, fy., 3.50  
 3.75; ch., 3.00@3.25; lower grades, 1.25  
 2.00.  
 Pomegranates—Cr., 75@85; one-half or-  
 ge bx., 1.75@2.00.  
 Persimmons—Bx., 75@1.25, according to  
 ze and quality.  
 Cranberries—Bx. of 33 1-3 lbs., 4.25@  
 50.

## DRIED FRUITS

Not producers' prices but prices of  
 holesaler to retailer.  
 Peaches—Unpeeled, lb. standard, 9 1/2;  
 oice, 9 1/2; extra choice, 10; fancy, 11.  
 he Peach Growers' Association has dis-  
 sed of all stock and is not offering.  
 Figs—In 50-pound boxes, per pound.  
 hite Adriatic, standard, 8 1/2; choice,  
 4; extra choice, 10 1/2; fancy, 11 1/2; Cal-  
 yrna, fancy, 15 1/2; extra fancy, 16 1/2.  
 Apricots — Lb. bulk basis: Standard,  
 1/2; ch., 15; ext. ch., 15 1/2; fcy., 16 1/2;  
 t. fy., 17 1/2; fy. Moorpark, 17 1/2; ext. fy.,  
 18.  
 Prunes—60s to 90s, 6 1/2 basis; 50s to  
 s, 1/2 premium; 40s to 50s, 1 1/2 prem-  
 m.  
 Apples—In 50-pound boxes, lb.: Fancy,  
 1/2; extra choice, 14 1/2; choice, 14.  
 Pears — Bulk basis, lb.: Fancy, 11 1/2;  
 tra choice, 13 1/2; choice, 8; standard, 6.  
 NUTS  
 Almonds—Cal. Almond Growers' Exc.,  
 oss prices: Nonpareils, 21 1/2; L. K. L.,  
 1/2; Ne Plus, 18 1/2; Drakes, 16c; hard  
 ell, 11 1/2.  
 eans ..... 16@18  
 ne Nuts ..... 16@19

## HONEY

mb, W. W., lb. .... 15@18  
 Lt. A., 11@12; A. .... 12@15  
 tr. W. W. Alfalfa ..... 15  
 tr. W. W. Sage ..... 16  
 t. A. Alfalfa, 13; do Sage ..... 14  
 mber Sage ..... 10 1/2@12 1/2  
 eswax, lb. .... 38

## BEANS

Jobbers' prices, cwt., new crop, re-  
 eaned.  
 mas ..... 13.50@13.75  
 ayous ..... 9.25@9.75  
 all Whites ..... 12.50@12.75  
 exican Reds ..... 9.00@9.50  
 arge Whites ..... 12.25@12.50  
 lns ..... 9.50@9.75  
 lackeyes ..... 9.25@9.50  
 ranberry ..... 12.75@13.00

## HOPS

Per lb.: California crop of 1917, 30@  
 ; on contracts, spot, 1916 crop, 18@22;  
 d, 8@15.

## RICE

California rice, new crop, cleaned, 100  
 und head rice, 6.75; brewers', 5.50;  
 reenings, 5.65.  
 Rough rice, 100 lbs., 3.20@3.40.

## HAY

Under date of Oct. 27, Scott, Magner &  
 Miller says:

Receipts past week 1740 tons, the  
 greater part of these for government  
 purposes. General market extremely  
 short. The railroads hold out no hope of  
 the car situation becoming easier for  
 some time to come. With the high prices  
 of hay and short feed on the ranges  
 stockmen are becoming very anxious.  
 Considerable alfalfa arrived and met  
 with ready sale.

We quote today wholesale prices in  
 carload lots as appear from dealers'  
 transfers. For prices to consumers  
 charges of cartage, commission and han-  
 dling must be added according to condi-  
 tions.

Fancy Wheat Hay (light 5 wire  
 bale, ton ..... 26.00@27.00  
 No. 1 Wheat or Wheat and  
 Oat Hay ..... 23.00@25.00  
 No. 2 Wheat or Wheat and  
 Oat Hay ..... 20.00@22.00  
 Choice Tame Oat Hay ..... 25.00@26.00  
 Other Tame Oat Hay ..... 21.00@23.00  
 Wild Oat Hay ..... 18.00@22.00  
 Barley Hay ..... 20.00@23.00  
 Alfalfa ..... 20.00@24.00  
 Stock Hay ..... 17.00@19.00  
 No. 1 Barley Straw, bale ..... 60@90

## GRAIN

Grain Exchange prices, cti.  
 Wheat — Government price at San  
 Francisco, \$3.50 cwt., or \$2.10 bu., with  
 4 cents added for sacks on No. 1 (60  
 lbs.); No. 2 (53 to 60 lbs.), 3 cents dis-  
 count; No. 3 (56 to 58 lbs.), 6 cents dis-  
 count.

Corn, California Yellow ..... 4.00  
 Barley, Feed, cwt ..... 2.40@2.45  
 Shipping ..... 2.42 1/2@2.47 1/2  
 Oats, Red Seed ..... 3.00@3.25  
 Oats, New Black ..... 3.25@3.50

## FEEDSTUFF

Wholesale prices per ton:  
 Bran ..... 41.00@42.00  
 Cornmeal ..... 85.00@87.00  
 Cracked Corn ..... 85.00@87.00  
 Middlings ..... 50.00@55.00  
 Alfalfa Meal ..... 29.00@31.00  
 Coconut Meal ..... 40.00@41.00  
 Rolled Barley ..... 50.00@51.00  
 Shorts ..... 43.00@44.00

## NEEDS

Prices in round lots, lb.:  
 Millet, re-cleaned ..... 4 1/4@5  
 Alfalfa ..... 20@21  
 Flax ..... 6@6 1/2  
 Rape ..... 2 1/2@3

## Citrus Fruit Market

Los Angeles, Oct. 31, 1917.

Orange prices cannot exactly be said  
 to be soaring but the market is excep-  
 tionally strong and some very large  
 prices are being received. With the  
 shortage of navels it is presumed every  
 Valencia will command long prices.

Lemons likewise are exceptionally  
 strong and the crop shortage will assure  
 good prices for every lemon to be had for  
 the winter season.

## Shipments

Shipments of oranges from Southern  
 California since November 1, 1916, 40-  
 579 cars, lemons 7733, total 48,312; to  
 same date last year oranges 31,688, lem-  
 ons 6919, total 38,607. From Central Cali-  
 fornia to date this season oranges 5044,  
 lemons 164, total 5208; to same date last  
 season oranges 5398, lemons 146, total  
 5544. From Northern California to date  
 this season oranges 845 cars; to same  
 date last season oranges 610, lemons 1.

## FROM THE AUCTION

October 24  
 New York: 9 Val., 1 lem. Raining,  
 market easier. Val. \$2.35-\$4.20, lemons  
 \$3.20-\$6.10, lemons \$1.00.  
 Boston: 1 Val., 1 lem. Val. \$3.75-\$4.35,  
 lem. \$4.10-\$5.70.  
 St. Louis: 1 car Valencias, \$2.20-\$2.25.  
 October 25  
 New York: 6 Val., 1 lem. Val. \$2.25-  
 \$5.25, lem. \$4.90-\$6.25.  
 Philadelphia: 6 cars. Val. \$2.05-\$4.15.  
 Boston: 4 cars. Val. \$3.15-\$4.65.  
 October 26  
 New York: 10 cars. Val. \$1.45-\$5.45,  
 lem. \$4.50-\$7.05.  
 St. Louis: 3 Val. 1 lem. Val. \$2.00-  
 \$5.35, lem. \$4.00-\$4.30.  
 Boston: 5 Val. \$2.00-\$4.55.  
 October 29  
 New York: 14 Val. 1 lem. Val. \$2.10-  
 \$7.15, lem. \$4.60.  
 Philadelphia: 5 cars. Val. \$2.30-\$5.40.  
 Cleveland: 1 Val. 1 lem. Val. \$3.45-  
 \$3.80, lem. \$4.70-\$4.75.  
 Boston: 6 cars. Val. \$2.50-\$4.90.  
 St. Louis: 2 cars. Val. \$1.55-\$3.45.  
 October 30  
 New York: 11 oranges, 1 lem. Val.  
 \$1.40-\$7.45, lem. \$2.90-\$7.50.  
 Boston: 5 Val. 1 lem. Val. \$2.75-\$4.65,  
 lem. \$6.15-\$8.40.

A mill in Texas is manufacturing cot-  
 tonseed flour. It is found suitable for  
 mixing with wheat flour and is said to  
 make excellent waffles, pancakes, or a  
 fine mixture with cornmeal in cornbread.  
 The mill is now sending out about 24 tons  
 daily of this flour. It is said to be four  
 times as nourishing as wheat flour.

"Conserve Sugar!" The food adminis-  
 tration wants every ounce which can be  
 saved to send to France which is suffer-  
 ing for want of sugar. The French peo-  
 ple are on a ration of 21 pounds per per-  
 son per year and the English and Italian  
 rations are also less than an ounce a day.  
 Shortage of shipping has caused a co-  
 coconut famine which has greatly reduced  
 the supply of oil and of feeding stuffs.

## WEATHER CONDITION

San Francisco, Cal., Oct. 27, 1917.

	Rainfall	Temp.	Min.
	Wk. Season Norm.	Max.	
Eureka	.00 .68 3.83	66	42
Red Bluff	.00 .80 2.20	62	42
Sacramento	.00 .51 1.31	66	50
San Francisco	.00 .03 1.40	87	50
San Jose	.00 .01 1.15	84	42
Fresno	.00 .00 .92	86	50
San Luis Obispo	.00 .00 1.06	84	44
Los Angeles	.00 .00 .74	84	54
San Diego	.00 .10 .47	89	48



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 Germain's Proven Hairy Peruv-  
 ian Alfalfa seed—is taxing our  
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To avoid disappointment place  
 your order at once and we will  
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 if you want highest feeding value  
 and 25% more tonnage—don't  
 fail to plant this improved  
 variety.

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 Alfalfa SEED

Rats and mice won't gnaw harness  
 oiled with Eureka Harness Oil.  
 There's no animal oil in Eureka  
 and rodents dislike it. Eureka  
 keeps your harness strong, flex-  
 ible and jet black.

Eureka Harness Oil

Standard Oil Company  
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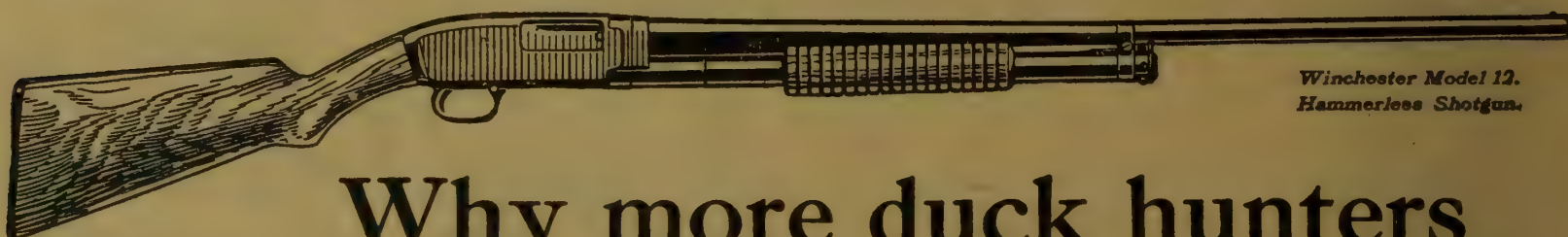
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Winchester Model 12.  
Hammerless Shotgun.

## Why more duck hunters choose this model than any other

If there's ever a place where you need a gun that's a hundred per cent reliable, it's when you're down in the damp salt marshes after duck.

Whatever gun you may start with, if you keep on long enough, you will come around to the Winchester No. 12 Repeater. It is the favorite in the long run with old duck shooters.

In the damp salt air of the seashore and swamps this gun never "gums." Under the most severe conditions it is a sure-fire, sure-to-work Repeater. It will not jam, catch, or fail to extract the empty shell. It "feels" right, "comes up" right, and *is* right. It works smoothly in whatever position it is held.

At the distance at which you get most chances at ducks, this gun shoots an effective uniform pattern of great game-getting penetration.

### The pattern that brings down the game

The remarkable game-getting pattern of the Winchester Model 12 (or the Model 97 for those who prefer a hammer gun) shooting its own standard ammunition, is the result of infinite care taken in boring the barrel.

The right amount of choke for different loads has been worked out after exhaustive experiment. Result: a pattern that spreads out evenly — neither too scattered nor too bunched — and lands with lots of steam behind it.



Quick feeder, sure ejector.  
Throws empty shell to the side, out of your way.

Even spread, maximum penetration. Winchester shot pattern brings down the game.

### The barrel is the gun

Men who know guns realize that the accuracy and durability of a gun lie in the barrel. On the quality of the barrel depends the quality of the gun. There is absolutely no difference in the standard of quality of the barrel on the highest and lowest priced Winchester guns. With Winchester the barrel is the gun and the single standard of quality has been attained only by the most unremitting attention to the boring, finishing and testing of the barrel.

### The Winchester barrel

The barrel of the Winchester Model 12 has been bored to micrometer measurements for the pattern it is meant to make. The degree of choke exactly offsets the tendency of the shot to spread. Until its pattern proves up to Winchester standard, the gun cannot leave the factory. The Nickel Steel construction preserves the original accuracy forever. The Bennett Process, used exclusively by Winchester, gives the Winchester barrel a distinctive blue finish that, with proper care, will last a lifetime.

For those who prefer a hammer action shotgun, we have made the Model 97. It is built on similar lines to the Model 12, but with hammer action.

What  means

This mark on the barrel means *Viewed and Proved Winchester*. This stamp stands for Winchester's guarantee of quality, with fifty years of the best gun-making reputation behind it.

Every gun that bears the name "Winchester" and that is marked with the Winchester Viewed and Proved stamp has been fired many times for smooth action and accuracy, and has been fired with excess loads for strength.

At every stage of Winchester manufacture, machine production is supplemented by human craftsmanship. It is a *test and adjustment process*.

It is this care in manufacturing that has produced in the Model 12 and Model 97 guns of unsurpassed game-getting qualities that have won the name of "The Perfect Repeaters" among duck hunters.

### Write for details of Winchester shotguns, rifles and ammunition

The Winchester catalog is an encyclopedia on shotguns, rifles and ammunition. Every hunter should have one. It gives detailed specifications of the Model 12 and Model 97, and describes at length the principles on which every one of the world famous Winchester shotguns and rifles is built. Write today. We will mail you a copy free, postpaid.

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DEPT. XX-3. NEW HAVEN, CONN.

### HOME DEFENSE LEAGUES!

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Winchester Model 97 Hammer Shotgun  
Take-down Repeating Shotgun. Made in 12 gauge, weight about 7½ lbs.; in 16 gauge, weight about 7½ lbs. The favorite with shooters who prefer a slide forearm repeating shotgun with a hammer.

# WINCHESTER

World Standard Guns and Ammunition



# CALIFORNIA CULTIVATOR

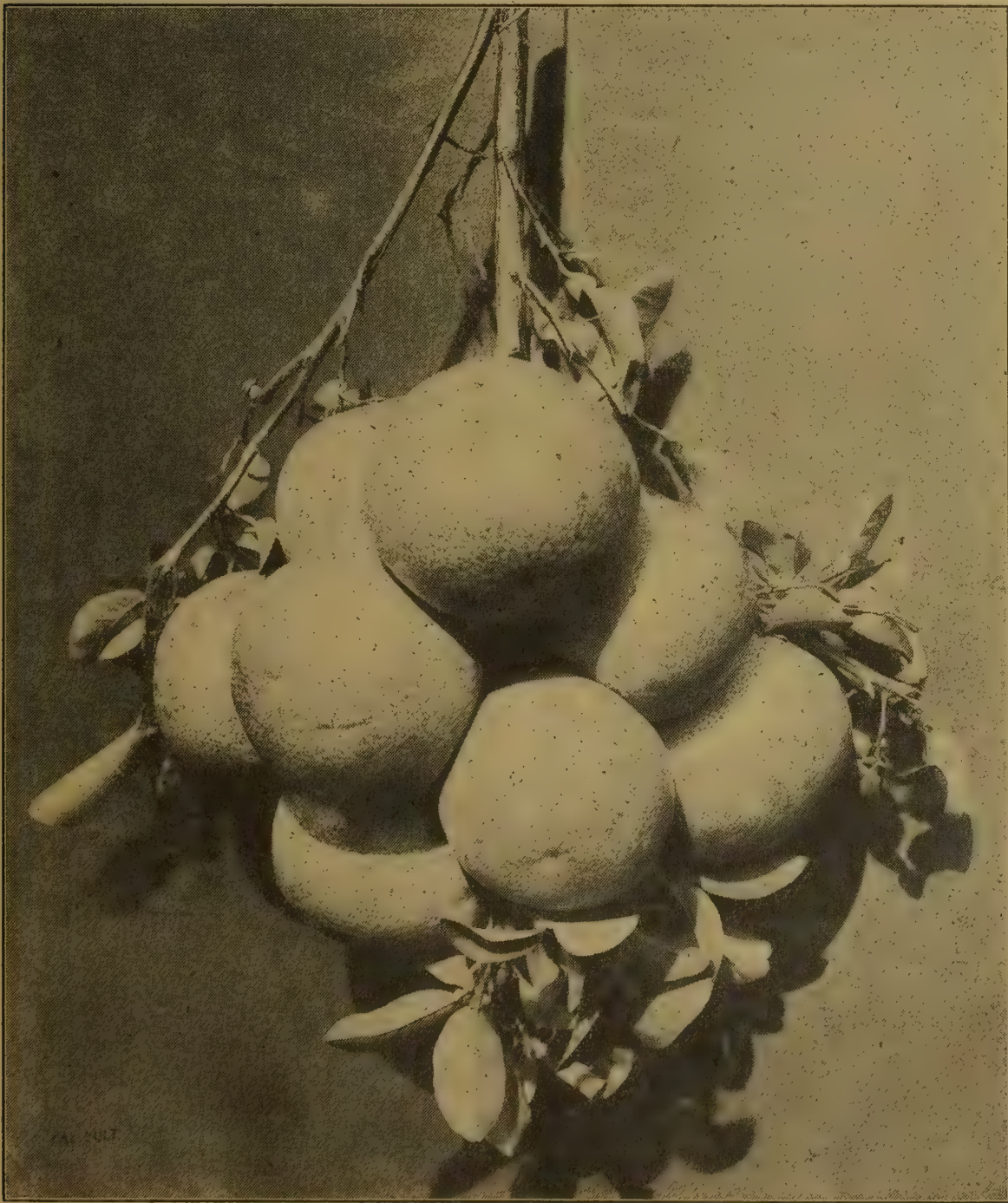
**THE LIVESTOCK** *Combined* **CALIFORNIA**  
*and DAIRY JOURNAL* *with* **CULTIVATOR**

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

November 10, 1917

SAN FRANCISCO





## Lumber Paint Plumbing

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### SAVE ON ROOFING

We sell the Best roofing at the Least Price.

One ply roofing \$1.60 a roll.	Two ply \$2.00 a roll.
	Three ply \$2.25 a roll.

### SAVE ON PLUMBING

Laundry trays \$9 and up.	Five-foot bath tubs \$22.
Low tank toilets \$19.	Portable shower baths \$8.

### SAVE ON HARDWARE

Special stove bargain. Durable sheet iron lined, air tight heating stoves \$2.	Garbage cans (heavy galvanized) \$1.50.
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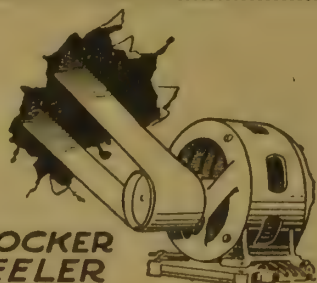
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# PLANT

IT

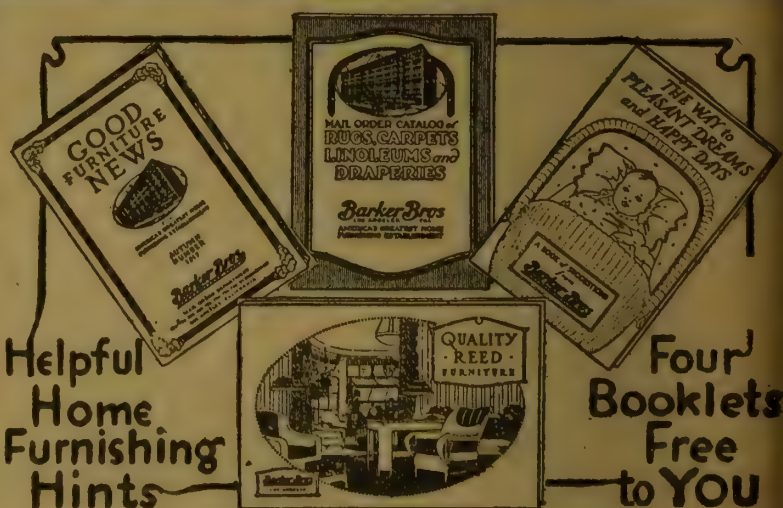
Alfalfa Hay prices are soaring. Authorities say we will have \$30 a ton hay in a few weeks. High prices may continue until the war ends—and perhaps years longer.

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# California Cultivator

Vol. XLIX No. 19

LOS ANGELES: November 10, 1917

One Dollar Yearly

## The Cheap Silo to Build, Fill and Feed From

M. E. Bemis of Arizona Writes of Building Silos with Fresno Scrapers. This Pit or Underground Silo Has Proven Economical and Satisfactory and Costs per Ton Capacity Only 33 Cents

**F**OR the man with little money and some time, an underground silo offers some inducements which should appeal to the farmer who cannot for one reason or another build a permanent above ground structure. The silo described below was made by Mr. Ralph Murphy, near Phoenix, Arizona, and has been used successfully for several years.

Unlike most underground silos this is not round or square, but is merely long and comparatively shallow trench. The length is about 100 feet, width 20 feet and the excavation is 4 feet in depth.

The work of excavating was practically all done with teams and "fresno" scrapers. The earth from the excavation was thrown around the edges, forming an embankment about four feet high. This embankment serves as a protection from water and to some extent probably from gophers. The trench lies north and south, the north end slopes from the bottom of the trench to the surface, necessarily a rather steep grade, but not more steep than many hills and on the roads in our hill country.

In using the silage from this trench the team is backed down the inside and the silage taken from the bottom of the trench rather than the top. In filling, the cut forage is dropped near the middle of the trench, and a team of mules, hitched to the little scraper shown in the picture, travels back and forth all the time the silo is being filled. The scraper drags and scatters the silage and the mules kick it, so that by the time the silo is full, which has of course taken a matter of at least a week or ten days, there is no further settling.

The silage is covered with old hay, straw, etc., to protect it from the air as much as possible. There being in this silo of this kind an unusual amount of surface exposed it is necessary to protect the top more thoroughly than in a deep silo.

So far this silo has given most excellent satisfaction. It will hold very close to 600 tons and cost to excavate about \$200, making the cost per ton capacity about 33 cents. In an investigation recently conducted by A. L. Schall, county agricultural agent of Pima County, he found that the cost of a considerable number of underground silos ranged from 30 cents per ton capacity to over \$4. As the figure did not include accurate labor costs it may be safely assumed that the cost of this trench silo per ton capacity is about as low as any which can be made. The cost of filling is also much less than the cost of filling an above ground silo, and the cost of taking the silage from the trench silo is but little if any more than from an above ground silo and much less than from the ordinary underground silo where a windlass is necessary.

### \$15 Hogs

In order to give a correct understanding of the attitude of the government in the matter of prices of hogs we quote entire a telegram just received from C. W. Holman of the food administration:

"Joseph P. Cotton, chief of the United States food administration meat division, today issued the following statement relative to the prices of hogs: The main purposes of the food administration as to hogs are four; to see that the producer at all times can count on a fair price for his hogs so that it will be profitable to him, to see that the farmer increases the number of hogs bred, to limit the profit of the packer and the middleman and to eliminate speculation.

"All these purposes are necessary because we must have more hogs, so that the ultimate consumer shall at all times get an adequate supply of hogs at the lowest feasible price.

"We shall establish rigid control of the packer. Fair prices to the farmer for his hogs, we believe, will be brought about by the full control which the food administration has over the buying of the Allies, our army and navy, the Red Cross, the Belgian Relief and the Neutrals, which together constitute a considerable factor in the market.

"The first step is to stop the sudden break in prices paid for hogs at the central markets. Those prices must become stable so that the farmer knows where he stands and will feel justified in increasing hogs for next winter. The prices so far as we can affect them will not go below a minimum of about \$15.50 per hundredweight for the average of the packers' droves on the Chicago market until further notice. We have had and shall have, the advice of a board composed of practical hog growers and experts. The board advises that the best yardstick to measure the cost of production of the hog is the cost of corn. That board further advises that the ratio of corn price to hog price on the average over a series of years has been about 12 to one (or a little less). In the past when the ratio has gone lower than 12 to one, the stock of hogs in the country has decreased. When it was higher than 12 the hogs have increased. That board has given its judgment that to bring the stock of hogs back to normal under present conditions the ratio should be about 13. Therefore, as to the hogs farrowed next spring: We will try to stabilize the price so that the farmer can count on getting from each 100 pounds of hog ready for market, 13 times the average cost per bushel of the corn fed into the hogs.

"Let there be no misunderstanding of this statement; it is not a guarantee backed by money; it is not a promise by the packers; it is a statement of the intention and policy of the food administration which means to do justice to the farmer."

This silo is filled with silage from corn and sorghum grown together. In planting a field a two row planter is used. One hopper is filled with corn and one with sorghum. In planting back and forth across the field this method brings two rows of corn and two of sorghum together. The result is a heavy growth, estimated to be from 14 to 20 tons per acre, of splendid silage.

Usually a makeshift, whether it is a building or an implement, is not good business, but in this crisis when it is of so much importance that all feed be conserved, makeshifts may not only be excusable under certain circumstances but highly commendable as well.

There are, of course, several reasons why everyone can't and won't

build silos this year. All the silo building companies in the United States, if they were working night and day, couldn't build enough to take care of the corn stover that will be grown this year. There are not enough laborers to build the silos needed, and a great number of farmers who would be glad to build silos haven't the capital and still a considerable number are tenant farmers and cannot afford to build silos on some other man's farm.

Government experts tell us that the acreage in corn this year will exceed the acreage of last season by more than 16,000,000 acres, and we are all congratulating ourselves that the crop prospects are now for more than half a billion bushels more than last year, or approximately the same as the banner corn year 1912, but what is going to become of all the fodder that will be produced on these 16,000,000 acres?

Our corn crop is the biggest crop that we grow—121,045,000 acres is some acreage, and just as a comparison the hay crop of the country is only 68,717,000 acres, just a little over half as much as the corn crop. The wheat crop is 46,692,000 and the cotton crop 34,600,000 acres, so that the increased acreage of corn is almost one-fourth as much as the entire acreage in hay and more than one-third the acreage in wheat.

What is going to happen to the fodder that grows on this 16,000,000 acres and a considerable portion of the fodder that grows on the balance of the 121,045,000 acres? If each acre produces an average of eight tons the total would be 128,091,000 tons on the increased acreage alone. The logical and the practical way to handle this fodder is, of course, through the silo, and practical farmers who have tried feeding cured fodder or feeding the stalks in the field and then have tried putting the fodder in a silo and feeding silage will agree that the estimates of one-third loss of feeding value is none too much. In other words, the silo will save in actual feeding value at least 42,876,000 tons of perfectly good silage which if fed in the dry form will be lost.

This corn fodder from the increased acreage of corn, if put into silos, would feed 6,000,000 dairy cows for a year. Now why shouldn't everybody get busy and build silos?

Every farmer should be casting over accounts of farm transactions, that is, as to receipts and expenses since January 1, 1917 and should be able on December 31 to make full and complete return as to net income. The only way to secure justice and to render just return to the government is a set of accurate accounts. The California Farm Record and Account Book will be an excellent aid in this matter. The circulation department offers special inducements to any who would like to send the paper to a neighbor or friend and secure this book with only slight cost.



An Arizona Silo

The cheapest of all silos to build. Not so picturesque as the ordinary silo, but economical and a satisfactory type in right soil conditions. Thousands of tons of beet pulp have been ensiled in California by this method.



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Traction obtained by pull instead of by weight allows a light weight tractor to carry a heavy load in soft ground.

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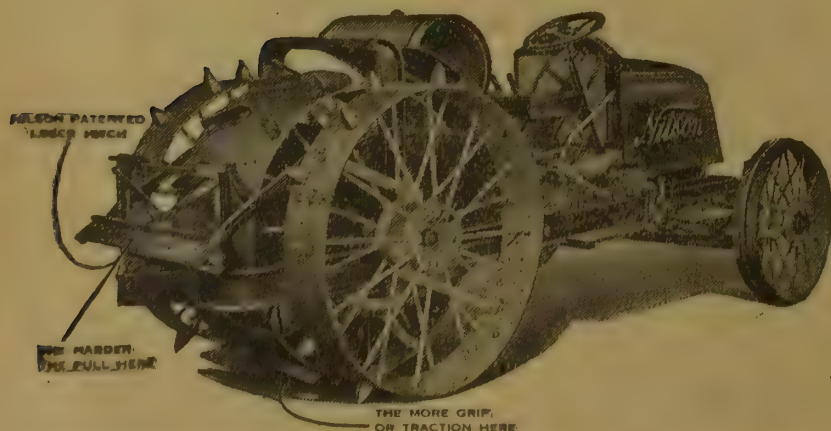
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## It Pays to Fertilize

Written for California Cultivator



**A**S TO the advisability of using fertilizer at present prices there is difference of opinion, but we feel that if the producer would at the same time consider prices of the product he has to sell he could figure most satisfactory war profit, producing more with the same labor, the same water and the same overhead expense by slight investment in good fertilizers. Before fertilizer prices were so high, in fact, before the war, there appeared in World's Work report of some of the demonstrations conducted by James J. Hill of the Great Northern Railway. The lessons of Mr. Hill's demonstrations remain. Let us refer to them, with some comments made by a believer in fertilizers.

### Does It Pay?

In one year James J. Hill of the Great Northern Railway demonstrated that he could practically double the yield of wheat, barley and oats, by the use of commercial fertilizers.

These experiments were tried on five-acre plots (and not 100 square feet); 151 plots covering 755 acres in all, scattered along the line of the Great Northern Railway in Minnesota and North Dakota, the most extensive, practical experiment in the use of commercial fertilizer the world has ever seen. Each acre received \$5.39 worth of fertilizer and with the following result:

The average production of fields in Minnesota and North Dakota without fertilizers, as per the United States census report, was: Wheat 15.8 bushels per acre, barley 21.9, oats 31. In Mr. Hill's experimental plots with fertilizers there were produced:

Wheat 30 bushels per acre, an increase of 89.8 per cent; barley 47 bushels, an increase of 114.6 per cent; oats 71 bushels, an increase of 129 per cent.

The grain in each case from the fertilized plots was much superior in quality and brought a higher price. This says nothing about the better condition the land was left in for future crops, and was an experiment of only one year's duration.

It is the experience the world over, that where good commercial fertilizers are used intelligently, that not only are larger yields and of better quality obtained, but the land steadily increases in productivity.

Does it pay? In our opinion Mr. Hill has fully answered the question by practically doubling the yield of wheat, barley and oats on 151 different farms, in one year's experimenting with commercial fertilizers.

Suppose the California sugar beet grower and the bean grower should do as Mr. Hill has done, double their yield at an expense of only \$5.39 per acre?

We note in the above that Mr. Hill's experiments were not reported with test plots under similar conditions. But they are compared with "average" productions of fields in Minnesota and North Dakota without fertilizers. Now then "average" productions of all crops are very low and perhaps these Hill demonstrations might have been under naturally much better conditions. However, there is a lesson in it and while the figures may not be absolute the lesson remains most forceful.

## Curing Olives



**H**ERE is an old olive curing formula given many times in the Cultivator, being first written for our readers by Mrs. Sherman. We repeat it now because many are planning for curing every available olive this year:

"When the meat of an olive slips from the pit when squeezed it is ready to pickle, though we often leave them until they grow black as possible. In handling them for domestic use half barrels are most convenient. Into each 12½ gallons of water put 1½ pounds of Greenbank or Hercules lye and a couple of pounds of salt, filling the barrel three quarters full. Pour the olives into the water rather than risk bruising them by pouring into the empty barrel. This solution is left on until it begins to show in the olive. After twelve hours test the olives by cutting one open, and if a yellow stain reaches almost to the pit the lye is run off and fresh water put on. Put into this water a pound and a half of salt. The water should cover the olives three or four inches. Stir with a wooden stick every two or three hours. Change the brine every other day. After two days taste and if the bitterness is not all out repeat the lye solution. The use of the salt prevents softening of the olives and also fixes the color in a measure. Let the light into the olives when in the brine but avoid the direct rays of the sun. To salt the olive, as soon as the bitterness is out make the next water heavier in salt, say 2½ pounds of salt, and leave it on three days, and then five pounds to 100 pounds of water. A five-gallon can two and a half times filled with water is about 100 pounds, or 12½ gallons of water is close to 100 pounds. In salting the olives if all the salt is put in at once they will pucker up. If this happens put clear water over them for a couple of hours and then make a weaker solution of brine. Olives will keep a reasonable length of time in open vessels if the brine is watched and boiled often enough to keep down bacteria, but it is better to can them either in glass or tin. As olives only need to be sterilized to make them keep it is better to put into jars or cans before heating them. Pick over, rinse in fresh water, make a brine of the same strength they are taken out of. Boil and skim carefully.

When lukewarm cover olives in the jars with it. Stand on boards in the wash boiler. Put water around them half way up. Put on cover and let cook. As soon as the water in the jars has boiled five minutes they can be lifted out and sealed. Have covers well washed and in a pan in the oven so they will go on warm.

Another method recommended in an April issue by Mr. Roeding is: It is not necessary to know just how much salt is used, because all that must be done is to take a barrel, bore a hole about an inch in diameter and close to the bottom, have the other end open, then place a layer of salt a couple of inches thick, then a layer of olives three inches, alternating the salt and olives until the barrel is about three quarters to seven-eighths full. Every two or three days pour from two to three gallons of water over the olives and allow it to run out through the bottom rather slowly. Within a month the olives will begin to shrivel. After this period the olives on top should be placed on the bottom and the salt more or less intermingled through them and pour water over them about every five days. It is very easy to determine when the olives are cured because practically all of the bitterness will be extracted from them. After the bitterness is practically out of the olives, their flavor may be very materially improved by pouring a little olive oil into a vessel of any kind and filling it full of olives. The surface of the fruit will become covered with a thin film of oil. If it is desired to keep the olives for a year or more, a small sprinkling of salt on them is all that is necessary.

During my travels in Asia Minor and in Greece I noticed a number of these olives in barrels. The barrel was usually tilted and there was a small quantity of brine in it. The olives were usually above the brine.

The olives treated in this way are those which the peasant class of Europe use so much when taking their noonday meals in the field.

Life is too short to waste  
In critic peep or cynic bark,  
Quarrel or reprimand,—  
'T will soon be dark:  
Up! mind thine own aim, and  
God-speed the mark!  
—Ralph Waldo Emerson



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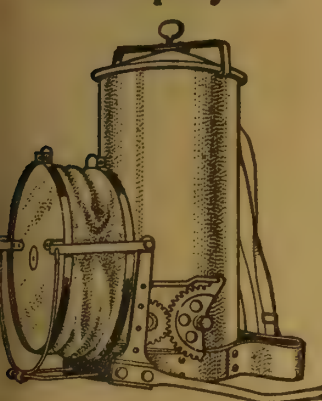
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## The Grapefruit

By A. D. Shamel  
In Address to Fruit Growers



IN one of the first groves of  
Marsh Seedless grapefruit  
trees observed by the writer  
in Southern California it  
was found that out of a total  
of 500 trees 123 habitually produced  
fruits containing from 50 to 100 seeds  
each. In some cases this heavily  
seeded characteristic was found to be  
correlated with a rough, thick rind  
and undesirable shape of fruit. These  
types have since been proven to have  
originated from bud mutations. They  
have been unintentionally propagated  
through the absence of any careful  
system of bud selection based on in-  
dividual tree performance records.  
To illustrate the importance of this  
condition it can be said that the own-  
er of the grove referred to above has  
lost thousands of dollars in the past  
through the unwelcome presence of the  
poor types of trees. Fortunately  
the trees belonging to these poor  
types are light bearers of fruit, as a  
rule, so that the loss resulting from  
the mixture of inferior types of fruits  
has been less than otherwise would  
have been the case.

### Various Types

The important types of Marsh  
Seedless trees and fruits found so far  
in our performance work are as fol-  
lows:

**Standard.** The trees of this type  
produce large and regular crops. The  
fruits have characteristically a slight-  
ly flattened shape. The ripe fruits  
have a very smooth, satin-like skin  
of ivory white color, thin rind, from  
none to ten seeds each, being com-  
mercially seedless. The rag is ten-  
der, having a slightly bitter taste  
which is pleasant and agreeable. The  
fruits have an abundance of juice that  
spurts from the fruits when they are  
cut. The juice possesses the desired  
and typical grapefruit quality, a high-  
ly developed pleasing flavor that is  
only equalled amongst California cit-  
rus fruits, in the opinion of the writer,  
by the fine flavor of the Washington  
Navel orange. This type is worthy of  
a separate varietal name in that it  
has been successfully isolated in Cal-  
ifornia by bud selection and is being  
extensively propagated by California  
citrus growers.

**Seeded.** The trees of this type dif-  
fer but little in appearance or fruit-  
ing behavior from those of the stand-  
ard. The fruits are very similar in  
appearance to the Standard and can  
hardly be sorted out from those by  
even the most experienced workers.  
The fruits are usually heavily seeded,  
averaging about 75 seeds each. Other-  
wise the characteristic quality of  
the fruits is as satisfactory.

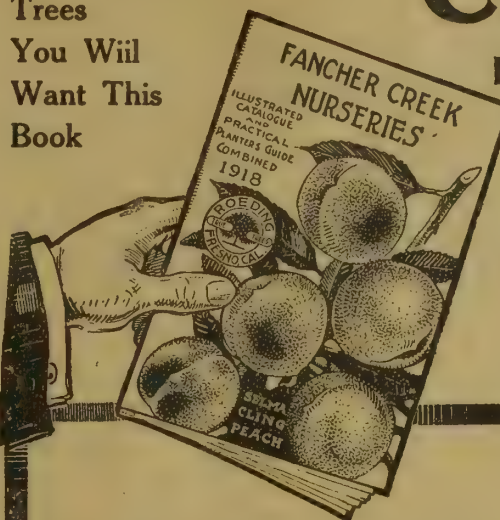
**Flattened and Wrinkled.** The trees  
of this type usually have a more up-  
right habit of growth than the Stand-  
ard. The fruits have but few seeds  
but frequently are lacking in juice.  
The juice is likely to lack flavor and  
is of comparatively poor quality. The  
rag is usually rather coarse and bit-  
ter. The wrinkled appearance around  
the stems of the fruits detracts from  
their appearance for commercial pur-  
poses. This type is distinctly inferior  
to the Standard. It occasionally oc-  
curs as limb sports in Standard trees,  
in which case it can be eliminated by  
pruning.

**Corrugated.** The trees of this type  
are similar in appearance to those of  
the Standard. The fruits are usually  
globular in shape. The rind is ribbed  
so as to give a ridged or corrugated  
appearance to the fruit. The color  
of the rind is likely to be yellowish  
green, and it never assumes the high-  
ly desired, clean ivory-white appear-  
ance. The rind is usually thick, the  
rag tough and very bitter, and the  
juice is of inferior quality. This type  
also appears as limb sports in Stand-  
ard type trees, in which case it can  
be removed by pruning.

**Bell-shaped.** The bell-shaped type  
trees are usually dwarfed in appear-  
ance and have a drooping habit of  
growth. The fruits have a character-  
istic bell, or pear-like, shape, resem-  
bling somewhat typical shaddocks.  
The rind is usually very thick and the  
skin possesses a yellowish cast. The  
rag is usually coarse and tough and  
the juice of poor quality. The trees  
of this type are usually light bearers  
as compared with the Standard.

**Rough.** The trees of this type are  
likely to have a dwarfed appearance

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Are Going  
to Plant  
Trees  
You Will  
Want This  
Book



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er's Guide Tells you in an Intelligent Way  
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ing, together with the experience of many of the  
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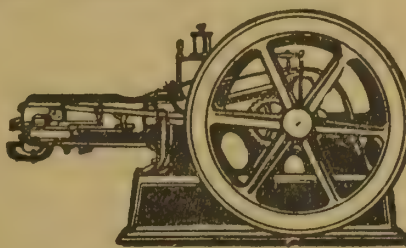
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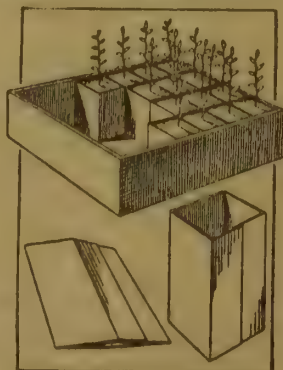
Easy to put on and cheaper than gunny sacks.

### COLLAPSIBLE PLANTING POTS

Why not raise your early Tomatoes, cabbage, chili and egg plants for home use or for market. Do you know that you can start

Cucumbers, cantaloupes, melons of all kinds in these pots in flats until they have three and four leaves then plant out and all, these melons two or three weeks earlier for market. Just the thing for BACK promoting. Write for samples and prices of both Pots and Protectors. State which you are interested in.

THE EXPAN CO., 935 E. Central Ave., Redlands, Cal.



and produce but light crops except at infrequent intervals. The fruits are usually globular, unattractive, have thick rind, tough rag, and inferior juice.

### Sports

Aside from the types listed above we have occasionally found navel grapefruit sports, fruits having raised or lowered sections, others resembling closely in size, shape, appearance, and somewhat in flavor, typical Valencia or other oranges, and many minor variations of little importance from the commercial standpoint. From the breeding viewpoint these variations, or fluctuations from the Standard and other types, are of interest and possible importance.

In this connection we cannot help but mention the peculiar so-called off-bloom fruits occurring more or less on trees of all grapefruit types. These fruits are frequently misshapen, having thick rinds, and are as a whole of inferior quality, even when ripe. The writer has no suggestion at present to offer as to the causes of this condition or a remedy for it. The number of these off-bloom fruits seems to vary with seasonal conditions.

### Isolation of Standard Type

Enough work has been done to prove that the Standard and valuable type can be isolated in propagation by bud selection based on individual

tree performance records. There is no doubt in the writer's mind but that the Standard type can be further improved by intelligent bud selection, both as regards the quantity and quality of production.

### Eliminating Poor Trees in Orchards

Performance records of individual bearing trees will locate those of inferior types in the established orchards. These trees can be removed or worked successfully, using for the purpose select fruit-bearing budwood from the best trees of the Standard type.

### NATIONAL ORANGE SHOW

The management of the eighth National Orange Show, which is staged to be held in San Bernardino February 20-28, discussed for a time the advisability of holding the show in the face of the serious war situation.

A wire to the president brings the following reply:

"The President would regret to see neglected any instrumentality which has proved serviceable in stimulating business and facilitating its progress. This is not a time for any slowing up of business but a time when every sensible process of stimulation should be used."

Greater energy than ever will now be thrown into the campaign for great citrus show.

## Study Your Vineyard

**P**ROMPTNESS, foresight and concentration on the work in hand are the qualities needed by the grower who has large tracts to look after or whose work takes him and his men over scattered tracts," says William Newman in the Sun-Maid Herald. Mr. Newman has been a resident of the raisin belt for twenty-seven years and has owned vineyards most of the time. He probably will have 125 tons of raisins this year in addition to large amounts of shipping grapes. He is also improving 80 acres, planting partly to raisin grapes.

A watchful eye is needed in raisin growing, as much as in any other business, in his opinion. The successful grower is he who remembers to study his vineyard and plows, waters, prunes and picks when the time is ripe.

"Study the vines and treat each part of the vineyard, or each variety, according to its needs," he said recently. "I found the grapes on one piece small and hard and left it thinking it would ripen very late. I returned in ten days and found the grapes ready to ship. The raisin grapes may turn out the same way this year. They should not be picked until they are ripe."

### Don't Test by Guess

"Every grower should be urged to buy a saccharometer and test his crop. Not only will it keep up the reputation of Sun-Maid raisin quality, but it will insure the grower getting the most for his crop. In our shipping grape picking we have a man

take several tests a day. It is a simple matter, and of course in that business we would not think of taking chances of mistakes without it. Testing by guess misses too often. One had just as well do the thing right."

Apparently Mr. Newman does not worry about the weather, although he lost a considerable amount of raisins last year by rain. The California climate has been almost uniformly favorable to him.

"If one has a great many raisins to pick, probably he would do well to start a degree below the 24 per cent mark," he said. "A little lower might do, although I would not pass on that. I expect to start picking with paper trays, though of course I prefer the wooden trays."

### Duty of Machinery

One of the practices on the Newman ranches is to make the farm machinery do full duty. For instance, one of his two tractors, when not needed for other work, is put to pumping water. He has some plantings of young Thompsons and Gracichons which have made a good showing this year. On another place he has old vines. The Malagas which bring in some cases eight tons of green fruit to the acre. The Muscat crop last year ran a ton and a half to a ton and three-fourths. In pruning he leaves the most wood on the vigorous vines.

The cultivation differs widely in the different places. Some of the subirrigated lands get no surface irrigation, while some of the higher land get two or more wettings.

## Greenhouses

"Greenhouses, Their Construction and Equipment," by W. J. Wright, New York School of Agriculture, published by Orange Judd Company, New York, at \$1.60 net.

This is a 286 page, five and a half by eight, cloth bound book, containing 131 illustrations, printed on fine book paper, with 16 chapters touching upon hotbeds, cold frames, the forcing boxes, gable-roofed sash beds, construction of the green house proper, material to use, framework, glazing, ventilation, heating, boilers, fuels, flues, etc.

### The publishers say:

For a decade and more there has been a decided demand for information about greenhouses. Owners and operators, present and prospective, have been asking for definite, concise information about the different forms

of construction, heating and equipment, and the probable cost. Students and teachers in agriculture schools and colleges have been demanding a suitable text-book which will not only give opinions but facts and figures.

"This volume attempts to meet these demands. It has been several years in preparation. The data given are based on experience and observation of the author as well as on the of hundreds of practical greenhouse builders and owners throughout the country. The tables and estimates are in accord with the best engineering practice. The book is illustrated with many photographs and drawings, which greatly enhance the value of the text."

A Pennsylvania apple grower will call at Thanksgiving time apples stored away in cellar having no cold storage whatever, in October of 1916.



# Questions and Answers

ANSWERS BY EDITOR AND STAFF

## Underground Cement Pipe

I have a pumping plant and use a wooden flume. I want to change to underground cement pipes. Will you kindly tell me how much water I am pumping with a flume 11x12 inches in measure running full, with a fall of five inches to 100 feet. I am using a centrifugal pump. If I put my discharge pipe from the pump into the flume so it cannot get any air will it work without a stand pipe; also what size pipe line will it require to carry the water without loss of power from friction?—Subscriber, San Gabriel.

If the flume is reasonably smooth inside it will carry 150 miners inches of water when running full. This amount of water will require a cement pipe 14 inches in diameter with the flume stated above. It is not necessary at the connection between the discharge pipe and the cement pipe to be airtight. In fact it is preferable to have an open cement box 3 feet wide, four feet long and three feet deep into which the water will discharge from the pump. The first 40 feet of the pipe line, beginning at the box should be 16 inches in diameter. If this is done there will be no need of a stand pipe, and one can al-

ways see whether the pump is working properly. Air vents must be placed at frequent intervals to prevent bursting the pipe when the flow of water is checked by closing valves.—J. B. N.

## Drug Plants

Please advise soil requirements and conditions necessary for the growth of ginger root, licorice, saffron and commercial bluing. Where may one obtain seeds and plants of the above and how are they prepared for commercial use?—Subscriber.

We would recommend before growing such plants that the matter of a market be looked into. The growing should only be under contract with a responsible firm. They are not like staple foods, which find a market at any time. If one finds it possible to develop a market we would recommend writing to W. W. Stockberger, Physiologist in Charge of Drug Plant and Poisonous Plant Investigations, United States Department of Agriculture, Washington, D. C., and ask for Farmers Bulletin 663, "Drug Plants Under Cultivation." There is a national association of manufacturers of medicinal products composed of chemists and druggists from all parts of the United States. Its secretary is Charles M. Woodruff, Detroit, Michigan. We may also mention that we believe the C. C. Morse Seed Company of San Francisco issues a catalog of seeds of medicinal herbs.

## Rust on Beans

I send leaf from Kentucky Wonder bean vine and would like to know what disease is affecting it and if there is a remedy. We were unable to use the beans this spring on account of the trouble.—Subscriber, El Monte.

Prof. C. O. Smith of the pathological laboratory, Riverside, answers: "The specimen shows, as you thought, rust spots. I do not know of any practical method of controlling this disease. At one time Mr. Rogers did considerable work in using various sprays, but they were without effect."

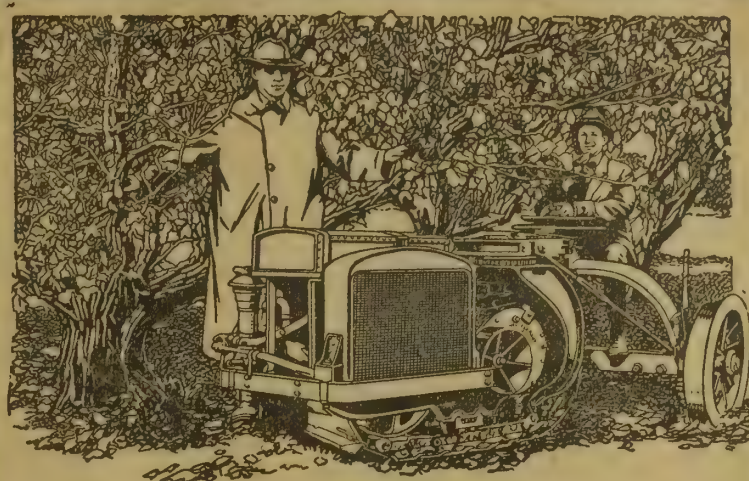
## Corn Rust

What is the trouble with leaves of corn which I am sending? You will note the leaves are covered with small brown insects or spots.—Subscriber, Huntington Park.

Under a strong glass these spots showed plainly that they were of a fungous nature. They were sent to the pathological laboratory of the citrus experiment station at Riverside, and Prof. J. T. Barrett answers: rust, scientifically known as Puccinia sorghi Schw. The leaves particularly are affected, although occasionally considerable damage is done to the development of the tassels. However, it seldom becomes an epidemic and therefore has not received much attention from the standpoint of control or of varietal selection. Some rusts have several stages in their life history. The alternate stage of this rust is probably Accidium oxalidis which occurs on Oxalis cymosa. There is reason to believe that under the mild climatic conditions of our winters the summer, or uredo-spore stage, may live over the winter and start infections the following season. In this case the alternate host would not be necessary for the propagation of the fungus. As a means of control I would suggest that rotation be practiced and that all refuse, such as leaves which may harbor the fungus, be destroyed or removed from the ground."

## Storing Onions

Please advise best method of curing and keeping onions. Several weeks ago I purchased a sack which I placed in a cool, dry place but in a remarkably short time they began to grow and later to decay. Have lost about



## Great Little Tractor

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Here is the tractor that the owners of orchards and vineyards have wanted to buy for years. It is built by the Bean Spray Pump Co., makers of the famous Bean Sprayers and Pumps. It does what no other tractor has ever done before. Its patented front-drive offers exclusive features, which sooner or later you will want in a tractor. Don't buy any tractor until you know all about it. Don't find out about this too late.

### Great Traction With Light Weight

This is the lowest-priced track-laying tractor manufactured. It weighs but 3100 lbs. and costs less to operate than wheel-type tractors of equal power. Note how the track grips the ground, and compare that contact with the wheel-type's.

This means great pulling power with a very light tread. No other can work so well in light soil.

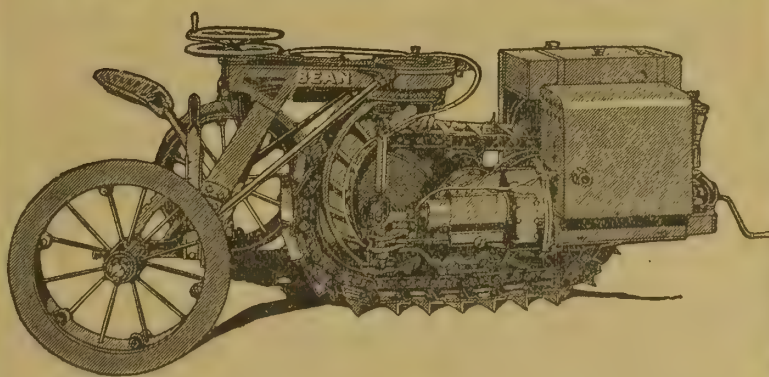
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This Tractor is handled more like horses than any other machine in existence. And it does what horses cannot do. It will pass under tree branches only 4 feet off the ground, plowing close up to the trunks. It works between 7-foot rows in vineyards, and cultivates right up to the vines without breaking off young shoots.

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On account of owner being drafted he has for sale a forty acre orchard, of which twenty acres are planted to olives and twenty acres to almonds, set out in spring of 1915. Trees are in first class condition, no better in the country. There is also on the place a new modern cottage, well, with tank, tank-house, engine pump, and tool shed. Will sell as a whole or each twenty acres separately. Invite inquiries and will quote prices on application.

Address R. R. No. 1, Box 158, Orland,





## The Fate of the Unprepared

Among the remarkable events of this war no fact stands out more startlingly than the tragic sacrifice of Russia's unequipped soldiers.

The army has been victimized by intrigue and treachery. Guns were sent to the front without ammunition and ammunition without guns. Supplies were provided that when unpacked proved to be rubbish. Left stranded by communications that broke down under slight pressure the brave Russian troops hurled themselves again and again against foes perfectly prepared.

From the very verge of victory they doggedly fell back fighting with stones and clubs and iron bars, resisting heroically but ineffectively.

No thought can be more abhorrent to Americans than that of our

boys ruthlessly slaughtered because of lack of equipment or support which it is the first business of us at home to supply.

Our Government, never before so powerful, is working prodigiously in the preparation of armies and means of warfare. Throughout the nation there is a unity of purpose that is piling on the altar of liberty every personal ambition and corporate gain.

Mines, factories, farms, shipyards, the counting houses and shops of every industry are laboring day and night to supply the sinews of war.

The Bell System is co-operating to mobilize production, transportation and communication, and is using its every energy to speed up American defense.



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## Alfalfa Seed

When you think of Alfalfa Seed you say: "Well, I won't need any until spring; so I will wait until then and buy." Not so fast, Mr. Rancher; maybe you will and maybe you will not.

Times have changed. Seeds, like other staples, have advanced. And this very advance and demand means with a small crop in 1917, that things will buzz later on. Note the big advances on Alfalfa Seed the past month; what will it be later on?

We handle this seed in great quantity, both retail and wholesale. Years of experience have made us the Alfalfa kings of the west. We know what you need, if you will tell us what your soil is. California grown seeds are our hobby, as well as our business, while,

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half of them. Is there any way of checking such conditions?—Subscriber, Morgan Hill.

The principal factors in keeping onions in storage are coolness, dryness and plenty of ventilation. If they may be spread in crates so that the air can reach all sides so much the better. As soon as the growth appears sort carefully, bruise as little as possible and throw away all diseased or decaying bulbs.

### Tannin from Acorns

Is there any way of extracting the tannin from acorns and curing so as to keep over from one season to the next?—Subscriber, Morgan Hill.

This question we cannot answer, but we think not. We will pass it on to our subscribers for any information they may give to us.

### Alfalfa Molasses

What is alfalfa molasses? — Subscriber, Big Pine.

Alfalfa molasses is a combination of cheap or pulverized alfalfa meal with waste materials from the sugar factories. The demand for sweets during the last few months has been so great that this waste product has advanced in price until now it is rather beyond economic bounds for feeding.

### Grapefruit

I want to set out a grapefruit tree for home use. What variety would be best?—Subscriber, Long Beach.

The Marsh is probably one of the best for California planting, at least it is the principal variety grown in this state and in Arizona.

### Citrus Trees in Lawn

Have orange trees in my lawn, one

six-year-old navel, also another navel and a Valencia set out three years ago. While the trees are thrifty they haven't made a large growth. Have kept the space around them spaded up and about two years ago spaded in well rotted manure. Otherwise the trees have not been fertilized as it is not convenient to get stable manure. Would you recommend the use of commercial fertilizer and when and how should it be applied and in what quantity? Also have a six-year-old Eureka lemon tree in the garden which hasn't done as well this year as usual. The ground around it has been cultivated and potatoes and small garden truck grown. This tree also was fertilized with chicken manure.—Subscriber.

Any complete commercial fertilizer will doubtless answer your purpose but we question whether any fertilizer will be sufficient to accomplish best results. No citrus tree does well in lawn. A lawn must be kept too wet to suit the roots of the ordinary citrus tree. Where a tree is to be set in the lawn it should always be on the sour stock root. Then as much space about it as possible should be kept spaded. It should be irrigated heavily but only a few times during the season. A warm, light porous soil with plenty of air in it, is one of the requirements of the citrus tree. One of the requirements of a blue grass lawn is moisture at all times, hence the two do not work together to best advantage. This is to be regretted for the citrus tree is one of the most beautiful with which to ornament a lawn. It becomes most unsightly, however, when it yellows and fails to do well. As to lemon tree in garden presumably the same condition obtains, that is, the small truck garden and potato crop calls for more moisture than needed by the lemon tree.

## November Vegetable Planting Calendar for Southern California

Written for California Cultivator By D. F. Reichard

**T**HE rains holding off so long gives ample opportunity to get all summer crops cleaned up, the trees and shrubs pruned and the refuse burned. This cleaning up each fall goes a long way toward controlling insect and fungus attacks the following year. Any plants that are badly infected, if easily replaced, should be pulled up by the roots and burned; but if they are permanent plants prune back as much as possible and spray thoroughly with resin wash for scale or insects and Bordeaux Mixture if infected with any form of fungus.

Dig and put away sweet potatoes, string the ripe chili peppers, and dry them, take in the squashes and pumpkins carefully so that they are not bruised. They will keep well into spring if handled properly, using bruised and scratched ones first.

On all vacated ground spread a liberal coating of manure to be leached into the soil with the rains. If the rains are too slow coming irrigation or sprinkling will have to be resorted to. However the moisture is obtained there should be enough to soak down at least two feet. The ground should be worked to a depth of not less than one foot so that it will be

in a condition to take in all the moisture that may come to it during the winter.

Cultivate shortly after each fall storm so that the surface will be thoroughly broken up, thus making a mulch to hold the moisture in the ground.

Plants from seeds sown at this time do not develop as rapidly as during the warmer months. Plant now for early spring harvest Egyptian beans, carrots, turnips, radishes, early winter varieties, Wonderful lettuce, prickly spinach, onion seeds or sets, cabbage and cauliflower plants to winter or the seed for spring, salad and dwarf peas.

Jerusalem artichoke, horseradish, asparagus and rhubarb roots may be set from this time until early spring. In frostless sections potatoes may be planted during this month for early spring potatoes. Seed of egg plant, peppers and tomatoes are started in hot beds or hot houses for young plants to be set in early spring.

All stuff planted during the last few months will need irrigating as long as the rains hold off, and we should watch the young plants that they do not want for moisture.

## Slick Up in November

Written for California Cultivator

**T**HIS is a delightful month for slicking up around the place. Gather up old stalks and weeds for the compost heap, rake up the leaves and throw on a little dirt and scrapings from the corrals, keep thoroughly wet and open at the top so the rains may penetrate. This will make wonderfully fine bedding soil a year later, also an excellent soil for filling in around new shrubs or trees. Besides it adds to the beauty of all the place to get this rubbish out of the way, lessens the fire danger and gets the soil in condition for later spading.

Nor is this simply a month of cleaning up, for one may plant now seeds of snapdragon, clarkia, candytuft and millions of California poppies, Shirley

poppies, stocks, larkspur, marigolds, in fact, a hundred other similar hard annuals. And don't forget the row of sweet peas along the unsightly fence. These are worthy of deep spading, thorough fertilization and best preparation of the soil.

In bulbs plant all the spring bloomers, especially iris, the poor man's orchid. Besides, plant anemones, freesias, dwarf types of gladiolus, hyacinths, daffodils, jonquills and tulips.

Later in the month cuttings of herbaceous plants may be made. To get best results these should be rooted in sharp sand with perfect drainage.

If the lawn has become overgrown with Bermuda a good raking, with fertilizer, will help to keep it green during the cold months.

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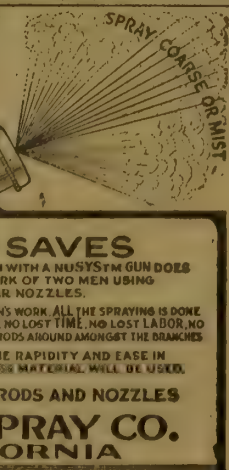
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### CONCERNING SUGAR

In 1915 Truman G. Palmer sent out the first bound volume of "Concerning Sugar." It contained in tables, illustrations and text the most complete information to be secured. Since then additional statistics and information in the form of loose sheets for binding in the volume have been mailed from time to time. The latest addition to this book has just been received. It is a series of questions and answers concerning sugar, putting in readable form a fund of material. For instance, one of the simpler questions:

"What are the main processes employed in manufacturing beet sugar?"  
 "The process of making sugar from beets is a continuous one from the time the beets are floated into one end of the factory until the granulated white sugar, ready for the table, comes out at the other, sacked or barreled, ready for shipment. From the time the beets are topped in the field until the package of sugar is opened by dealer or consumer, neither the raw material nor the finished product is touched by hand. The sugar, together with various impurities, is stored in liquid form in the minute cells of the beet, and after removal of the sugar from the solids of the root it must be separated from the liquid impurities which come out with it.

"After the beets are floated into the factory they pass through an automatic washer and then are cut into cossettes or slices, consisting of long slender pieces resembling shoe-string potatoes. The cossettes then are run into a diffusion battery consisting of eight to 12 cells, each holding from two to six tons, where the juice of the beet is leached out by running hot water over the cossettes, the only further use of which is for cattle food. This refuse is known as 'beet pulp.' The 'mother liquid,' as the juice from the cossettes with the admixture of water is called, then is subjected to numerous boilings, filtrations and clarification in order to evaporate the water and eliminate the impurities, after which it is boiled until it forms into crystals, when the thick, hot mass is run into centrifugal machines which throw off the molasses and leave the pure white sugar. The sugar then is conveyed to a granulator, where it is sifted and dried, after which it is sacked, ready for shipment and direct consumption. Prior to 1864, when de Dombasle's invention of the diffusion battery was installed in a factory in Austria, beets were held against a revolving rasp which reduced them to a pulp from which the juice was extracted by hydraulic pressure."

### DRAWBAR HORSE POWER

Answering a question which recently came to the Cultivator Prof. J. B. Davidson of the agricultural engineering department of the university farm at Davis writes: "In reference to drawbar and brake horsepower and fuel consumption of tractors it is rather difficult to answer briefly because it is necessary to discuss somewhat conditions for which the estimates are given. Under usual conditions it may be expected that the drawbar horsepower of a tractor will be about one-half the brake horsepower. In soft ground, as in the case of subsequent tillage operations after plowing, the drawbar horsepower may be reduced to as little as one-third, while on good firm footing the drawbar horsepower may be as much as 60 per cent of the brake horsepower. The kind of tractor will have something also to do with the drawbar efficiency. The average tractor will use about one-eighth of a gallon of fuel per brake horsepower hour. This would of course mean twice the consumption for a drawbar horsepower."

### AN APT COMPARISON

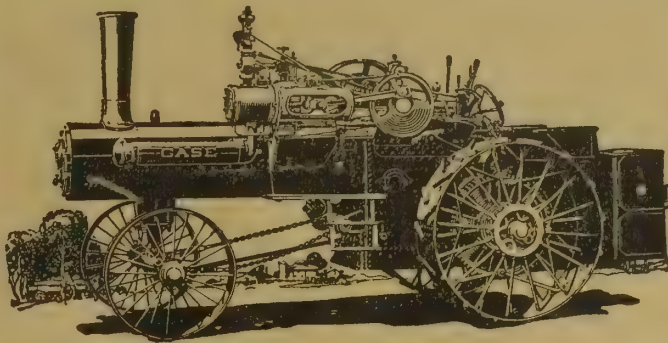
"The farmer who lets his machinery rust and rot and be scattered about all over the place is no better than the soldier who lets his rifle barrel get choked with mud and has lost his bayonet," is one of John Field's apt statements in an Oklahoma Farmer editorial urging farmers to put their implements in good repair at once and keep them so until used again. "Farmers are soldiers of the soil now," he continues, "and they cannot afford to neglect their equipment any more than the soldiers of the trenches can."



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**The California Cultivator**

A Journal of Horticulture, Agriculture and Live Stock

Rural Californian, Established 1877  
 Combined with California Cultivator 1914.  
 Livestock and Dairy Journal, Established  
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 Cultivator 1916

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Saturday, Nov. 10, 1917

## OUR ADVERTISERS RELIABLE

We guarantee our subscribers against loss through dishonesty of any advertiser in the Cultivator. We do not attempt, however, to adjust trifling differences between subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within 30 days from date of the transaction, and the subscriber must have mentioned the Cultivator when writing the advertiser.

## THIS WEEK'S COVER?

Why "grape"fruit? is a question often asked as to the luscious pomelo. Answer is given on the cover this week. The cluster of fruit, eight at least in full view, is not entirely unlike a cluster of grapes, and when it is considered that each one of these fruits is the size of a man's two fists, it is seen that the tree bears some weight when it brings forth many such clusters.

This cluster was grown in Arizona, which state is proving a producer of remarkably fine pomelos. The branch has been stripped of many of its leaves to give full view of the cluster. This photograph was used by courtesy of the Chamber of Commerce of Phoenix.

## TRANSPORTATION

One of the greatest problems confronting the generals in the field is that of transporting foods, munitions and troops and having all where needed, when needed. That problem is not only with the front line trenches but in the most remote regions of the world. In India, Australia and Russia wheat is rotting because of lack of transportation. In the United States we are denying ourselves that our wheat may be sent to those who must have it in order to fight and labor efficiently. Every American shipper is straining every point to load and unload as rapidly as possible. But much of the advantage of our nearness to the fighting forces is lost because of lack of transportation. Tractors and trucks are entering into the solving of the transportation problem in a large way. To make their aid as great as possible our highway construction is being pushed to the limit.

## G. W. HOSFORD

The Cultivator has recently referred to the passing of pioneers in the fruit industry. Now we must refer to the passing of a comparatively young man, taken from most active and patriotic work in encouraging greater production of food, G. W. Hosford, for many years manager of the lemon packing house at San Dimas in Los Angeles County, and more recently field man, passing from orchard to orchard and packing house to packing house, encouraging more and better work in production and in packing. Before taking up this work he was connected with the United States department of agriculture. Mr. Hosford died at the age of 38 years at his home in San Dimas last Sunday. In his passing the lemon industry suffers a great loss.

## ORDER EARLY

Months ago the Cultivator gave warning, because of steel and labor shortage, that implements and tractors, machinery and tools of all kinds would not only be higher in price, but hard to secure. The farmer has found this to be true. The wise ones who are planning a greater season's production next year are already placing their orders. It is nearly a year till bean threshing time again, but doubtless as advantageous figures can be secured today as nine months from today, so immediate orders should be placed. It is to be hoped that the food commission will aid manufacturers in securing sufficient steel and supplies to fill orders of the farmers for equipment they actually need.

Also order next season's supply of seeds, fertilizers, in fact, everything needed.

## PRICE FIXING

The wheat grower has at times felt restive under the fixing of prices for wheat, yet many other growers have felt that even at the advanced labor and other costs wheat may be produced at a good profit at the prices fixed. In any case, the wheat grower can live and be patriotic at such prices.

But the wheat grower is not the only one who has freedom of action under limited control by the government. Prices have been fixed on copper, steel, coal, coke and pig iron. It is announced that this control is for three purposes: first, to enable the public and the government to purchase at fair prices; second, to secure distribution on basis of the country's requirements; third, to prevent the making of large profits and eliminate causes of labor discontent. Presumably many other products will be brought under government price control. See on third page of this issue reference to a movement which aims to control prices of hogs.

The best of it is the greater portion of the people are uniting heartily in support of the government.

## FEAST DAY OR FAST DAY?

There is much speculation as to what President Wilson's Thanksgiving proclamation will contain, whether he will proclaim a Feast Day or a Fast Day. Of course, the Cultivator or any member of its staff would not think for a minute of offering any suggestion to anyone so wise and so capable of conducting the affairs of this country as our worthy president, yet feel that if he should ask for an Annual Fast Day it would meet with hearty approval. The Cultivator believes it

so strongly that the force have agreed among themselves to take the extra amount that they would spend for Thanksgiving dinners and donate it to the Red Cross, the Y. M. C. A., or the K. of C. The Cultivator will also undertake to forward any donation which any one of our subscribers or readers will send to this office, provided there is not one of these organizations in your immediate neighborhood, therefore if this idea meets with your approval and you wish to send us money and ask us to forward it to one of the above organizations, we will gladly do so, sending you a receipt from such organization.

We believe there is no way that we could show our patriotism better than by making this sacrifice, especially on this Thanksgiving.

Of course there is no way of knowing how much the average family would spend, but we would say, taking the nation over, it would run from five to ten dollars. Think what this amount would mean if it was donated to the organizations mentioned above which are doing such splendid work, and how much it would mean to our boys who are in the camps or somewhere in France!

## SPICE IN VARIETY

Variety is the spice of life, and in consideration of the highly spiced, rich Thanksgiving dinners which probably every reader of the Cultivator has enjoyed for many years, may we not use the variety in spicing our Thanksgiving dinner in 1917? We are now conserving at every possible point. Why may we not this year devote of our comfort, or at least of our luxuries, to those who are giving their comfort—possibly their lives—to our country? Instead of roast pork, highly spiced mince pies and other rich dishes of the usual feast, let us reduce this year and let the spice come from the variety, giving the cost for these extras to our soldiers.

## WAR TAXES

Most important of the war taxes, at least so far as Cultivator readers are concerned, is the income tax. While not immediately effective reports have to be made between December 31 and March 1. But that report must cover the 12 months from January 1 to December 31, 1917. The present concern of the farmer is as to the making up of his report for the year. Details will be given in another issue.

## Taxes Effective Now

War taxes on facilities of public utilities became effective November 1. Passenger tickets for transportation by rail or water or any form of motor power on regularly established lines, eight per cent. Commutation tickets for trips less than 30 miles or tickets for transportation where fare is less than 35 cents, no tax.

Sleeping car, parlor car, chair car tickets, ten per cent.

Freight and express shipments, three per cent.

Parcels and packages by express over regular roads, one cent for each 20 cents or fraction thereof.

Transportation of oil by pipe line, five per cent.

Telephone and telegraph messages, when charge is 15 cents or more, five cents.

Life insurance policies, eight cents on each \$100, or fractional part thereof, of amount for which life is insured.

Fire and marine insurance, one cent on each \$1.00 premium. This applies to renewals also. We understand this tax will be paid by the companies carrying the insurance.

Casualty insurance, one cent on each \$1.00 of premium.

## Increased Postage Now Effective

Three cents per ounce or fraction thereof, for letters, excepting drop

letters, which require two cents. Post cards, two cents. Letters mailed by soldiers on duty in foreign lands, no postage.

War excise taxes, next week.

## This Week's War News

The withdrawal of German troops from Russian soil, especially near Riga, for use against Italy has enabled the Russians to recover some of their captured lands.

Herbert Hoover reports the result of food pledge week as a wonderful showing of willingness of American home makers to aid in food conservation. California did her part.

Secretary Lansing reports an agreement between this government and Japan. The United States recognizes that Japan has special interests in China, and Japan agrees that the territorial sovereignty of China remains unimpaired.

The second war chancellor of Germany, Michaelis (Mee-ka-ay-lis), has been dismissed. He is succeeded by a Bavarian, von Hertling, presumably appointed against the wishes of the Prussians in an attempt to hold the rest of Germany in line.

During the past week the war has come closer home and the American people have a fuller realization of the fact that We are at war. American boys have been killed in the trenches in France; others wounded and a dozen or more men captured by the Teutons.

The pressure of English and French troops continues on the west front and gains are reported every day. The British troops under Gen. Haig report the capture of Passchaendale, which indicates that the English have captured the heights and now have only the plains of Flanders before them.

Reports from all the training camps show that the quota of practically every district in the United States has been completed and a mighty American army is being drilled. The patriotic spirit being aroused the country over calls for placing these troops on the European fields as soon as possible.

In 1865 when the copperheads were clamoring for peace Unconditional Surrender Grant said; "We will fight it out on this line if it takes all summer." When peace came it was complete. The secretary of war for the United States says; "This war will end when we win." Lloyd George says; "No road to peace but in victory." It is no time for compromise.

The plunge of the combined forces of the Austrians and Germans into the Austrian territory occupied by the Italian army, and later onto Italian soil, has been a matter of serious concern to the Allies. Guns and reinforcements are being hurried to Italy. Meantime the Teutons have captured the city of Udine (Oo-dee-nay) and crossed the Tagliamento (Tal-ya-men-to) River where it has been hoped Gen. Cadorna could hold out until reinforcements arrived. The Italian troops were taken entirely by surprise almost at the moment they had reason to hope they would have Trieste (Tree-es-tay). The Germans claim to have taken 200,000 of them captive.

## CULTIVATOR CHISEL TEETH

Poor Puss explored the garbage can and muttered, "Dern this Hoover man."

Now! for a long pull, a hard pull and a pull altogether. Pushing is in good form too, but cut out the kicks.

A hog in 1917 is worth two in 1910.

Vegetarianism is having a grand world try-out—and Wm. Hohenzollern did it.

They're not fighting this war—We are.

Meanless day? Huh! Always did like fish.

Wheatless day? Just pass the corn-bread and honey.



# Agricultural News Notes of the Pacific Coast

## Northern California

Did we subscribe for liberty loans?" "Well, Yes."

Solano County hopes for an early lift-out of the anthrax quarantine.

The rice mill at Gridley, Butte County, started up October 19.

Gridley, Butte County, has shipped several carloads of horses to Europe.

Prices of hops are declining. Ores are now reported to be selling between 30 cents.

Butte County laborer has just died from anthrax contracted from diseased cattle.

Gridley hay producer goes to market with his hay on tractor trains, 12 cars to the trainload.

Pomona County is boasting over 100 prize winning apples at the San Francisco Land Show.

The federal farm loan bank at Berkeley has ordered reappraisal of farms in Butte County.

University farm experts advise spraying morning glory at this time of year with arsenic solution.

Solano County stockman has just sold 3000 head of ewes two to five years of age at \$14 per head.

Butte County live stock men are fighting the overflow from rice fields spreading anthrax germs.

The great subsolier recently illustrated in the Cultivator is tearing up the soil in Sacramento County.

Colorado County reports an exceptionally heavy crop of apples. Placer County has shipped 250 cars of fruit.

A forest and field fire in the coast range west of Willows did serious damage and at last reports was still burning.

Butte County's farm bureau campaign is progressing and farmers hope for appointment of an adviser within short time.

There will be more general planting of orchards on the hillsides of Nevada County this coming season than in several years.

Deaths because of fire damage to buildings on the state fair grounds at Colusa are still under way, some estimates claiming \$5000.

Three cattlemen have been arrested by the forest service because of alleged setting of fires in the Stonyford district of the California national forest October 23.

Wool producer of Shasta County is using his goats to produce both wool and milk and has established a successful cheese factory which is handling the milk from 300 goats.

Commissioner Hecke and Sacramento County fruit growers are planning for a great state convention which opens in the city of Sacramento November 21. Horticultural commissioners, however, convene on Monday, November 19th.

Yandotte, Butte County, hopes for early establishment of a great apple producing plant, and millions of berry cuttings will be planted this year to provide the pasture. It is reported that over 1000 acres will be planted.

Sutter County live stock man recently had a valuable Holstein stolen by some miscreant. It was thought at first that this was with intention of introducing anthrax virus, though some of the animals have died. The state veterinarian reports it is not from anthrax.

## Central California

"Over the top with our Liberty loan."

Stockton recently held a chrysanthemum carnival.

Twenty tons of almonds went up in smoke at Lodi last week.

Yosemite stage lines have suspended operations until spring.

Tulare County has made its first direct shipment of eggs to New York City.

The farm bureau at Keyes, Stanislaus County, is discussing drainage problems.

Tulare County estimates its output of oranges will be around 60 per cent of normal.

The Tulare County Poultry Association did \$8000 worth of business in September.

Navel shipping will be much later in the Tulare County section than preceding years.

The Stanislaus Poultry Association is planning for its show at Modesto, December 5-8.

Santa Clara Valley's output of garden and field seeds will be far greater than any preceding year.

Most of the beans are in but some threshing is yet to do. The weather has been most favorable.

The harvest of Manzanillo olives is in full swing and the earlier Missions are beginning to come in.

Oakdale, Stanislaus County, is contemplating the installation of water storage for 100,000 acre feet.

Eight miles of the John Muir trail between Yosemite Valley and Mt. Whitney have been completed.

The annual meeting of the San Joaquin County farm bureau is being held this week Saturday at Stockton.

A demonstration of farm machinery and tractors was made at San Jose last Thursday, Friday and Saturday.

Hanford, Kings County, expects to have construction work on a \$100,000 creamery under way in a short time.

The state veterinarian gives warning that the greatest carriers of anthrax are the large animal-biting flies.

A recent meeting of dairymen at Dinuba, Tulare County, discussed plans for organizing the San Joaquin Valley Dairymen's Association.

The farm bureau of Kern County has placed over 23 tons of squirrel poison in the hands of various members of the farm bureaus.

Madera and other counties are engaging in a sugar beet planting campaign, which means a greater production of sugar than any preceding year.

To encourage the bee industry by enforcing more rigidly the county bee ordinance is one method Tulare County has of increasing the sweet output.

The milling companies at Stockton report more extended use of home grown corn in the manufacture of various table products than in any preceding year.

Practically all the large cooperative organizations of the San Joaquin Valley have become members of the California Federation of Farmers Cooperative Marketing Associations.

Orange growers of Lindsay, Tulare County, held a meeting last Monday and discussed "substantially colored" and what was the intention of California legislators as to the shipping of immature oranges.

## Southern California

"Reached our Maximum on Liberty loan" says almost every community.

Wheat acreage of the Imperial Valley is greatly increased.

Imperial Valley is making a campaign against Johnson grass.

The Festival of Dates called large crowds to Coachella last week.

February 20-28 are the dates of the Orange Show at San Bernardino.

Palo Verde, Imperial Valley, cars of hogs bring the owner around \$1700 in cash.

Many of the farm loan associations of Southern California have joined forces.

Four new pig clubs have just been organized in the Imperial Valley high school.

Coachella Valley pressed dates have been ordered for American soldiers in Europe.

Palo Verde Valley, Riverside County, has just ginned its first bale of long staple.

Late gardens at San Jacinto, Riverside County, were visited by frosts October 20.

Pomona is discussing the securing of a creamery. Two thousand cows are required.

The cotton picking machine plan of harvesting is being renewed in the Imperial Valley.

"The biggest ever" is the report as to the apple show held at Yucaipa, San Bernardino County.

Nearly \$70,000 has recently been advanced Imperial Valley farmers by the federal farm loan bank.

Some poultrymen are finding fault with the business management of the Poultry Producers' Association.

Now comes a stock grower near Colton and reports death of a horse and serious illness of a cow from eating Sudan grass.

Now the turkey growers are getting together. Imperial County turkey producers have organized and will cooperate in selling.

The El Cajon Valley in San Diego County is discussing greater production of wheat and a lesser production of ground squirrels.

San Bernardino County citrus people have organized a league for the purpose of reducing assessed valuations of citrus groves.

The establishment of a branch of the university farm school at Davis is being urged for the experiment station grounds at Riverside.

The Pomona Valley Poultry Keepers' Association is a live wire in the marketing of poultry products of members these days of high prices.

Imperial Valley cotton producers are discussing a cooperative gin and oil mill. They assert that cottonseed prices in the valley are \$12 to \$20 lower than in Texas.

The building of dams for the impounding of a great quantity of water near Whitewater, Riverside County, which will supply lands in Coachella or possibly Imperial Valley, is being discussed.

Because of many flat cars ordered to Eastern states Ventura County road construction work has been seriously handicapped, but the county now hopes to arrange for use of the cars of local beet sugar producers for hauling rock and cement.

## The Coast and General

Instead of \$3,000,000,000 we subscribed \$5,000,000,000.

"More pennies" is the demand of trade. Cause, war taxes.

Louisiana is beginning to ship pecans. The crop will be good.

All exports of sugar from the United States were prohibited October 10.

India has 13 and a quarter million acres in cotton for 1917-18, a million increase over last year.

Arizona has a state seed stocks committee and is investigating as to quantity and quality of seed available for present season's planting. It will meet in Phoenix November 12.

Says "Sugar:" "The able-bodied man who refuses to work these days is not only personally contemptible, but he is a public menace and should be treated as such." Women, too.

Director Forbes of the Arizona experiment station is making a pull for greater production of wheat in that state. Most of the plantings have been at an altitude of 4000 to 5000 feet.

Condense all packages sent for Christmas to soldiers in France. Large parcels cannot possibly be handled by the department. After giving name and branch of service, mark "Christmas Box, Pier 1, Hoboken, New Jersey."

"The Packer" reports that last winter's freeze has cut short Florida's orange and grapefruit crop and that Louisiana's oranges have been damaged by winds. The Florida Citrus Exchange estimates the state's crop at 4,000,000 boxes.

Federal farm loan banks are rapidly getting to a working basis. The country over there is about \$4,000,000,000 loaned on farm mortgages. It is estimated that the greater part of this can be transferred to a five per cent loan instead of the 7-10 per cent which is estimated as present average.

Every broker, jobber, commission merchant and retailer, the latter doing a business of \$100,000 or more a year, must have secured a government license by November 1 or be subject to fine of \$5000 or two years imprisonment, or both. The only dealers in food who are exempt are farmers and country shippers who do a business of less than \$50,000 a year.

Corn growing states are seriously discussing the labor question. The corn has been grown and is ready for the husking peg. One peculiar feature of the situation is the immense quantity which has been turned out by the Southern states. The yield will be great and it is hoped that it will encourage the South in breaking away from exclusive cotton production.

Michigan bean growers are reported to have fixed a price of \$8.00 per bushel for their beans. At the price fixing meeting representatives were present from 20 to 30 bean growing counties in the state and they based this price on a report that the average cost of raising beans this year is \$57.43 per acre and the average crop eight and a quarter bushels per acre. Some of the growers protested that the price was not high enough. At a meeting of the bean jobbers held following that of the growers, vigorous protests against "profiteering" were made.



# Gombault's Caustic Balsam

The Worlds Greatest and Surest

Veterinary Remedy

HAS IMITATORS BUT NO COMPETITORS!

## SAFE, SPEEDY AND POSITIVE.

Supersedes All Caustery or Firing. Invaluable as a CURE for

FOUNDER,  
WIND PUFFS,  
THRUSH,  
DIPHTHERIA,  
SKIN DISEASES,  
RINGBONE,  
PINK EYE,  
SWEENEY,  
BONY TUMORS,  
LAMENESS FROM  
SPAVIN,  
QUARTER CRACKS,  
SCRATCHES,  
POLL EVIL,  
PARASITES.

## REMOVES

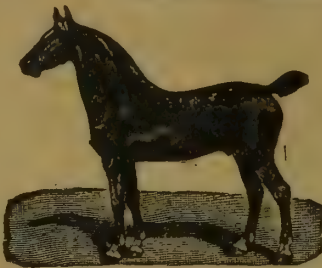
BUNCHES or  
BLEMISHES,  
SPLINTS,  
CAPPED HOCK,  
STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what the most prominent horsemen say of it. Price, \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

**The Accepted Standard  
VETERINARY REMEDY**

**Always Reliable.  
Sure in Results.**



None genuine without the signature of  
*The Lawrence-Williams Co.*  
Sole Importers & Proprietors for the  
U.S. & CANADAS. CLEVELAND, O.

## NOTHING BUT GOOD RESULTS.

Have used GOMBHAULT'S CAUSTIC BALSAM for more than 20 years. It is the best blister I have ever tried. I have used it in hundreds of cases with best results. It is perfectly safe for the most inexperienced person to use. This is the largest breeding establishment of trotting horses in the world, and use year blister often. - W. H. HAYES, Prop., Belmont Park Stock Farm, Belmont Park, Mead.

## USED 10 YEARS SUCCESSFULLY.

I have used GOMBHAULT'S CAUSTIC BALSAM for ten years; have been very successful in curing curb, ringbone, capped hock and knee, bad ankles, rheumatism, and almost every cause of lameness in horses. Have a stable of forty head, mostly track and speedway horses, and certainly can recommend it. - C. C. CRAWFORD, Training Stables, 990 Jennings Street, New York City.

Sole Agents for the United States and Canada.  
**The Lawrence-Williams Co.**  
TORONTO, ONT. CLEVELAND, OHIO.

## Our Spring Pigs Are Mighty Good Buys

We have for sale a limited number of specially selected spring pigs, sired by Mayhews Leader 6th, a son of the \$3000 Grand Champion of the World, Grand Leader 2nd.

These pigs are well developed and are excellent value at their prices. All are cholera immune. The guarantee of Anchorage Farm is behind every pig.

Write today for full information to

**ANCHORAGE FARM**  
ORLAND, CALIFORNIA

Home of STAR LEADER,  
Premier Berkshire Boar of the  
Pacific Coast.



## Hollow-Hill Farm Guernseys

We are offering some bull calves from 4 to 8 months old out of Imported and A. R. Cows and by

**KING OF HOLLOW-HILL 25876**

The sire is a son of Itchen Daisy's May King of Langwater, which was recently sold to a California breeder for the record price of \$8000, and of Caroline of Chilmark 24812 which has just finished an A. R. test with 16,185.9 pounds milk and 722.97 pounds butter fat.

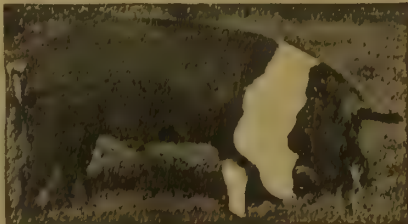
King of Hollow-Hill combines the May Rose blood of Imp. Itchen Daisy III 15620 and Dolly Dimple 19144 with that of Imp. Mashers Galove 8572, Imp. Cora's Governor of Chilmark 8971 and Governor of the Chene 1297 P. S.

The prices on these calves are reasonable.

212 R. F. D. 1 **HOLLOW-HILL FARM** COLTON, CAL.

## Prize Winning HAMPSHIRE

The farmer who wants a hog that puts on 200 lbs. of firm meat at six and a half months of age buys the Hampshire.



F. A. Langdon  
Manager

Llano Vista Ranch, Ferris, Cal.

Boars, gilts, bred and open, for sale from the P. I. E. Champion Hampshire stock, just as nearly perfect as they make them.

F. V. Gordon  
Owner

## Who's Who

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photographs and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Written for California Cultivator



OHIO and Minnesota have sent many of their sons and daughters to the western country, and California boasts a particularly large number from those two states.

Minneapolis, Minnesota, claims Karl Gotshall, and Columbus, Ohio, claims A. R. Magruder. These two enterprising young men are associated in the breeding of registered Holstein

Company of Stockton. His first position was with the Farmers and Merchants Bank in Stockton and very shortly afterward he opened the Bank of Ripon and was made vice president. He is president of Ripon Lumber Company, a director in the Morse Hardware Company, is an Elk, and is married.

A. R. Magruder lived in his native state till he was 21 years of age, and after careful schooling entered the business field in the capacity of credit man for a big wholesale shoe concern in Columbus. After being there for five years he was transferred to the Minneapolis branch where he met Mr. Gotshall and where the friendship was established which later on led to close business connections. In 1912 Mr. Magruder made his first trip west with the Shriners who were having a convention in Los Angeles. Of course he came north to visit Mr. Gotshall before returning East. Mr. Gotshall induced him to get back in the farming game, and the field here looked so attractive that he could not resist. Meanwhile, Mr. Gotshall had been building up a fine business by loaning money to farmers who had dairy stock for security. He induced them to buy pure bred bulls and also females if possible. Then the idea of founding a purebred herd of their own from which they could supply the ever increasing demand for Holstein cattle struck the partners and they bought 11 head of choice individuals, purchased a big ranch, erected fine buildings, and in a short time they had acquired about 75 head of the best they could buy. They will conduct official test work and in time show their herd at the fairs. Here is the best illustration I know of the quick and sure success of the purebred livestock business when founded by energetic and intelligent young men. It cannot lose, and the particular part of the state where Gotshall and Magruder settled is not at all sorry they came.



Left, Carl Gotshall; right, A. R. Magruder

cattle at Ripon, San Joaquin County, under the firm name of Gotshall & Magruder. The story of how, why, and where they got into the pure bred stock business in California is briefly told.

Mr. Gotshall attended school in Toledo, Ohio, after his father moved there from Minneapolis to go into the banking business. It was from him that he learned the fundamentals which have stood him in such good stead since he branched out for himself. He came to California in 1910 through the friendship of P. E. Holt, president of the Holt Manufacturing

## Korn Kontest



PRODUCERS and merchants of Earlimart, Tulare County, recently staged one of the most successful little fairs or contests of which we have heard. It was a Korn Kontest. The contestants were producers of milo,

raising milo, irrigation, raising raisins, etc. W. L. Norris writes as to the winners: "The crowd manifested much interest in the selection of seed and the production of better crops of all kinds. The winners of the contest were: first prize for milo, C. M. Kig-



A Quartet of Producers

Milo, kafir and feterita are becoming great wealth producers for California. These are some of the exhibits made at the Earlimart Korn Kontest.

kafir and feterita, and we are told the exhibits were well worth the prizes offered, which consisted of sacks of sugar, potatoes, flour and similar products.

At the formal opening of the contest there was a program consisting of an address of welcome and, of course, as is always in order, discussion of Red Cross work and appeal for its support, with other addresses on co-operation among farmers, methods of

gins, recently from Los Angeles; second prize, O. N. Garrison, an extensive farmer, raising alfalfa, hogs and also operating a dairy; third prize, H. T. Franklin, one of the leading poultry raisers of the district. The first prize for kafir was taken by Lloyd Wade and for best feterita by G. S. Snyder an old time Iowa farmer."

There is an area of some 40,000 or 50,000 acres of land contributory to the Earlimart section which is as yet





More Sorghum Grain Exhibits  
One of the fine displays of milo at the Earlilmart contest.

gely undeveloped and one of the  
tures of this contest was to show  
erein these lands produced wonder-  
crops. Of course there were ex-

hibits of alfalfa and other crops pro-  
duced in the same section but the  
greater interest centered on the three  
sorghums mentioned.

## Jack Cheese

**J**ACK cheese is made every morning from night's and morning's milk. The mixed milk should not test higher than 0.16 per cent acidity and should have a clean flavor. Standardize the milk to 3.1 or 3.2 per cent fat. Heat the milk to 86 degrees Fahrenheit and add 0.5 to 1.0 per cent commercial starter (clabbered milk). Add sufficient rennet (about six ounces per 1000 pounds milk) to curdle the milk ready for cutting in 25 minutes. Dilute the rennet about 40 times its volume with cold water before adding. The time for cutting is determined by the same method as for Cheddar, testing the curd for firmness. The curd is also cut in the same manner as for Cheddar. After cutting the curd should be allowed to stand a few minutes before stirring, then stir gently with the hands. Stir the curd sufficiently during the cooking process to prevent matting. The heat should be applied ten minutes after cutting to raise the temperature raised to about 100 to 112 degrees Fahrenheit in 35 minutes or at the rate of about 3 1/2 degrees in five minutes. It will take about 35 to 45 minutes to firm the curd after it reaches the maximum temperature, but the only method for determining the time for dipping should be the firmness of the curd. The curd should be slightly rubbery but not so firm as curd for Cheddar cheese. The whey is removed and the curd stirred sufficiently to remove the excess whey. Too much stirring injures the curd; do not handle it roughly. Salt is added while the curd is warm at the rate of three pounds per 1000 pounds milk and after it is thoroughly mixed and dissolved the curd is ready to press.

### Molding the Cheese

The press cloths used for molding these cheese are made of heavy sheeting and are about 34 inches square. The cloths are laid out evenly, one over the other, and are spread over the top of a large open pail. Push the center down to the bottom of the pail, saving the edges hanging over the sides. Sufficient curd (about seven pounds to make a six pound cheese) is weighed out and poured into the top press cloth. The four corners of the cloth are caught up with the left hand, while with the right hand the curd is formed round and the cloth straightened. The cloth is now taken up lightly over the curd with the left hand, while the cheese is given a rolling motion on the table, with the right hand, pressing at the same time to expel the whey. This twists the press cloth tightly over the curd, where it is tied with a string. The excess cloth is spread out evenly over the top of the cheese and it is then ready for the press.

### Pressing

The cheese are pressed between two wooden planks, 12 inches by 1 1/2 inches surfaced; the length will depend upon the number of cheese pressed or the size of the room. The first board should be laid with a slight slant to permit the whey to drain off readily. These cheese are then placed in the center of the board about one inch apart after which another board

is placed on top. If necessary the cheese can be placed four or five layers deep if a board is placed between layers. Best results can be gotten by placing the boards and cheese in an ordinary upright cheese press. Another method is to brace the first board, near a wall, about three feet from the floor; then level with the top board a lever (2 by 4, 5 feet long) is fastened to the wall with a hinge which will allow it to be raised or lowered. These levers, one every four feet, are laid over the top board and a weight (about 100 pounds) is fastened to the other end. This acts as an automatic press. The cheese are left in the press about 15 hours, after which they are removed, the press cloths taken off, and the cheese laid on the shelves. If the press cloth sticks to the cheese, pulling out pieces of cheese when removed, this indicates that the surface gets too dry while in the press. Water thrown on the cheese occasionally or the room kept moist will prevent this. In about two days after removing from the press the cheese should be dipped in hot (200 to 220 degrees) Fahrenheit paraffine and held there for 10 seconds. This will prevent shrinkage and gives the cheese a neater appearance.

### Half Skim Jack Cheese

Milk used for half skim Jack cheese should test 1.8 to 2.0 per cent fat. The night's milk may be skimmed and the skim milk mixed with an equal amount of morning's whole milk. The rate of rennet extract should be decreased sufficiently to curdle the milk ready for cutting in about 45 minutes. The cooking temperature should be lower; about 104 to 106 degrees Fahrenheit and the whey should be removed when the curd is about the same firmness as for full cream Jack. The cheese should not be paraffined as they are usually dried for grating purposes.

The above is from a circular written by Prof. H. S. Baird of the University of California. The full circular with more explicit information will be given out by the university later.

### TOPPED SANTA ANA SALE

The sale of registered Holsteins at McClure Farm, Santa Ana, October 16-17, was topped by the McClure cow, Inka Wayne Pietertje Beets, who went to McAllister and Sons, Chino, at an even \$700. She is a daughter of the great sire, Sir Skylark Ormsby Hengerveld, and looks good for a large record in the hands of her new owners. The McAllisters also secured another of the top females in the sale, a very promising two year old granddaughter of Rag Apple Korndkye 8th. The absence of any considerable number of breeders at this sale left a clear field in the bidding to many dairymen and beginning breeders who secured excellent foundation animals at most moderate prices.

Col. Ben A. Rhoades and Harold B. Rhoades handled the auctioneering in a most satisfactory manner, the junior colonel performing especially well with the highest priced animals in the sale.

The sale was managed by California Breeders' Sales and Pedigree Company, Sacramento.

## Kings County Breeders' Directory

### Big Type Poland Chinas

Won Grand Champion Sow at State Fair  
Won Reserve Champion Boar at State Fair  
Won Grand Champion Sow at Hanford  
Won Grand Champion Boar at Hanford

Wm. Bernstein

HANFORD - CALIFORNIA

### HOLSTEINS

32 Females

Herd Sire Juliana De Kol King Segis  
Grand Champion Kings County Fair  
CHOICE BULLS FOR SALE

A. B. COMFORT - Guernsey, Cal.

### HOLSTEINS

Select Herd Headed by  
CREAMCUP FIDESSA CORNUCOPIA  
DE KOL  
A SON OF FORMER STATE RECORD COW  
Nicely Marked Calves For Sale

### Poland China Hogs

The California Farmers Hog  
Make Rapid and Cheap Gains  
PRICES REASONABLE

ROSSMEAD FARM, Hanford, Cal.

### The Little Kingdom of Kings

Kings of the soil and the products thereof,  
till the lands of rich Kings County

## Poland Chinas, Medium Type

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain. 12 firsts, Junior Champion and Reserve Grand Champion Boar. Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

M. Bassett

Hanford, Kings County, Cal.



## Santa Anita Rancho

Anoakia Breeding Farm

**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by Imported Stallion Ibn Mahruus, head of our Arabian stud. Dams are the choicest thoroughbred mares on Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahruus, world renowned imported desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the best blood lines. Meet all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted California State Record Cows. Prince Gelsche Walker, and bulls from one World Record sow and two California State Record Cows. Write for details.

Correspondence Invited

Anita M. Baldwin

W. H. TAYLOR, Superintendent

Santa Anita, Cal.



Awarded Gold  
Medal Pan.-Pac.  
Exposition

## Why Use Dirty Coal-Tars or Dangerous Carbolic Acid

When you see these words what sort of a product do you think of? Probably a dirty, vile-smelling, oily coal-tar or dangerous carbolic acid.

Then you will quickly see the remarkable advantage of using B-K, the POWERFUL disinfectant with ten times the germ-killing strength of undiluted carbolic acid, as B-K is not a poison—contains no acid to sting, or dangerous drugs to poison—no oil to gather filth on stock. B-K is clear and clean as water, and as easy to use. You should use B-K regularly for spraying barns and stock—hog pens and poultry houses—for dipping the birds and stock as well as for mixing in the drinking water. If your dealer does not have B-K, send us his name.

FREE BULLETINS—Ask for complete information—"trial offer" and bulletins on Farm Disinfecting—Contagious Abortion, Calf Scours, Hog Sanitation or Poultry Raising.

Dealers wanted in every town.

General Laboratories

3117 S. Dickinson St.  
Madison, Wis., U. S. A.

## Hauser's Digester Tankage

GIVES GREATEST VALUE FOR LEAST MONEY.  
IT MAKES THEM FAT.

Hauser Packing Co.

Los Angeles

10  
2 Year  
Old  
BULLS

### SHORTHORNS

H. L. & E. H. Murphy  
Perkins - - - California

8  
BULL  
CALVES



# Unusual Holstein Offering!

Our consignment to the Quality Sale, Sacramento, December 5, 1917, consists of the following ten highly bred animals, all of show ring type and quality.



Miss Korndyke Mercedes

Miss Korndyke Mercedes 121428, Grand Champion cow—California State Fair, 1917. Heavy in calf to King Segis Alcartra Abbecker, a 30 pound son of the \$50,000 Bull.

Miss Pontiac Nudine of Springvale 175955, who has a 30 pound record made at five years. Heavy in calf to King Segis Alcartra Prilly, a 30 pound son of the \$50,000 Bull, and Grand Champion Bull at California State Fair, 1917. Also a yearling daughter of this cow by a 30 pound sire and bred to King Segis Alcartra Prilly.

Oakvale Jennie Korndyke 173499. A five year old cow with a 27 pound record, who has a 30 pound full sister. Heavy in calf to King Segis Alcartra Prilly.

Two daughters of the \$50,000 King Segis Pontiac Alcartra. One from a 31.35 pound dam—one whose first seven dams averaged over 31 pounds butter in seven days. Both bred.

A daughter of King Walker 5th and out of a 30 pound cow. Safe in calf to King Segis Alcartra Prilly.

A daughter of the great sire It and from a 27 pound three year old daughter of King of the Pontiacs. Bred to King Segis Alcartra Prilly.

A daughter of King Mead of Riverside and from a 23.63 pound dam, whose dam is a 30 pound cow. Bred to King Segis Alcartra Prilly.

A great young bull born January 11, 1917. A high class show bull whose dam is a 31.70 pound five year old, and capable of increasing present record. His sire Spring Farm King, who is a 34 pound son of King of the Pontiacs and a full brother to the first 44 pound cow K. P. Pontiac Lass. The records of the first three dams and the sire's full sister of this bull average 34.41 pounds butter in seven days.

## BRIDGFORD COMPANY

KNIGHTSEN, Contra Costa County CALIFORNIA

# World's Record Breeding

Bull born July, 1916. A good well grown individual with four near of his pedigree averaging over 30 pounds in seven days. His own dam has a record of over 28 pounds with a prospect of increasing it at next freshening.

His dam and sire's dam average over 25,249 pounds milk and 1026 pounds butter in one year.

Where can you beat this combination?

Write now for further particulars of this and a few other bulls we are now offering.

## J. S. Gibson Co.

Dairy Dept.

Williams, California



SAVE YOUR HOGS

## Economy Powder

and They Will Always be in Prime Condition  
Send for Sample and Free Stock Book  
Economy Hog & Cattle Powder Co.  
Hearst Bldg. San Francisco, Cal.

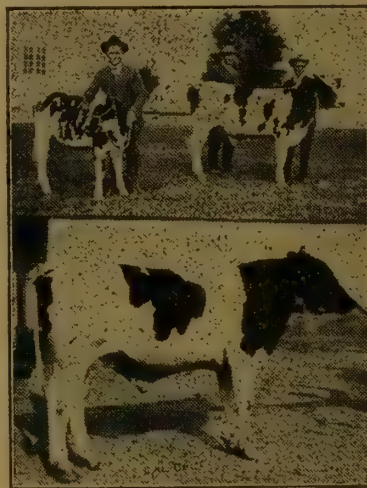
Make the reading of advertisements in the California Cultivator a habit. They will broaden your knowledge of the manufacturing improvements.

## Sacramento Holstein Sale Makes High Average

Written for California Cultivator



THE public sale of Holsteins at Sacramento, October 29-30, conducted by the California Breeders' Sales and Pedigree Company, exceeded the estimate made by the officers of the company by nearly \$3000. Ninety-six head in all were auctioned off for a grand total of \$27,480, an average per head of \$287. Thirteen bulls averaged \$376 and 59 females averaged \$328. Top bull brought \$900 and top female, \$775. There is not a doubt that the averages would have been considerably higher had some of the consignors made it a point to have their stock in prime sale condition. That these consignors made a costly mistake, which reflected not only on their business acumen but on the breed itself, was admitted after it was too late to remedy the fault. This sale was the



Sacramento Holstein Sale

Upper: Geo. Cressy at left, holding his \$610 heifer. At right, Jack Campbell, posing the son of Prince Gelsche Walker. In center, W. H. Taylor, manager Santa Anita Rancho. Lower, King Ignaro Mead, \$900, top of sale, consigned by Morris & Co., bought by Chas. Yocum.

third held by the Pedigree Company. C. L. Hughes, manager. Ben Rhoades and son Harold cried the sale.

The sale was replete with features. Several bankers from different parts of the state availed themselves of this opportunity to invest in Holsteins for the first time. If the sale did nothing else than to accomplish this it was well worth the expense. Vice-president McCormick of the Southern Pacific, attended the sale and purchased his first Holstein. Geo. A. Cressy, Modesto banker, was a heavy buyer. Gion Gibson paid the top price for females in the sale, \$775 for Woodcroft Gem Cornucopia, 168031. Chas. Yocum of Tulare purchased a large number of animals, all choice ones, including the top price bull, King Ignaro Mead. C. A. Miller of Ripon, bought Bridgford's January bull calf, Nudine Butter Boy. One of the very best buys of the entire sale was that of Prince Gelsche Walker 11th, the year old son of Prince Gelsche Walker, by Jack Campbell, Escalon. W. J. Higdon, Tulare, who rarely misses a good Holstein sale, brought a long string including the promising cow, Pauline Soldene De Kol 3rd. Mrs. Annie Donders of Fresno showed her knowledge of Holstein breeding and individuality by the purchase of several outstanding animals in the sale. There were numerous other bargains picked up at this sale, and the buyers without exception were more than satisfied. Frank Morris did not overlook a single opportunity to buy in all the granddaughters of Tilly Alcartra, and he also got a fine daughter of King Korndyke Sadie Vale 27th.

The presence of A. A. Hartshorn of Hamilton, New York, the last day of the sale was a big surprise to all present. He made a short talk, laying particular stress on the danger of sacrificing production to type, saying that because a cow had a sloping rump or a poor top line she should not be condemned without knowing whether she was a big producer or not. Mr. Hartshorn is considered one of the greatest Holstein breeders in America. He has bred and developed a long line of famous

sires and dams including Prince Gelsche Walker, and the King of the Black and Whites, two sires now owned in California. The great foundation cow, Prilly, was one of the three females upon which his fortune was built.

Consignors: Bridgford Company, Frank Hatch, Fred W. Kiesel, McAlister and Sons, A. W. Morris and Sons Corporation, Santa Anita Rancho, University Farm, A. A. Merkeley.

### Animals Sold and Purchasers

W. J. Higdon; Pauline Soldene De Kol 3rd, \$650, Heng. De Kol Segis Korn, \$320, Meadmore Prilly Queen, \$295, Cloth Beauty Pon Veeman \$165, Countess Del Cream \$130, Lady Pont. Helegen Jewell \$115, Cora Aral Walker \$325, May Seg. Linwood \$370, Jen. Seg. Linwood \$320. Gotshall & Magruder; De Kol Princess Belle 2nd \$425. R. L. Holmes; Lady Victoria Walker \$705, Segis Tarde Maid \$125, Jane Cream Hengv. \$400. V. L. Vogel; Countess Pontiac Win Segis \$190. C. A. Miller; Marian Liewukge Walker \$370, Mech. Aralla Walker \$385, Nudine Butter Boy \$800. Mrs. Annie Donders; Josephine De Kol Cedarside \$605, Vic. Bruera Johanna \$130, Hel Fobes of Lin. \$300, De K. Barnum Segis \$255, Aralla De K. Pont. Susie \$435, Ch. Ing. Linwood \$175. Napa State Hospital; Queen of Hopland \$200, Niko Joh. De K. of Sunny-side \$340, Toma Corn. Piet \$225, Mabel Parth. Beets \$230. H. C. Muddox; Unahanna, Fairview Korn. \$265, Barrington Johanna Korn. \$395, Prince Gel. Walk. 12th \$300. George Winter; Sterling Jewel Doris Aaggie Grace \$200, Leoncillita Tritonia \$60, K. M. of Riverside 5th \$250, Johan Korn. Vina \$165. A. Schmidt; Frieda Korndyke \$180. Geo. Robinson; Tula Pietj. Julianna \$185, Lady Daf. of Ceres \$170, King Pon. Stanis. \$70, Creamelle De Germaine \$135. Chas. Yocum, Anelen Creamelle \$75, Yama Prin. Alcar. Lass \$165, Nellie Tula Piet. Burke \$330, Emp. Nydia Cream. \$190, Tula Piet. Starlight \$285, Albina De K. Nev. \$250, King Ignaro Mead \$900. Jones & Son; Fanoria 2nd \$200. Frank Helm; Blamor 3rd \$270, Corda Johan Cream \$165, Talma De K. Segis \$115, Alamo Col. Ormsby \$350, Isabel Korn. Crane \$300. W. B. Atterbury; Geneso Bel Alcartra \$155, Burpl Cornucopia \$60, Charlotte Joh. De K. \$90, Dekolando Alcartra \$70, Alma Gem Queen \$90. J. N. Christensen; Diosa Vale \$175, Lady Butter Dell \$155, Colantha Gera Vina \$75, Emp. Conten Crmcp. \$240, Prince Har. Alcar. Walker \$200. R. E. Clifford; Alamo Gen. Maid \$215. A. W. Morris & Sons Corp.; Miss Lida Alcartra, \$500, Dora Kar Tilly Al. \$420, Lady Beets Alcar. \$500, Marcella Agg. Alcar. \$275. E. O. McCormick; Inka Alcar. Poesh \$305. Fred W. Kiesel; Dora Walker \$400, Cleo S. V. Const. \$210, Pauline Model Artis \$300, Gold Model De K. \$400, Anoakia Walker \$320, Floss Joh. S. V. \$225. Bridgford & Co.; Pauline Artis S. V. \$380, King Mead of Riverside 3rd \$200. V. F. Dolcini; Miss Gerb. Col. Fayne \$310, Maud Sar. Linwood \$285. Dr. E. J. Weldon; Joh. Wil. Korn. \$225, Queen Har. De K. Korn. \$325. J. S. Gibson Co.; Woodcroft Gem Korn. \$775. J. H. Miller; Loc. Grove Queen Beauty \$335. George A. Cressy; Anoakia Josh Walker \$610, Pietj. Lyons Pont. \$260, King Kelco S. V. \$100. Peter Posten Bros.; Nat. Tan De Kol \$150. A. F. Schledecker; Prince Aaggie Korn. Walker \$285. C. H. Hobart; K. M. of Riverside 6th \$235. J. M. Campbell; Prince Gel. Walker 11th \$675. C. L. Morse; Korn. Seg. Alcar. Abbecker \$210.

## Field Notes From the Live Stock Men

The Southern California Duroc Jersey breeders made a fine display at the Riverside fair. Buttons advertising the red hog were worn and no opportunity overlooked to place the merits of their favorite breed before the people.

Dr. J. A. Crawshaw writes: "I am proud to say that I was successful in obtaining a son of Gerstale Jones, the \$6600 boar, to head my herd and improve the Poland-China blood on the Pacific Coast. He is doing well, and every one that sees him thinks he will make a humdinger."

Hundreds of swine breeders attended the swine day exercises at Iowa state college. Dean Curtis referred to the fact that there was a shortage of at least eight per cent in the swine crop while almost all other crops had increased to meet the demands of the food administration. Another year and



his report must be different, for the hog is as important a factor in defeating the Germans as is wheat or corn.

James Mills, proprietor of the famous Mills Orchard Company in Butte county, and an extensive breeder of livestock, was a visitor at the Riverside fair. Mr. Mills is going to sell out his Holsteins and purchase pure bred horthorns. His facilities for handling the latter breed are of the best.

Stalder Bros., Riverside County Holstein breeders, are more than pleased with the calves sired by their herd sire, King Pontiac Netherland Segis sire. They all give promise of becoming great producers and will be given every opportunity to make good records. A. J. Stalder has christened the farm, Rosamaines Rancho, and it will be known hereafter under this name.

The new stock yards at Fresno are rapidly nearing completion. The

## Economy of Keeping Sheep

WOULD not know how to do good farming without sheep," declared George McKerrow of Wisconsin, one of the best and most widely known sheep breeders of America, upon a recent visit to the food administration in Washington. "Why?" he continued, "Because my sheep use up the wastes of the farm. They clean up the grass, weeds, brush and gleanings, and in so doing turn into cash what otherwise would be lost."

"Sheep," said Mr. McKerrow, "make the most economical gains of any kind of livestock because they clean up the odds and ends. They are particularly useful on the farm in the fall of the year, for they turn into cotton the things that otherwise would not be used. At the same time they save the feedstuffs that would be given them if they did not have access to these other things."

After harvest, Mr. McKerrow's sheep are turned into the oat fields for a few hours the first day, an hour or two longer the second day; and the time gradually increased until at the end of a week they have complete possession of the fields. The lambs are permitted to enter the corn before it is cut and they clean up on the weeds and lower corn plant leaves. The lambs do not pull down the lower ears of corn as do the sheep. Roots are grown for the cattle and sheep, and after the larger roots are hauled to storage for winter use, the sheep are turned into the field and eat the smaller ones that remain. Both the sheep and lambs are turned into the aftermath of the meadows and this brings them into winter quarters in good condition.

Another profitable practice on this farm is that of plowing up fields that become weedy after harvest. These fields are sown to rape and turnips, and later the sheep are turned in. They eat the rape and turnip tops with relish and will later hollow the meat from the turnip, leaving but a shell.

Mr. McKerrow has found that a frequent change of pasture is beneficial to the sheep. A 36-inch woven wire fence in 20-rod lengths is moved about, thus preventing the too short cropping of the grass, and furthermore reducing the internal parasite plague to a minimum. Water is also an important consideration, and ewes particularly should have water the same as dairy cows.

"I would not go so far as to say

packing plant will be handling its capacity in cattle, sheep, and hogs by October 15. It was originally intended as a producers' cooperative killing organization but was finally financed by private capital. If the management pays top prices for its material and gives the producer fair treatment there is no reason why everybody concerned should not benefit.

R. H. Whitten, owner of the Whitten Ranch at Terra Bella, has purchased of R. W. Halford, Manning, Iowa, the top boar pig of his spring crop. The boar was sired by the 1100 pound Big Bob, the breed's greatest sire of herd headers, and was out of a mammoth, prolific sow by the noted 1106 pound Long Jumbo. This Big Bob-Long Jumbo cross has produced many Eastern prize winners, and Mr. Whitten has named his new boar Whitten's Big Bob. This gives Mr. Whitten six herd boars.

that there should be some sheep on every farm," declared Mr. McKerrow, "for peculiar conditions might not make it practical, but I do believe that there should be sheep on the vast majority of farms in this country. They turn waste into cash. The sort of saving that the good housewife is making in her kitchen can be practiced with corresponding effectiveness by the use of sheep on the farm."

### POWDERED HELLEBORE PREVENTS FLIES BREEDING

A safe and effective weapon against the typhoid or housefly has been found in powdered hellebore. Flies lay their eggs chiefly in stable manure. Powdered hellebore mixed with water and sprinkled over the manure, will destroy the larvae which are hatched from the eggs, but it will not kill adult flies which must be swatted or trapped.

It has long been known that flies breed in manure, but previous methods of destroying the larvae there by the use of strong chemicals have been open to the objection that the treatment under some conditions lessened the fertilizing value of the manure or actually injured vegetation. This is not true of powdered hellebore. Government experiments have shown that the hellebore is entirely decomposed in the course of the fermentation of the manure and that even in excessive quantities it does no harm except to the larvae it is intended to destroy. Chickens picking in manure treated with it suffer no ill effects.

One-half pound of powdered hellebore mixed with 10 gallons of water is sufficient to kill the larvae in eight bushels, or ten cubic feet, of manure. The mixture should be sprinkled carefully over the pile, especial attention being paid to the outer edges. In most places hellebore is obtainable in 100-pound lots at a cost of 11 cents a pound. This makes the cost of the treatment a little less than sevenths of a cent per bushel of manure. A liberal estimate of the output of manure is two bushels a day per horse. The money involved is, therefore, trifling in comparison with the benefits to the individual and the community from the practical elimination of the disease spreading fly.

## California Live Stock to So. America

Written for California Cultivator By F. F. Stonerod

IN the huge total of pure bred live stock importations to South American countries our Pacific Coast breeders have supplied but a very limited amount. England, Scotland, Holland, and Denmark, in the order named, have been the leaders up to a few years ago when our Eastern and Middle West breeders commenced to cut in on the trade. This is the reason why the shipment to Chili of California bred stock this fall is of so much importance to the industry in our Pacific Coast states.

Before writing about this particular exportation to Chili, let us hear

what Mr. E. Susaeta, the representative of Chilean interests, has to say about this wonderful country. Mr. Susaeta was born in Spain, went to Chili a few years ago and secured employment in a Valparaiso mercantile house. A college course in Chili, close study of local conditions, and natural ability won him recognition which resulted in his association with the firm of Gonzalo Campo Compania, of Talagante. Mr. Susaeta came to California a few months ago to take a post graduate course at Berkeley and, after securing his degree, he went to the University Farm at Davis for an agricultural course. After finishing

## THROUGHOUT THEIR WHOLE LIVES

you will be able to point with pride to the Holsteins you bought in the 1917 GUARANTY SALE, and long after they are gone you will still be reaping the harvest from sowing their prepotent blood in your herd.



Sacramento  
California  
Wednesday  
December 5  
1917

### FIRST RANK BREEDING SUPERB INDIVIDUALITY

Six 30 pound cows.  
Fourteen daughters of 30 pound cows.  
Two daughters of 29 pound cows.  
Two 28 pound cows.  
Six daughters of 700 pound cows.  
Four daughters of 27 pound cows.  
Two 26 pound cows.  
Four daughters of 26 pound cows.  
Twelve heifers and cows with records from 20 to 25 pounds.  
One 1000 pound yearly record cow.  
A daughter of a 1000 pound cow.  
Two 800 pound cows.  
Four daughters of 800 pound cows.  
Six daughters of 700 pound cows.  
Three 600 pound cows.

### Highest Record Bulls Ever Offered in the West

Son of a 36 pound junior three year old; son of a 41 pound bull and a 35 pound world's record first heifer; son of a 33 pound cow that made over 1,000 pounds butter in one year; son of a 41 pound bull and a 30 pound cow; son of a 32 pound cow that will make around 1,200 pounds butter this year; son of a 34 pound bull and a 31 pound cow; son of a 29 pound cow that has a 34 pound three year old daughter; son of a 25 pound daughter of a 34 pound cow; son of Prince Gelsche Walker, out of a 27 pound four year old; son of a bull whose dam and sire's dam were both world's record cows, out of a 23 pound junior two year old daughter of Prince Gelsche Walker.

COMMITTEE OF SELECTION  
FRANK L. MORRIS  
JAMES W. McALISTER, Jr.  
C. L. HUGHES

AUCTIONEERS  
COL. BEN A. RHOADES  
COL. J. E. MACK

MANAGEMENT OF

CALIFORNIA BREEDERS SALES AND PEDIGREE COMPANY

J. M. HENDERSON, Jr., Pres.

C. L. HUGHES, Sales Mgr.

Sacramento, California

### PROFITABLE HOGS

are the healthy ones; and the problem of the hog raiser is to keep them so.

For scours, thumps, distemper and other ailments, try Sloan's Liniment. Quickly effective and promptly relieves. Have it always handy. You will find many uses for Sloan's Liniment in your home.

At all dealers. 25c-50c-\$1.00.  
The \$1.00 bottle has six times the amount of the 25c size.



Sloan's  
Liniment

Rossmead Farm

POLAND-CHINAS

Won second on boar and sow P.P.I.E. 1915. Champion sow at Fresno and Hanford 1916. Young stock of this breeding for sale.

F. D. ROSS

Hanford, Cal.

### Papac Cutter and Blower

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Save Money, Power, Expense of Upkeep and Labor. It lasts always and has a positive guarantee. Ask for Catalogue.

SIMPLEX SILO

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Berkshire Hogs—Milking Shorthorns

Breeding Stock For Sale

G. A. Murphy - Perkins, Cal.

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BURN KERO-OIL. Easy to use—easy to own. Save \$15 to \$200. Immediate Shipment. New Book FREE.  
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### HOLSTEIN-FRIESIAN CATTLE

Registered young bulls from best families.

### REGISTERED BERKSHIRE PIGS

Masterpiece, Longfellow, Robin Belle, Rookwood, Duchess and Rival's Champion's Best Strains. Fine individuals of both sexes—we pay registration fee. Careful attention given to mail orders.

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WHITTIER, CALIFORNIA

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Reduces Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Swellings; Stops Lameness and allays pain. Heals Sores, Cuts, Bruises, Bait Chafes. It is a

SAFE ANTISEPTIC AND GERMICIDE

Does not blister or remove the hair and horse can be worked. Pleasant to use. \$2.00 a bottle, delivered. Describe your case for special instructions and Book 5 M Free.

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### HOLSTEIN-FRIESIAN CATTLE

From my herd of 75 registered Holsteins, can spare ten yearling heifers and heifer calves splendidly bred, closely related to 30 and 40 pound cows.

One bull calf, whose eight tested nearest dams averaged 31 pounds weekly butter record.

One service bull from 29 pound dam. 102 pounds milk one day. His two nearest dams through sire yearly record average 21,000 pounds milk and 812 pounds butter.

Write me for low prices and further information.

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"California's Favorite"  
for nearly 20 years

For the Prevention of Blackleg  
in calves and young cattle

Their superiority is due to nearly  
20 years of specializing in  
"Vaccines and Serums only."

Year in and Year Out they give  
better satisfaction than any  
other vaccine made, and the  
cost of a few cents per dose  
is cheap insurance against a  
disease that always takes the  
fattest and best.

Single Pills may be used for ordi-  
nary and range stock.

Double Pills should be used for  
pure bred and high grade stock.

Use any Injector, but Cutter's  
simplest and strongest.

Prices:  
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10 dose pkge. Double Pills 1.50  
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Cutter's Pill Injector.... 1.50

Insist on Cutter's. If unobtain-  
able, order direct.

Write for new booklet, "The  
Control of Blackleg." It tells  
about Anti-Blackleg Serum  
which cures Blackleg and  
may be used simultaneously  
with vaccine to combat out-  
breaks and safely protect val-  
uable stock.

The Cutter Laboratory, Berkeley, Calif.

The Cutter Laboratory of Illinois, Chicago  
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## Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count  
Glory, 426982, grand champion at  
the California State Fair, 1916.  
Berkshire herd won Premier Ex-  
hibitor's banner at P. P. I. E.

513 Hearst Bldg., San Francisco  
Carruthers Farms, Mayfield, Cal.



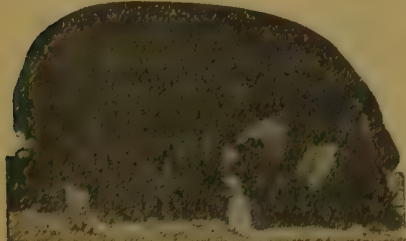
Pure and Cross-Bred Rambouillet Range  
Sheep. Also Breed Hampshires.

## Mutton and Wool

J. BIDEGARAY

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## Large Type Poland Chinas



W. H. Browning  
Woodland, Yolo County, Calif.

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most efficient, simplest, most modern des-  
igned separators, from highest quality ma-  
terials, and sell to you at lowest manufacturers'  
prices—less than wholesale.

Nearly 100,000 Galloway Separator giving  
satisfaction everywhere. Four practical sizes. Also  
milk canners and creamers. 500,000 satisfied cus-  
tomers prove it in your vicinity. Close shipping points  
everywhere. My free catalog honestly describes  
Galloway goods. Get it before buying. Please  
mention advertisement wanted.

WM. GALLOWAY CO., Box 3013, Waterloo, Iowa

Better service is assured by the advertiser if when  
writing you mention the California Cultivator.

at Davis he was commissioned by his  
firm in Chili to purchase a bunch of  
Holstein-Friesian cattle and a few  
choice hogs so the stock could be un-  
der his personal care when he sailed  
for home. That Mr. Susaeta has pur-  
chased one of the best lots of Cali-  
fornia live stock yet to leave the state  
will not be questioned.

But we are running ahead of our  
story. To hear Mr. Susaeta discuss  
Chili and its possibilities one can read-  
ily understand why his people down  
there sent him to California on an  
important mission. If he remains  
much longer he is liable to persuade  
some of our Californians to return  
with him. Chili is as large as the



Senor E. Susaeta

A live stock producer who will soon re-  
turn to Talagante, Chili, with some of  
California's best bred Holsteins and pure  
bred swine.

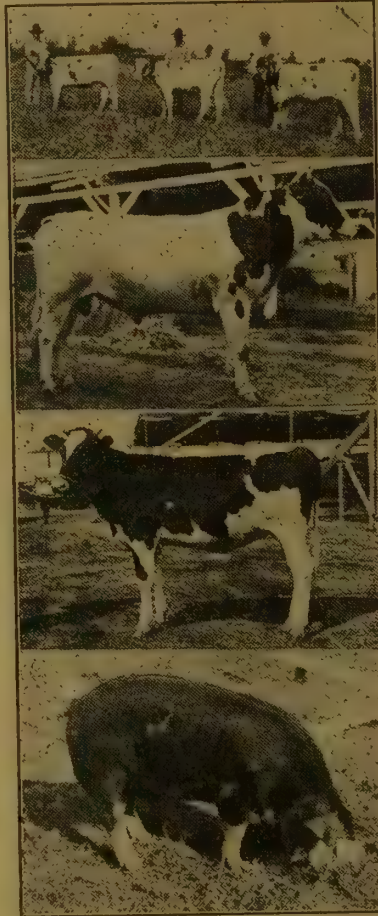
states of California, Oregon, Wash-  
ington and British Columbia combin-  
ed. The southern part is devoted to  
beef cattle and sheep raising, the  
northern part to dairying and hog  
raising. Chili produces more nitrate  
of soda than any other country and  
is a leader in copper production. Her  
central valleys are very similar to  
our San Joaquin and Sacramento val-  
leys. Water is abundant and cheap.  
Alfalfa hay can be bought for about  
\$4.00 per ton, American money, while  
prices obtained for butterfat are fully  
as high as California prices. Best of  
native labor can be had for \$15 per  
month. This is not particularly a  
boost for Chili but merely to show  
why the market for pure bred live  
stock will expand, under these con-  
ditions it cannot help but do so.

In 1912 a few head of registered  
Holstein cattle were first brought into  
Chili from Denmark, and a bunch  
from New York in 1916. Yorkshire  
hogs were imported in 1892, and Berk-  
shires about five years ago. The  
Hampshire and Romney Marsh breeds  
of sheep are popular in southern Chili.  
Shorthorns and Herefords are the  
beef breeds in favor. The market for  
dairy products is very large as the  
mineral mines in the north employ  
thousands of men and food cannot be  
grown in that part of the country but  
must be purchased in central Chili.  
The distance from Valparaiso to New  
York is less than from Valparaiso to  
Cape Colony, Africa, California, or  
New Zealand, moreover Chili is near-  
er to Europe than to any of the above  
named countries. Her fruit shipments  
are enormous, rivaling California's.  
In climate Chili is more like Califor-  
nia than any other part of the world.  
Mr. Susaeta says he never saw such  
a similarity. Indian corn is one of  
the principal crops and yields as heav-  
ily as in Iowa or Illinois. Chili has  
more than 8,000 miles of railroads, is  
more than 4,000 in length, and has  
more than 5,000,000 population. She  
has more credit in Europe than any  
other South American country, but  
very little in the United States. Will  
we ever appreciate the wonderful field  
down there open to America more  
than to any other? Spending time  
and money trying to secure steamers  
to ship goods down the coast, with no  
credit, and dealing with a country  
which is indifferent, to say the least,  
is not very encouraging to our South-  
ern neighbors in their efforts to trade  
with us. One wonders when Califor-  
nians will wake up and do their share  
to reinstate America in her former  
place as mistress of the seas and lead-  
er in world commerce.

The engravings will give the reader  
an idea of the quality of a few of the

animals which will go to Chili. We  
regret that we could not secure pho-  
tographs of all the animals in the  
shipment.

Twenty-two head of Holsteins, four  
head of Berkshires, four Yorkshires,  
and two Poland China hogs comprise  
the total. Breeders from whose herds  
the animals were selected together  
with the number from each are W. J.  
Higdon, three junior yearling heifers  
sired by Sir Bessie Forbes Tritomia  
and a four year old cow, Pearl Pet;  
Bridgford Company, six heifers, Jen-  
nie Korndyke Walker 374,438, Prin-  
cess Inka Butter Girl 360987, Inka  
Hengerveld Korndyke Pontiac 383487,  
Daisy Korndyke De Kol Mercedes  
324463, Valdessa Inez Korndyke 336-  
125, Woodbine Pontiac Cornucopia;  
and one bull, Segis Korndyke Alcar-  
tra Abbekerk; Wm. Morris & Sons, one  
bull, Segis Pontiac De Kol Burke 6th,  
174892; Harlan Company, two junior



Over Seas to Chili

California pure bred purchased for ex-  
port. Upper, three prize winners bred  
and sold by W. J. Higdon; second from  
top, Segis Pontiac De Kol Burke 6th, by  
A. W. Morris & Sons; third from top,  
Princess Inka Butter Girl, by Bridgford  
Company, junior and grand champion at  
two 1917 shows; at bottom, Major Won-  
der, bred by H. I. Marsh. This is the  
first big type Poland-China to go to  
Chili.

yearling heifers, Princess Walker  
Fidorence 378759 and Mercedes De  
Kol Walker 378754; Gibson Company,  
three heifers, Princess Korndyke Seg-  
is Alcartra 386119, Kate Korndyke  
Pontiac Alcartra 386120 and Princess  
Hazel Pontiac Alcartra 386118; Napa  
State Hospital four heifers, California  
Colantha Bess 282567, Fay Nook  
Creamelle 304680, N. S. H. Midnight  
Marie and Lady Ormsby Genessee  
378495; University Farm, two Berk-  
shire boars, a son of Star Leader and  
a son of Superbus, also two gilts; A.  
L. Tubbs, Yorkshire boar and sow;  
Alex. McCarty's Riverina Farms,  
Yorkshire boar and gilt; Hale I.  
Marsh, Big Type Poland-China boar,  
Major Wonder, and sow. The total  
value of the shipment is approximate-  
ly \$15,000 and it reflects credit not  
only on the men who bred the animals  
but on the good judgment and careful  
buying of Mr. Susaeta. We trust it  
will be a fore-runner of others.

## FORM THE BUTTERMILK HABIT

"Drink buttermilk freely," says the  
United States food administration in  
its effort to encourage the use of dairy  
by-products. The use of buttermilk is  
largely a matter of habit. Southern  
cities consume almost as much butter-  
milk as sweet milk. The difficulty of  
keeping milk sweet has been largely  
responsible for the popularity of but-  
termilk as a beverage.

By valiant knights the selfsame deeds  
are done  
Before the eyes of many—or of none.



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NO DOSE TO MEASURE.  
NO LIQUID TO SPILL.  
NO STING TO ROE.

BLACKLEGOIDS are small pills. Each  
pill is an accurate dose of blackleg vaccine.

BLACKLEGOIDS are easily adminis-  
tered—simply inject them under the skin  
with a vaccine injector.

## TAKE NO CHANCES.

Don't wait until your calves become in-  
fected. This means certain loss—there is  
no cure for blackleg. Vaccinate now—  
before the deadly disease shows itself.

## THE COST IS SMALL.

BLACKLEGOIDS are economical. The  
expense is trifling compared with the loss  
you are liable to sustain if you do not use  
them.

ORDER THROUGH YOUR VETERINARIAN  
OR DRUGGIST.

Write for free booklets on Blackleg,  
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DO you first disinfect, and then go over  
all surfaces again with whitewash in  
order to keep your stables, dairies  
and poultry houses bright, cheerful and  
free of lice, mites, fly eggs and the germs of  
roup, white diarrhea, cholera, glanders, etc?  
Such a method is a waste of time, money and  
labor. Use Carbola instead—it does the two things  
at the same time. It is a disinfectant that dries  
out white—no dark and colorless—and gives much  
better results.

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agreeable odor. Absolutely safe—will not harm  
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found in the California Cultivator.



# Cutting the Feed Bills

Written for California Cultivator By Jean A. Koethen

to feed or not to feed, that is the question; whether 'tis better for the poor hen farmer to buy four-dollar corn for slacker birds or to sell every one for what she'll bring him and let the butcher end them.

**S**OMETIMES the best way out of our troubles is to cut the Gordian knot at one whack; let everything go and begin over again with a clean slate. Sometimes, and this is more often the case, there is a way of untying the knot if only one will work hard enough at it. Most generally too one cannot let go if he wants to. He must hold on for dear life, with teeth and nails if necessary, and wring a favorable answer from a marble-hearted world. This is philosophy. It is also religion. Moreover, it is common sense and good business.

For every evil under the sun there is a remedy or there is none. If there be one, try to find it. If there is none, never mind it.

Reduced to its lowest terms, the question is, is it possible to do a profitable poultry business with feed at present prices? If so, how is it to be done? A good deal has been said in this column about the use of cheaper feeds such as barley, of which the best one can say is that it is only less expensive than wheat and corn, and the sorghums, which are not cheap at all when you buy them but can be raised at home with little water and labor, and of the use of vegetables and other greens as substitutes for part of the grain feed. Now I want to attack the question from its other side, that is the side of the hen. Does it make any difference to what kind of hen you are feeding four-dollar corn? If he happened to be a 200-egger, would that make the problem any easier of solution?

The report of the All Northwest Egg Laying contest at Pullman, Washington for the month of September is interesting reading. This contest closed October 15, so the records of pens and individual are nearly complete. September is not one of the best laying months. In fact, it is one of the poorest for the average flock. The hens in this contest were all finishing their first year in the laying pen. There were no pullets to lower the average and few molters. Mrs. Whitaker, the director, says in her letter to contestants: "Feathers have begun to fall, but in general you will see that I have kept the hens laying fairly well and am sending them home to molt." This is significant. Hens that do their molting after the first of October are good layers. Probably these hens are from flocks that had been carefully culled by the molting test, which is one of the easiest and surest. The hen that begins dropping her feathers in July or August will certainly not increase the average production of the flock.

During September the 944 hens in

the contest laid 11,377 eggs, or an average of 13.4 eggs per hen. The best layer laid 28 eggs, the poorest none at all. As the eggs were sold for 42 and 44 cents per dozen, the average income from all hens was a little more than the average price of 42.7 cents per dozen, or 47.6 cents, according to Mrs. Whitaker's figures. The feed cost for the month was 21 cents per bird, and the eggs sold for 26.6 cents per bird over feed cost. This 26.6 cents is not all profit, for an expense of \$7.00 for egg cases and some minor bills have not been figured in, but the total margin of \$251 above feed cost for this flock of less than a thousand birds in one month covers these and labor as well with still something to spare. Most poultrymen would consider themselves well paid if they received \$200 for a month's labor. Interest on investment and depreciation of plant are not figured in. In such a critical time as this a man is content if he can pay for the feed for his hens and have left a reasonable wage for himself without bothering with interest.

Washington is not California. There may be some reasons that do not appear in this report for the cheapness of the ration. I doubt if many California flocks were fed in September for an average of 21 cents per hen, but we might allow ten cents more than this and still have a reasonable profit according to this report.

The whole question of profit or loss seems to depend on the production of the hens. These hens in the All Northwest contest were picked hens from flocks which their owners knew to be more than average layers. Had they not known this or had some reason to believe it, they would not have sent their hens to Pullman. The hen that laid no eggs at all during the month ate just as much, presumably, as the hen that laid 28 eggs, yet the latter brought in 90 cents, while the former cost 21 cents and brought in nothing. The average cost of producing a dozen eggs was 18 cents, but the hen that produced no eggs raised the average cost for the whole flock. In other words, the hen that worked paid the board of the slacker hen. Wasn't that a pity, and isn't the moral of this story so plain that whoever runs can read? Get rid of the slacker first of all. Improve the production of the flock, and then it will be time to see what can be done about cheaper feed.

Down at the Riverside show the other day I talked with W. G. Suits of the Bandini Poultry Ranch, a man who has made a good living from his flock of 2000 odd hens. He said he wasn't worrying much about the price of feed, though of course he did not use any such high priced things as wheat and corn, because he had culled out the non-producers and this left his average high enough so that the ship could weather the gale fairly well. Four hundred hens were culled from the flock by the tests that are used quite generally by experiment stations and large poultry plants: color of legs, beak and earlobes, and the capacity of the hen measured by the length of her keel from breast to pelvis. The production of the flock was scarcely lowered by the removal of these hens, and they laid, the first day they were by themselves, just 40 eggs. Later on the production dropped lower, as it always does when hens are moved to new quarters, but this first day's test showed that these 400 hens had been laying about one-fourth the number of eggs they should have laid to maintain the flock average of 40 per cent. They were slackers, pure and simple, and the flock was better off without them.

What Mr. Suits did with his large flock can be done by any owner of any sized flock, no matter how small. If you have only six hens, watch them, see which ones go on the nest most regularly and always leave an egg when they come off. Keep a record of the production of the pen. Most important of all, cull out right now the birds whose shanks, beaks and earlobes are bright in color. Keep the faded looking hens that have not molted. Learn how to measure the capacity of a hen. If you have a good layer, be sure you have a son of hers to head

the breeding pen next year. Don't think that because your hens have not paid for their feed they cannot be made to do it. Above all things, don't keep any hen just because she is a hen. Find out whether or not she is a layer, if you have to trapnest. Trapnesting is troublesome business and takes a good deal of time, but if you cannot improve your flock by other means, then trapnest. Improved production is the surest cure for high cost of feed.

Chilled dry-packed poultry reaches destination in much better order than the wet ice-packed product. The dry-packed product stands delays in transit far better than the ice-packed, especially during warm weather.

Can the cockerels when it no longer pays to feed them.

Stanislaus County grain growers are dipping practically all seed sown.

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Alfalfa Seed—Common variety, hairy and smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. E. F. Sanguinetti, Yuma, Arizona.

Rhodes Grass—The strongest and best feed. Most drought resisting forage known. Will grow on hard alkali ground where nothing else will grow. Imperial Valley Nursery & Seed House, El Centro.  
Rhubarb—\$1127.00 from one acre. A crop every month of the year. Write to me and I will tell you how you can do as well. J. M. Stone, Lodi, Cal., Route 4.

Mr. Alfalfa Grower—If you want good seed at the lowest price, write me for samples and prices. Smooth Peruvian a specialty. O. C. Nordahl, Bard, Cal.

Vetch Seed—New crop clean seed, \$4.00 per 100 lbs., on car. Alsike, Red Clover. Price on application. Carlton Nursery Co., Carlton, Ore.

New Crop Alfalfa Seed now ready. Not the lowest in price, but high in quality. Leo Turner, Yuma, Arizona.

### AUTOMOBILE STORAGE BATTERIES

Titan Batteries for Service, get our prices before buying or having an old battery repaired. Call or write, Olive Street Electrical Co., 910 South Olive St., Los Angeles, Cal.

### HOGS

Registered Durocs—We offer for sale a choice service boar out of a daughter of M. desto King and by a grandson of Burk's Good E. Nuff; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col.; three young boars out of a great sow of Crimson Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. Derryfield Farm, L. O. O. F. Building, Sacramento, Cal.

Chester Whites, the Billiken Brand—The big winners at the California State Fair; Billiken was Grand Champion boar; a son was Reserve Grand Champion and a daughter was Grand Champion sow. Do you want some of this strain? Twenty gilts bred to farrow during October and November. Fifty Billiken pigs, both sexes, March and April farrow. Every animal is cholera immune. Write for prices and booklet on Chester Whites. C. B. Cunningham, Mills, Sacramento County, California.

Grape-Wild Farm Berkshires—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

Berkshires—First prize junior boar; first and second senior boar pigs including junior champion; fifteen spring and fall open gilts sired by Ames Rival 115, champion boar; and two junior yearling bred sows priced cheap for immediate sale. F. D. Hall, Perris, Cal.

For Sale—30 Poland-China sows, some with litters, others to farrow soon. One registered Poland-China boar. Mrs. Ina M. Randolph, Administratrix, 865 Glendale Ave., Glendale. Phone Glendale 1291W.

Rancho Rubio Durocs—Some extra good gilts sired by Orion Model and California Keen 5th and out of my best sows. Write for prices bred or open. Weaned pigs either sex. Elmer Lamb, Ceres, Cal.

Duroc-Jerseys—Five, four months past. Thrifty and fat. Price \$100 for the bunch. One Berkshire, bred for second farrowing, \$50. Exceptional bargains. Jersey Queen Farm, San Jose.

PLW. Duroc-Jerseys, the most consistent winners wherever shown. Peters, Lamson & Walker, Devore, San Bernardino County, Cal.

Bernstein Sells 20 head of choicest Poland-Chinas at the Big Sale October 19 at Hanford, Kings County. W. Bernstein.

For Sale—Why pay \$300 for a sow when \$20.00 will buy a July gilt. Big, smooth, long Poland-China. Registered, crated, f. o. b. N. M. Lester, Gridley, Cal.

Duroc-Jersey Spring Boar—Sire, dam, dam's dam, and three litter mates of dam were 1916 Riverside winners. A high class boar priced to sell. H. C. Withers, Palo Cedro, Cal.

Big Type Durocs—Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

Most Money in Duroc-Jerseys—Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.

Large Type Poland-Chinas are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Cal.

Large Type Poland-Chinas—Very best stock. Prices reasonable. Weanlings my specialty. C. R. Hanna, Riverside, Cal.

Durocs—P. & L's Defender by Defender heads herd. Joseph Prendergast, Route 2, Box 87A, San Bernardino, Cal.

Model Herd Berkshires bred for size and quality. Weanlings and gilts. J. L. Gish, Laws, Cal.

Carruthers' Farm Berkshire Hogs—Our herd won Premier Exhibitor prize at the P. P. L. Exposition, Mayfield, Cal.

Poland-Chinas—A few good breeding boars. S. F. Williams, Orland, Cal.

### LIVE STOCK

Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

For Sale or Trade—Registered Percheron stallion; black, age five years; sound; weight 1950 lbs.; height 17 hands. Good breeder and fine action. Will trade for registered Holstein cows. Picture, price and pedigree on application. Address D. B. Adams & Son, H. F. D. 1, Modesto, Cal.

Registered Shires—Blackhawk Stock Ranch. Importers and Breeders. Easton & Ward, Burlingame, Cal.

### CATTLE

Pedigreed Bull Calves, Registered \$50.00, unregistered \$25.00. Service bulls \$75 and up. Good individuals from producers. Cows with yearly records at a profit, tuberculin tested. Write or come and select. Horses. N. H. Locke Co., Lockeford, Cal.

For Sale—As we are going into registered Holsteins exclusively, will sell or trade for steers 50 head grade Holsteins and Jerseys. All bred to registered bulls. An excellent opportunity to pick up a top string. Terms. Agee Bros., Brawley, Cal.

D. O. Lively announces a purchasing trip East. He will execute orders for customers for any kind of livestock and save money for buyers. 215 Hobart Bldg., San Francisco.

For Sale—A few head of registered Jerseys best blood in the country, few young cows, heifers and calves of both sexes. Prices reasonable. Tribble Bros., Lodi, Cal.

Registered Holsteins out of ARO Dams. Grandsons of Pieterje Mald Ormsby. 35.55 pounds average 5.31. Geo. Kounias, Modesto Farms, Modesto, Cal.

Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

Veramont Stock Farm Pure Bred Herefords. Location Plumas County. Ideal for stamina and vigor. Bulls for sale. Address H. M. Barngrover, San Jose, Cal.

Registered Holstein Bulls from high producing dams for sale at reasonable prices. Also a few choice females. McAlister Sons, Chino, Cal.

For Sale—Fine registered Holstein three year old bull, dam's record 25.08 lbs. butter fat, 635.7 lbs. of milk. Call or write F. W. Bowdle, Hawthorne, Cal.

Sunshine Farm Jerseys—Bulls from officially tested dams for sale. E. M. Greenough, Merced.

Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Calif.

Registered Holstein Bulls of various ages for sale. Milbrae Dairy, Milbrae, Cal.

Registered Jerseys—both sexes for sale. J. R. Carhart, Fullerton, Calif.

Holstein Bulls from record cows. Prices right. A. M. Bibens, Modesto, Calif.

### MACHINERY

WHY BUY NEW? SAVE HALF  
Material guaranteed. It's second-hand after used few times, but not worn out. Engine snags: 6 Stearns, \$89; 24 h. \$89; 3 Fords, \$125; 18 Western, \$295; 34 Lambert, \$390. Many others.

NEW, USED WOOD, GALV. TANKS  
All sizes; galvanized wagon tank, \$48; 3500 swell corrugated galv. tank, \$72.50; 10,000 gal. redwood, \$75; 10,000 galvanized, \$135; 16,000 corrugated galv., \$195; 5000 gal. redwood, \$48; 25,000 gal. redwood, \$125; 8000 redwood and stand \$75. Complete gas plant for private home, \$75.

WINDMILLS, SPECIALLY PRICED  
8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel.

PUMPS, CYLINDERS, PIPE  
2½-in. two-stage hor. centrifugal pump, \$38; 2-in. rotary, 3 hor. cent., \$35; 5-in. two-stage B. J. hor. cent. pump, \$175; 8-in. hor. cent., \$150, pumps 200 in. water; deep well double-acting No. 2 Ames, \$145. Large Bulldozer Jacks, \$68. Small Bulldozer, \$42.50. Plunger pumps 5x6 air compressor, \$23. Pipe fittings; new complete gas plant for private home, \$75.

RANCH MACHINERY  
Walking and riding plows, harrows, cultivators, scrapers; brand new ¾-in. cable, 6c; water troughs, \$4; bone grinder; feed mill; sprayer; mowers, rakes, belting; sundries. Down town office DEMMITT CO., UP-STAIRS, 120 N. Main. Yards, 816 Yale, Los Angeles.

Gasoline Engines, the largest stock of used gas engines in California, from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 738 North Spring St., Los Angeles.

For Sale—Titan Tractor 10-20 h. p. used only 60 days. Fine running condition, \$1000. Call 901 East 8th St., Los Angeles or Buenaman Ranch, Victorville, Cal.

Disk Plows—Rolled Cold. Auto tractors built to order. J. O. Parrish, 359 South Garey Pomona, Cal. Phone 3132.

### MISCELLANEOUS

Famous Hairy Peruvian Alfalfa Seed—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. H. F. Sanguinetti, Yuma, Arizona.

Slacked Lime—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road, Pasadena.

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

For Sale—1915 Petaluma Brooder Stove (for distillate) cost \$27.50. Price \$15.00 good as new. Red Horse Shoe Polity Farm, Box 163, Sierra Madre.

### TURKEYS

Our Geese and Turkeys Win Again—Grand Champion Sweepstake Special. For best pair of birds in show. For size, vigor and quick maturity, our stock are best. East or West. Stock and eggs in season, also Colic pups. Correspondence solicited. John G. Mees, St. Helena, Cal.

For Sale—Mammoth Bronze turkeys. The Best In The West. Geo. A. Smith & Son, Corcoran, Cal.

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### FARM LANDS FOR SALE

1900 Acres—First-class stock farm in Douglas County, Oregon, about two miles by the Pacific Highway. A hard surface road now under construction from Oakland, a good little town on the main line of the Southern Pacific railway. All well fenced, with heavy woven wire, white oak posts and subdivided into pastures, each with spring water. Beautifully timbered; scattered oak and fir. Suitable buildings, good repair. New modern sheep barn for large flock lambing ewes. About one-half tillable; 150 acres in cultivation; 50 acres seeded down to hay. Early pasture. Price \$17 per acre on reasonable terms. Farm is in capital condition and partly stocked. Sheep, horses, implements can be taken over at an appraised valuation. Wm. MacMaster, 701 Corbett Building, Portland, Oregon.

For Sale—Vineyard and Ranch in Lower California. 450 acres; 90,000 grapevines, full bearing, Zinfandel, Burgundy and Mission varieties. Rest of land used for farming. Winery with all necessary apparatus. Storage tanks for 75,000 gallons. Only winery on Pacific Coast of Mexico. High protective tariff. At present import duty on wines 90 cents U. S. per gallon. Will sell reasonable figure, part cash and balance in exchange for income property. Retiring from business. Address: Andonaegui, Ensenada, Lower California. Lake County, California—Climate uncanceled. We have two 160 acre ranches; both have an abundance of running water, fruit, grain, wood and pasture land. Orchards of walnut, prunes, pears, peaches, apples, berries, etc. Three room cottage, five room house, barns and out buildings. Fenced and cross fenced. Three miles to good small town, one mile to school. Price \$7,000.00 and \$7,500.00. No exchange. Terms. Address Box Kelseyville, Cal.

For Sale or Trade—160 acres relinquishment \$2000. Land perfectly level and improvements on all sides, 40 acres cleared. Water can be developed on land. Posts for 20 acres of fencing. See H. D. Blanchard, Covina, or Terra Bella, Tulare Co., Cal.

Arizona—Gila River bottom lands \$15 to \$40 per acre. On railroad. Power line and highway building. Two crops yearly rule—no exception, value \$150 to \$500 per acre. Splendid climate and water. Particulars. T. C. Davison, Box 101, Ontario, Cal.

For Sale—80 acres improved ranch 7 miles west from Bakersfield. Lots of buildings and plenty of water. One mile to store, school and half mile to boulevard. Price \$150 per acre. W. F. Mark, Los Angeles, Cal.

Oregon, California Government Lands. Latest Green Booklet Free. Tell "How, Why, Where." Write Joseph Clark, Sacramento.

### POULTRY

Blue Andalusian Cockerels, Blue Orpington Cockerels and Ancona cockerels. Large vigorous birds, for the shows or breeding pens. Write for prices. J. R. Huddleston, 342 Edgeware Road, Los Angeles.

Day Old Chix—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Cal.

Poultry Wanted—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

200-290 Egg Leghorns, Reds, Rocks, Wyandottes, Anconas, Orpingtons, Minorcas. Chicks, eggs weekly. Booking orders December-June delivery. Get paying strain, feed high. C. Beeson, Pasadena, Cal.

For Sale—Twenty pairs correctly mated Red Carneaux pigeons. Good workers and from best blood obtainable. Four dollars pair. Red Horse Shoe Polity Farm, Box 163, Sierra Madre.

"Eastman's Bred to Lay" Barred Plymouth Rocks. Choice Cockerels. Fairmead Poultry Farm, Fairmead, Cal.

Buff Orpington, Buff Leghorns, Bourbon Red Turkeys—Breeding stock. The Ferris Ranch, S. Reservoir, Pomona, Cal.

### LUMBER

Lumber—Sash—Doors—Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A \*R.W. Shingles 500 per bundle. Send list for estimate. Dap P. Dolan, 1670 Mission Street, San Francisco, Cal.

### WOODLAND COW BREAKS CALIFORNIA RECORDS

Aaggie Acme of Riverside II has won fame in the state dairy cow competition. The university states that her production of \$628 worth of milk and butterfat during the ten months is exceeded by only a few cows in the United States or in the whole world. It takes six average California cows to equal her production.

Her daily average production of three pounds of butterfat for ten months is equivalent to more than three and a half pounds a day of ordinary butter. She was bred and owned by the A. W. Morris and Sons Corporation of Woodland. Her production for ten months was 22,088 pounds of milk and 928.813 pounds of butterfat, equivalent to about 1080 pounds of butter, worth at present prices at least \$640. The 17,670 pounds of skim milk, worth an additional \$88, make her production during the ten months \$628 — and this without counting the value of her calf.



## Legal Queries

Louis B. Stanton, attorney, 243 Wilcox building, Los Angeles, will answer legal queries in this department.

Immediate mail replies cannot be given except where fee to Mr. Stanton is paid. When replies are wished in Cultivator address query to 115½ N. Broadway, Los Angeles.

### Straying Stock

A and B live upon an almost unused country road; each maintains fences on each side of the road. A has some fenced range and at times his cows and horses get on road, as do his neighbor's. B leaves his gates open and the stock go into his fields; B corrals the stock in the fields and also stock only on the road, then sends for the owners to come and get their stock. A has shot horses so that they were crippled for months. B claims he has right to corral the stock in the instances mentioned and also to shoot them, if trespassing. Is this correct?—Subscriber.

As far as the corralling of the stock a concerned B is within his legal rights. The estray act provides that anyone finding an estray domestic animal upon his premises or upon the highways adjacent thereto may take up the same and have a lien thereon for all expenses incurred in caring for said animal. As long as he leaves his gates open he is not entitled to claim damages for the injury done by the trespassing animals. He is not entitled to shoot the animals, however, whatever they have done. In fact by his actions in that respect he not only renders himself liable to the owner for the value of the services of the animal for the time it is recovering from the injuries, but also liable to prosecution for cruelty to animals, punishment for which is imprisonment in the county jail for not to exceed six months, or a fine of \$500 or both.

### Lawful Fence

What is considered a lawful fence?—Subscriber, Yuba County.

There is no general legal requirement for lawful fence; the statute treating of the recovery of damages resulting from the trespassing of animals upon private lands speaks only of "a substantial fence or other inclosure." In the fence law applying to certain counties, of which Yuba County is one, a fence has been defined as follows: "Wire fence shall be made of posts not less than 12 inches in circumference, set in the ground not less than 18 inches, and not more than eight feet apart, with not less than three horizontal wires, each one-fourth of an inch in diameter. The first one shall be 18 inches from the ground, the other two above this one at intervals of one foot, all well stretched and securely fastened from one post to another, with one rail, slat, pole, or plank of suitable size and strength securely fastened to the posts not less than four and one-half feet from the ground."

### Damages from Stock

Does a person have to have a lawful fence before he can collect damages caused by trespassing stock?—Subscriber.

The statute concerning the recovery of damages from injuries caused by trespassing animals provides that such damages can be recovered only when the land is planted to growing crops, vines, fruit trees, or vegetables and is at the time entirely enclosed by a substantial fence or other enclosure.

### What are Estrays?

Are cattle or horses considered estrays when they are branded and belong to neighbors living within a mile of where they are taken up?—Subscriber.

For the purposes of the estray act they are; in fact the act provides that where the owner of the animals is known the taker up may prepare and serve a notice upon the owner containing a description of the animal or animals, with the marks or brands, the probable value, the place where taken up and the place where confined. If the taker up knows the owner of the animal he may serve this notice upon him, for which he is entitled to a fee of 50 cents; if he does not know the owner he must record such notice and the taker up has a lien upon the animal for his costs in that respect.

### Stock on Unfenced Land

Can those having land unfenced compel adjoining owners having unfenced lands to keep their stock off?—Subscriber.

The owner of unfenced land is justified in driving off stock belonging to neighbors from his lands and he is entitled to take up animals straying upon his lands under the estray act, but he cannot restrain the owner of the animals from permitting his stock to stray. Nor is there any means whereby the owner of unfenced land can be required to fence or close his gates if he has fenced and desires to leave his gates open.

### STATE GRANGE CONVENTION

At the convention of the State Grange which ended its 1917 convention at Napa last week it was voted to hold the next California State Grange at Ukiah in Mendocino County. Other sections inviting the Grange were Santa Rosa, San Jose and Monterey.

Officers elected for the next year are: Treasurer, M. Farrell, Mountain View; secretary, Mrs. Martha Gamble, Santa Rosa; gate keeper, Robert Scholz, Campbell; Ceres, Miss Lula Eipper; Pomona, Mrs. Mary Church, Saratoga; Flora, Mrs. O. H. Braugher, Sacramento; lady assistant steward, Mrs. Mamie Sanford, Sacramento; pianist, Mrs. Alice E. Winans, San Jose; A. Van Maren was named on the executive committee for a term of three years.

Rousing resolutions were passed in effect that our liberty and the preservation of our institutions depend upon the successful termination of the war, that efficiency in the greatest measure is demanded for that successful termination, and that the saloon is the greatest destroyer of such efficiency, "therefore be it resolved that the best interests of our country demand that the saloon be abolished."

Representatives of the nation's butter, poultry and egg industry, in conference with food administration officials, went on record recently as unanimously favoring the license system. All the large produce markets of the United States were represented.

The licensing system requires the principal classes of produce handlers—among which are wholesale dealers, butter manufacturers, commission men, and those retailers whose business exceeds \$100,000 a year—to make monthly reports to the food administration and to supply such other information as may be desired.

In the opinion of market experts, the effect of broad government control will be a more uniform trend of prices, the elimination of excessive profits and greater public confidence in those who handle the nation's food between producer and consumer.

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Equipped with the Alpha Automatic Pressure Regulator which holds the pressure steadily at the desired point and relieves the engine and pump of unnecessary strain when nozzles are closed. All parts of pump are readily accessible and interchangeable.

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The power behind the pump is the dependable high class Alpha Engine. When spraying you have no time to lose tinkering with an unreliable engine. Intelligent handling of the Alpha guarantees you freedom from troublesome delays. No cranking necessary; no batteries. A vigorous full powered engine that will last for years.

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10 Inch.....	\$ 9.00 per 1000	18 Inch.....	\$12.50 per 1000
12 " .....	9.50 " " "	20 " .....	15.00 " " "
14 " .....	10.50 " " "	24 " .....	17.50 " " "
16 " .....	11.50 " " "	30 " .....	20.00 " " "

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Our trial delivery plan makes it easy. No previous experience necessary. Practically every farm home and small town home will buy after trying. One farmer who had never sold anything in his life before writes: "I sold 51 the first seven days." Christensen, Wis., says: "I have never seen an article that sells so easily." Norring, Ia., says: "92% of homes visited bought." Phillips, O., says: "Every customer becomes a friend and booster." Kemmerling, Minn., says: "No flowery talk necessary. Sells itself." Thousands who are coming money endorse the ALADDIN just as strongly. NO MONEY REQUIRED. We furnish stock to get started. Sample sent prepaid for 10 days' free trial and given absolutely without cost when you become a distributor. Ask for our distributor's plan. State occupation, age, whether you have rig or auto; whether you can work spare time or steady; when can start; townships most convenient for you to work in.





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### A Majestic!—for about a wagonload of crops

Surely you can afford a Majestic now when it costs you only about half as much, in crops, as it used to. Think how little seed and labor you now give for this quality range that will mean so much to the whole family for years to come.

The Majestic will lighten the work of cooking and make good baking sure.

The Majestic's scientific oven bakes right always—no food waste. Its heat-tight construction maintains perfect baking temperature with least fuel use. Its unbreakable malleable frame and rust-resisting charcoal iron body save repairs and make the Majestic outlast three ordinary ranges.

One quality; many styles and sizes. There is a Majestic dealer in every county of 42 States. Send for free booklet and name of dealer near you.

Majestic Mfg. Co., Dept. 203 St. Louis, Mo.

**"The Range with a Reputation"**

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Requesting your local merchant to stock articles advertised in the California Cultivator helps your town, the advertiser and the Cultivator.

## Household Department

### THE TORCH

In Flanders' fields the poppies blow  
Between the crosses, row on row,  
That mark our place, and in the sky  
The larks still bravely singing fly,  
Scarce heard amidst the guns below,  
We are the dead. Short days ago  
We lived, felt dawn, saw sunset glow,  
Loved and were loved, and now we lie  
In Flanders' fields.

Take up our quarrel with the foe,  
To you from falling hands we throw  
The torch—be yours to hold it high,  
If ye break faith with us who die,  
We shall not sleep though poppies grow  
In Flanders' fields.—Riverside Press.

### MILITARY TRAINING AS AN ASSET

**T**UST size up the boys in khaki," when they come back home on leave and you can realize the statistical fact that the war will add five years to their average chance of life, says the Fresno Republican. Every one of those boys has those five years, or more, now visibly engrafted in his frame. From the tan of his skin and the brawn of his muscles to the self-control and self respect of his soul, he is already wound up for a longer run than life would otherwise have given him. And his training is not a quarter done yet. Some of that training, to be sure, is going to be done, not for his benefit, but for the

tenth as many as would do it in the ordinary risks of civil life. The difference is that in the army we shall have the satisfaction of the one-tenth, while in civil life we shamefully hide ourselves from knowledge of the nine-tenths.

Every risk of life, of disease, of morals, and of general slackness and worthlessness, is less in the army than at home, save the single risk of explosions—and even that risk is not absent at home. And the improvement, physical, mental and moral, is an asset now and for life—for a longer life, in fact, than the boys without the army training would have lived.

### "GOD SAVE OUR SPLENDID MEN"

**T**HE Boston Transcript publishes a letter from a visitor to Canada who attended, while in Winnipeg, a Sunday afternoon service of the National Council of Women. He writes:

"When Lady Aikins closed that solemn session of Canada's leading women, she simply said: 'Now we shall pray for our gracious King and for our splendid men.' The crowd arose, the pianist struck a chord, and the first stanza of the national anthem swelled forth. Then there followed, with a fervor that put many handker-

O, God of Love, of Mercy—and of Peace,  
Give me strength

Today

And for the days that bring I know not what;  
To turn my eyes toward That Great Light that streams,  
Through the black clouds of war, about us all,  
That Light he follows in the trenches, where  
I sent him—freely—because he is a man  
And knows the measure of his life is not  
In length and fullness of its days, but in  
The Meeting of The Test.

And give me strength, O God,  
To keep That Light enshrined in my own heart,  
That I may wait, and work, and serve, as he  
Is serving, and that I may make myself  
As true a woman as he is a man,  
O God!

war's; some of the food he will not get in the trenches and some of the sleep and shelter he will not get, will be hardships and be endured, rather than experiences to be profited by. Some of the surplus brawn he is accumulating now is reserve to meet that strain. And there will be more danger of being blown up by a shell in the army than there is of being blown up by a boiler or run over by an automobile now. But one is not safe from those things, anywhere. We killed thousands of our young men, last year, to run our railroads and factories, and we will kill more thousands next year, to run the war. Life is a hazardous occupation anywhere, and none of us finally survive its risks. But the khaki boy has a hundred times less risk of dying of disease than his grandfather had in the Civil War, and two or three times less than he would have at home; if he gets shot the chances are fifty to one that he will get well, and the extra risk of being blown up now is no more than insurance premium on the certainty of adding five years to his allotment at the other end—the end where you are now—when he comes back. So, altogether, war is a profitable, though risky, adventure. There is some gamble in it, but the stakes are good if you win—which most of the players do.

The balance of advantage is much the same on the moral side. The positive moral gain is a firmer moral fiber, in disciplined courage, self-reliance, self-respect, order, loyalty, patriotism and the inspired spirit of willing sacrifice. The moral dangers are brutalization, drink and vice. The brutalization, in an army like ours, is mostly fiction. The men whom war brutalizes were brutal already. And the chief feature of the other risks is that we know about them. Some boys who never drank before may learn to drink in the army—but not one-tenth as many as would learn it in the same time in civil life. The difference is that we shall know how many. Some boys who had no previous experience in lewdness will learn it in the army and some of them will be diseased by it—but not one-

chiefs to eyes, another stanza, written since the war began, and now sung all over Canada:

God save our splendid men,  
Send them safe home again:

God save our men!  
Keep them victorious, patient, and chivalrous,  
They are so dear to us,  
God save our men!

"That amendment to 'God Save the King' is one of the most significant side-lights of the war. It reveals the new and democratic mood of the people who are giving of their best to the great cause. As a commentary upon President Wilson's address of April 2 it needs no words. In all the long years and generations that Britons have been singing 'God Save the King,' it never occurred to anybody to add a prayer for the men who serve the King. Now it is done instinctively and fervently, with no thought of disloyalty to his Majesty, but only in the natural assumption that the welfare of the soldiers ranks equal with that of the King. All religious services in Canada, at least in the Protestant churches, include the singing of the national anthem; and all, except where the strain is too great upon the mothers, include 'God save our splendid men.' Who can trace all the wonderful ways in which democracy is doing its work in these changeable days?"

This verse is also being added to "America" as sung in churches in the United States. We hope and believe the custom will become universal.

### MEAT AND PASTRY ROLLS

Chop left over meat (of one or several kinds mixed) fine and season it well. Mix in enough butter or other fat to make it "shape" well. Form into rolls about the size of a finger and wrap around each a thin piece of short dough made from pint flour, two tablespoons baking powder, salt and milk enough to mix. Bake rolls in hot oven until they are a delicate brown. Serve hot.

Brush lower pie crust over with unbeaten white of egg, and it will not absorb juice and be soggy.



# SOME CABBAGE RECIPES

How to vary the preparation of cabbage from "plain boiled" is suggested by the United States department of agriculture in the following recipes:

## Cabbage with Sour Sauce

After taking off outside leaves, remove tough stalk from a small head of cabbage; cut in quarters; soak in cold water and cook in boiling salted water in uncovered dish, adding one-fourth teaspoon soda. Cook slowly from 30 minutes to one hour, drain, and serve with the following sour sauce:

Melt one tablespoon butter or other fat, then add one tablespoon flour and one-half cup milk. Stir over the fire until hot and add one teaspoon made English mustard and two tablespoons warm vinegar. Pour over hot cabbage. preferred a plain cream sauce can be used.

## Smothered Cabbage

Cut fine one-half head cabbage. Melt two level tablespoons butter or other

fat in a pan and stir in two level tablespoons flour. Add the cabbage, one cup sweet milk, one teaspoon salt, and one-eighth teaspoon pepper. Cover closely and simmer slowly 30 minutes.

## Cabbage Pudding

Shred head of cabbage closely and cook in salted water until tender. Drain and place in buttered dish in layers with sprinkling of grated cheese between. To two level tablespoons melted butter or other fat add two table spoons flour; add cup of milk, yolks of two eggs, one teaspoon salt, and one-half teaspoon mustard. Stir over fire until it boils, then add beaten whites of eggs. Pour over cabbage, mix well, and bake one hour.

## Stuffed Cabbage

Remove coarse outer leaves and core. Parboil three minutes. Fill core and inside of each leaf with finely chopped left-over meat (raw meat is best), or sausage. Tie securely in cheesecloth. Place in kettle with two or three carrots and onions. Cover with stock, and let simmer slowly two hours, or until tender.

## Cold Slaw

Slice small cabbage very finely. Soak in cold water until crisp. Drain and dry between towels and mix with cream salad dressing. It will improve the dressing to add to it a very little curry powder.

## A SOLDIER'S CREED

A French soldier has worked out a plan whereby he overcomes fear. His creed is as follows:

"Of two things one is certain, either you're behind the line or you're on the front. If you're behind the lines there is no need to worry.

"If you're on the front, of two things one is certain, either you're resting in a safe place or you're ex-

Will You Give Your Thanksgiving Dinner to Our Soldier Boys? Not the whole dinner, but "the fixings," just the extras that make it a feast.

Every member of the California Cultivator force has pledged himself or herself to give the cost of the extras to such a fund.

Will you join us?

If no representative of the Red Cross, Y. M. C. A. or K. of C. is near you, send to California Cultivator, Los Angeles, and we will send your contribution to one of these organizations.

Read "Spice in Variety" on editorial page.

posed to danger. If you're resting in a safe place there is no need to worry.

"If you're exposed to danger, of two things one is certain, either you're wounded or you're not wounded. If you're not wounded there is no need to worry.

"If you are wounded, of two things one is certain, either you're wounded seriously or you're wounded slightly. If you're wounded slightly there is no need to worry.

"If you're wounded seriously, of two things one is certain, either you recover or you die. If you recover there is no need to worry.

"If you die you can't worry." After mental action of this kind the soldier found that fear and worry were gone. He did the duty immediately before him and let the rest go.

## ANOTHER QUESTION

Written for California Cultivator By B. L. Welch

WHO is she who can be my companion, Old Man Selfish said, and answered his own question: "She who will come at my command; have my meals ready when I am ready to eat, and prepare such as I like; have my clothes clean and where I can find them, my slippers in place, also paper, pipe and tobacco; look after everything that commands attention about the house; buy lots with little money; keep out of debt; ask for no money; be satisfied and don't grumble; love me better than anybody else and treat me with admiration and respect." Mr. Fairmind asked: "Whom can you be a companion to?" Selfish answered: "That is another question."

Thou, too, sail on, O Ship of State! Sail on, O Union, strong and great! Humanity with all its fears, With all the hopes of future years, Is hanging breathless on thy fate! —Longfellow.

# Your Good-Morning Cup of Coffee

—should be clear and uniform—always retaining the delicate aroma and distinctive flavor of perfect coffee.

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## SAVES MONEY

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STAR OIL-GAS BURNER CO.

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# The Nation's Strength

is not only in the mailed fist but in the hand of industry—the hand of health. It behooves all of us to be strong and keep strong, in order to carry the present day burden.

As a strength-giving food product Ghirardelli's Ground Chocolate is an ideal blend of foods—cocoa and pure sugar, each full of elements that supply energy and build up worn tissues.

A tablespoonful of Ghirardelli's Ground Chocolate, 1c. worth, makes not only a delicious but an unusually nutritious beverage. Drink daily a cup of

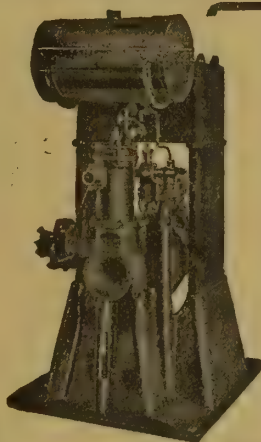
## Ghirardelli's Ground Chocolate

Comes in 1/2 lb., and 3 lb cans

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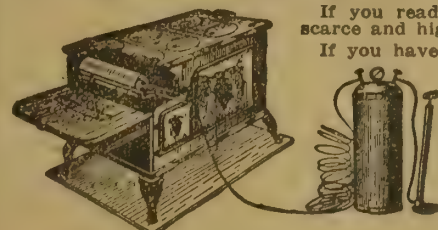
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I selected the seed myself and to the best of my ability have chosen only the purest and cleanest lots. The seed is good and you order it with the satisfaction of knowing the money is well placed for "Quality is my first consideration."

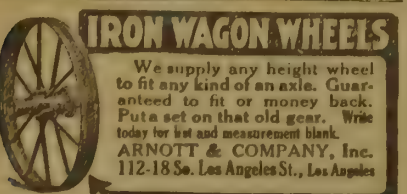
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 Yuma - Arizona



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When writing advertisers, mention the Cultivator.

## Los Angeles Market

Los Angeles, Nov. 7, 1917.

### BUTTER

Produce Exch. Quotations.  
 Price to trade 4c higher.  
 California extra creamery ..... 43  
 Dairy Exch. prices past week:  
 Oct. 31 Nov. 1 2 3 5 6  
 '17 ... 44 44 44 44 48 43  
 Rets. wk. ending Nov. 6, 263,400 lbs.

### CHEESE

Brokers prices:  
 California fresh, lb. .... 28  
 Oregon Longhorn ..... 29  
 Tillamook Trip ..... 28  
 Domestic Swiss ..... 34

### EGGS

Exchange quotations. Prices include cases and fillers valued at 35c. Prices to retailers 4 cents above Exchange.  
 Fresh extras ..... 58  
 Case count ..... 56  
 Pullet ..... 52  
 Dairy Exch. prices past wk.  
 Oct. 31 Nov. 1 2 3 5 6  
 '17 ... 57 57 57 57 57 58  
 Rets. wk. ending Nov. 6, 404 cases.

### POULTRY

We quote to producers:  
 Broilers ..... 28@32  
 Hens—Leghorns ..... 22@23  
 Roasters, 3 lbs. and up ..... 26  
 Ducks, lb. .... 16@21  
 Squabs, doz. .... 3.00@4.00  
 Rooster, old ..... 14

### LIVE STOCK

We quote cwt. f. o. b. L. A.  
 Corrected Wednesday morning November 7, by the Cudahy Company.  
 Cattle—  
 Beef steers, av. 1000 to 1100 lbs. 8.50@9.00  
 Heifers, good ..... 6.50@7.00  
 Cows, good ..... 5.50@6.50  
 Cannors ..... 4.50@5.00  
 HOGS—  
 Av. 125 lbs. .... 14.50  
 Av. 150 lbs. .... 15.50  
 Av. 175-200 lbs. .... 16.00  
 Rough, docked 20 lbs.; piggy sows, 40 lbs., stags, 40 per cent. .... 9.50@10.00  
 Prime wethers ..... 9.00@9.50  
 Ewes ..... 13.50  
 Lambs ..... 10.00@10.50  
 Yearlings ..... 10.00@10.50

### POTATOES

Wholesale selling price:  
 Northern Burbank, cwt. .... 2.80@3.00  
 Russets ..... 2.80@2.90  
 Rurals ..... 2.40@2.45  
 Sweet, cwt. .... 2.75@3.00

### ONIONS

Wholesale selling price:  
 Brown, cwt., 3.00; white ..... 3.00  
 Garlic ..... 8

### VEGETABLES

Wholesale prices:  
 Artichokes, doz. .... 1.25  
 Beans—Wax ..... 10@11  
 Limas, lb. .... 10@11  
 Ky. Wonder ..... 10@11  
 Beets, sk. .... 1.00  
 Cabbage, lb. .... 1.14  
 Carrots, doz. .... 1.00  
 Cauliflower, doz. .... 1.00  
 Celery, cr. .... 3.10  
 Corn, jug ..... 70@75  
 Cucumbers, lug. .... 1.25@1.35  
 Egg Plant, lb. .... 6@7  
 Horseradish, rt. lb. .... 15  
 Lettuce, doz. .... 40@45  
 Leeks ..... 30  
 Mint ..... 40  
 Onions, green, doz. .... 25  
 Okra, lb. .... 10@12  
 Peas, lb., Telephone ..... 8 1/2 @9  
 Peppers, Chill, lb., 6@7; Bell ..... 6@7  
 Parsnips, doz. .... 40  
 Parsley, doz. .... 20  
 Pumpkins, lb. .... 20  
 Radishes, doz. .... 20  
 Rhubarb—Strawberry ..... 1.10  
 Romaine, doz. .... 50  
 Spinach, doz. .... 25  
 Squash, Summer, or ..... 1.20  
 Crockneck ..... 70@75  
 Hubbard, lb. .... 2  
 Tomatoes, cr. .... 1.10@1.15  
 Turnips, doz. .... 85

### FRUITS

Wholesale prices:  
 Apples—Skinners Seedling ..... 1.50@1.75  
 Bellflowers ..... 1.25@1.35  
 Greenings ..... 1.15  
 Jonathan ..... 2.00@2.15  
 King David ..... 1.75@2.00  
 Avocados, doz. .... 6.00@9.00  
 Bananas, lb. .... 4 1/2 @5  
 Casabas, lb. .... 2  
 Cranberries, bbl. .... 14.00  
 Figs, bx. .... 1.00@1.35  
 Grapes—Black ..... 1.10  
 Tokays ..... 1.40@1.50  
 Guavas ..... 6  
 Peaches, lug. .... 1.25@1.35  
 Pears, Bartlett, lug. .... 2.00  
 Persimmons, lb. .... 7@10  
 Plums, lug. .... 1.25@2.00  
 Pomegranates, lug. .... 1.50  
 Watermelon, lb. .... 2

### DRIED FRUITS

These are not prices to producers but prices made by wholesalers to retailers.  
 Apples—50-lb. bx., evaporated, 15c, extra ch., 15 1/2.  
 Apricots—Ch. 18, ex. ch., 18 1/2, fy., 19.  
 Peaches—Ch., 12, fy., 12 1/2.  
 Lemon and orange peel, lb., 25.  
 Figs—Bulk, 25 lb. bx., blk., \$2.75, wh. 2.75.

### CITRUS

Lemons, 4.25@5.50; juice ..... 2.25  
 Grapefruit ..... 3.75  
 Times basket ..... 1.00  
 Valencias ..... 3.75@4.00

### HONEY

Prices of wholesaler to retailer:  
 Extr. White, lb. .... 14@15  
 W. W. lb. .... 15@16  
 Comb, case, W. .... 3.75  
 W. W. case ..... 4.80

### NUTS

Almonds—Not growers' prices but prices of wholesaler to retailer.  
 Nonp. .... 21 1/2

I. X. L. .... 21 1/2  
 N. F. U. .... 20 1/2  
 Peanuts, raw ..... 12  
 Pine Nuts ..... 20  
 Pecans ..... 19  
 Walnuts—Cal. Walnut Growers' Association named prices Oct. 1:  
 No. 1 Soft Shell, lb. .... 20  
 No. 2 Soft Shell, lb. .... 16  
 Budded, Diamond Brand ..... 24  
 Budded, Standard Brand, (same size as No. 1 Soft Shell) ..... 21  
 Prices delivered in East 1 1/4c higher.

### RICE

Wholesale quotations:  
 Cal. .... 7.50  
 Broken ..... 5.60@6.00

### BEANS

Limas have reached a point where some sales were made as high as \$13.50, but the government has apparently taken a hand and some government purchases have been made on a straight \$11.50 basis. This has affected the market and practically no prices made, neither any transactions excepting to meet immediate needs. Lady Washington and Small Whites have been purchased by the government at \$11. Teparys have dropped and are not commanding more than \$8.00. These are prices made by wholesaler to retailer.

Lady Washington ..... 14.00  
 Limas ..... 14.00  
 Pinks ..... 10.50  
 Manchurian Reds ..... 11.00  
 Baby Mex. .... 9.00  
 Garbanzos ..... 10.50  
 Small White ..... 14.00  
 Blackeyes ..... 10.00  
 Tepary ..... 9.00  
 Lentils ..... 18.00

### HAY

Quotations by Nichols-Loomis Company. Prices to growers f. o. b. L. A. carlots:  
 Tame Oat ..... 23.00@25.00  
 Volunteer Oat ..... 17.00@19.00  
 Wheat ..... 19.00@22.00  
 Barley ..... 20.00@23.00  
 Alfalfa ..... 20.00@23.00

At a meeting of the Executive Committee of the Alfalfa Growers' Association of Southern California, at Riverside, November 1, it was reported that buyers are offering \$26 per ton f. o. b., where the \$1.50 freight rate applies, and \$25 f. o. b. where the \$2.50 freight rate applies.

### GRAIN AND FEEDSTUFFS

Wholesale cwt. f. o. b. L. A.  
 Alfalfa Meal ..... 1.95  
 Alfalfa Molasses ..... 2.00  
 Barley, Rolled ..... 2.85  
 Barley, Re-cleaned, Whole ..... 2.90  
 Barley, Hulled ..... 3.45  
 Beet Pulp ..... 1.80  
 Bran, Heavy ..... 2.15  
 Coconut Meal ..... 2.50  
 Cottonseed Meal ..... 3.30  
 Corn, Yellow ..... 4.45  
 Corn, White ..... 4.55  
 Corn, Cracked ..... 4.50  
 Corn, Feed Meal ..... 4.55  
 Corn, Egyptian ..... 3.40  
 Middlings ..... 3.05  
 Milo ..... 3.15  
 Oat Chop ..... 1.90  
 Oats, White ..... 2.85  
 Oats, Rolled White ..... 2.90  
 Oats, Hulled ..... 4.75  
 Oats, Rolled Chicken Groats ..... 4.85  
 Ollcake Meal ..... 3.65  
 Wheat, No. 1 ..... 4.00@4.05  
 Wheat, Cracked, No. 1 ..... 4.40  
 Red Millet ..... 4.65@4.75  
 Rye ..... 4.00  
 Blood Meal ..... 5.00@5.10  
 Bone, Green ..... 2.75@2.85  
 Bone, Dry ..... 2.95@3.05  
 Charcoal, 50-lb. sk. .... 2.80@2.90  
 Clam Shell ..... 70@80  
 Grit, Granite ..... 75@85  
 Oyster Shell ..... 1.25@1.35  
 Sunflower Seed ..... 4.90@5.00  
 Soya Bean Meal ..... 3.40@3.50  
 Scratch Feed ..... 3.80@3.90  
 Critless ..... 3.90@4.00  
 Rice Bran, ton ..... 40.00  
 Middlings, ton ..... 45.00  
 Rice Polish, ton ..... 49.00

## San Francisco Markets

San Francisco, Nov. 6, 1917.

### BUTTER

Dairy Exchange quotations, lb.:  
 Fresh extras ..... 43  
 Prime firsts ..... 42 1/2  
 Dairy Exch. quotations past wk.  
 Oct. 30 31 Nov. 1 2 3 5  
 '17 ... 43 1/2 43 1/2 43 1/2 43 1/2 43  
 '16 ... 33 33 32 1/2 32 1/2 33  
 Rets. wk. ending Nov. 5, 409,400 lbs.

### CHEESE

Dairy Exchange quotations:  
 Cal. Flats, 18@22 1/2 Y. Am. .... 22@25  
 Cheddar ..... 23  
 Ore, Young Am. .... 25  
 Jack Cheese, full cream ..... 28@24  
 Half skim ..... 17@18

### EGGS

Dairy Exchange quotations:  
 Extra ..... 57 1/2  
 Firsts ..... 57  
 Selected, Pullets ..... 48  
 Firsts ..... 45 1/2  
 Dairy Exch. quotations past wk.  
 Oct. 30 31 Nov. 1 2 3 5  
 '17 ... 56 1/2 56 1/2 56 1/2 56 1/2 56 1/2  
 '16 ... 48 48 48 48 48 46 1/2  
 Rets. wk. ending Nov. 5, 7119 cases.  
 400 lbs., 15 1/2.

### POTATOES

Wholesale selling prices at wharf:  
 Wholesale selling prices at wharf:  
 Salinas Burbank, cwt. .... 3.00@3.15  
 River ..... 1.75@2.25  
 Sweets, lb. .... 2 1/2 @3

### ONIONS

Wholesale selling price on wharf:  
 Australian Brown, cwt. .... 2.25@2.50  
 Yellow ..... 2.10@2.25  
 Garlic, lb., new ..... 6@7

### VEGETABLES

Wholesale selling price:  
 Beets, sk. .... 1.50@1.60

Appliances Sold on Time Payments

## The Eden

\$9.00 down  
 \$8.75 per month



Write for Name of Dealer in Your Territory

The Eden, cylinder type galvanized body, zinc cylinder washing and wringing machine takes all the drudgery out of wash day. Washes the clothes cleaner, with less wear and tear, quicker and with no physical effort on your part. A demonstration or trial in your own home will convince you. Price \$105.00, on terms \$115.00.

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 Keeping OUT DUST and RAIN - Keeping IN OIL

SPLASH OILING SYSTEM  
 Constantly Flooding Every Bearing With Oil, Makes It Pump The Lightest Grease And Prevents Wear

DOUBLE GEARS - Each Carrying Half the Load  
 Every feature desirable in a windmill in this AUTO-OILED AERMOTOR  
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## CITRUS TREES

Orange, Lemon, Pomelo and Lime, bud selected (pedigreed) trees, subject to immediate delivery. Correspondence invited and prices cheerfully quoted.

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OF EVERY DESCRIPTION

BOUGHT and SOLD

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Beans, string, lb.	60@8
Fy. Garden, 60@9; Lima	70@9
Brussel Sprouts, lb.	40@5
Cauliflower, doz.	40@1.00
Carrots, sk.	1.25@1.50
Celery, doz.	40@60
Cucumbers, lug	75@1.25
Hothouse	1.15@1.25
Lettuce, cr.	75@1.25
Egg Plant, lug	1.00@1.25
Onions, bx.	85@90
Pickling, cwt.	2.40@2.50
Okra	65@85
Peas, lb.	6@10
Parasips	1.50@1.60
Peppers, Bell, lug, 75@1.35; Chili, 75@85	
Pumpkins, sk.	50@65
Rhubarb, bx	1.00
Squash—Marrowfat, sk.	60@75
Cream, lug	90@1.00
Hubbard, sk.	90@1.00
Summer, lug	1.50@2.00
Italian	75@1.00
Tomatoes, lug	50@1.25
Turnips, sk.	1.25@1.50

## FRESH FRUITS

Berries—Strawberries, 6.00@8.00 ch. to the trade; raspberries, 7.00@8.00; huckleberries, lb., 14@15.	
Peaches—Oregon, Salways, bx: Fancy, 1.00@1.10; other grades, 50@85.	
Plums and Prunes—German and Grand Duke, cr., 1.00@1.25.	
Figs—Black, double layer bx, 1.15@1.35; single layer, 60@75.	
Pears—Lake County Bartlett's, wrapped, bx, 2.00@2.50; Winter Nellis, lug, 1.50@2.00; bx., wrapped, 1.50@1.75; winter pears, 75@1.25.	
Grapes—Malaga, cr., 65@80; lug, 90@1.00; Thompson seedless, cr., 1.25@1.50; big lug, 2.00@2.25; Muscat, lug, 1.00@1.50; cr., 75@1.00; black, lug, 75@1.00; Tokay, 65@1.00; Cornichon, cr., 50@75; lug, 65@85; Isabella, cr., 1.25@1.50; Verdell, lug, 75@85.	
Apples—Bx.: Bellflower, 4 1/2-tier, 1.00@1.10; 4-tier, 1.10@1.25; 3 1/2-tier, 1.15@1.35; Spitzberg, 4-tier, 1.75@1.85; 4 1/2-tier, 1.00@1.25; B grade, 1.00@1.15; Red Parnmain, 85@1.00; white do, 4-tier, 1.00@1.15; Smith Cider, 4-tier, 1.00@1.15; 4 1/2-tier, 1.00@1.15; 4 1/2-tier, 85@1.00; Baldwin, 1.25@1.50; 4-tier, 1.35@1.50; Wagner, 4-tier, 1.15@1.25; 4 1/2-tier, 90@1.00; Hoover, 85@1.00; Newtown Pippins, 3 1/2-tier, 1.35@1.50; 4-tier, 1.20@1.35; 4 1/2-tier, 95@1.00; Northwestern apples: Jonathan extras, 1.75@1.90; fancy, 1.60@1.75; Spitzbergs, extras, 2.25@2.50; fancy, 2.00@2.25; choice, 1.50@1.75.	
Cantaloupes—Cassabas, cr., standard, 75@1.00; Honey Dew, 75@1.25.	
Citrus Fruits—Bx.: Lemons, fancy, 6.00@7.00; choice, 5.00@6.00; lower grades, 4.00@5.00; lemons, 2.75@3.75; grapefruit, fancy, 3.50@4.50; choice, 3.00@3.50; lower grades, 1.50; Mexican limes, 2.25@2.50.	
Oranges—Bx.: New Valencias, fancy 3.75@4.00; choice, 3.00@3.25; lower grades, 1.25@2.00.	
Tropical Fruits—Bananas, Hawaiian, 5c lb.; pineapples, 3.50@4.00 doz.	
Pomegranates—One-half orange bx., 1.50@2.00.	
Persimmons—Bx.: 75@1.25.	
Cranberries—Bx.: of 33 1-3 lbs, 4.25@4.50; Cape Cod, opening price to jobbers, bbl., \$15.	
Alligator Pears—Doz., 5.00@7.00.	
Quinces—Bx., 1.00@1.25.	

## DRIED FRUITS

Not producers' prices but prices of wholesaler to retailer.

Peaches—Unpeeled, lb. standard, 9 1/2; choice, 9 1/2; extra choice, 10; fancy, 11. The Peach Growers' Association has disposed of all stock and is not offering.

A. J. Sturtevant of the California Peach Growers' writes: "It has been a long time since we made any alteration or changes in our price list. We have been withdrawn from the market on all varieties of dried fruits. In all probability we will have some grades to offer a little later on. The crop has run very largely to standard and choice grades, the percentage of fancy and extra fancy being unusually light. Shipments of fruit this year have been unusually delayed because of two very annoying conditions; namely, the shortage of cars and difficulty in securing box shooks. These two factors will influence our re-entering the market. We would not care to accept any further business until we have taken care of a large enough portion of the orders already in hand so that we can see daylight ahead. Markets all over the United States are crying for fruit. So our entire attention at this time is being devoted to taking care of this demand for immediate shipment."

Figs—In 50-pound boxes, per pound. White Adriatic, standard, 8 1/2; choice, 9; extra choice, 10 1/2; fancy, 11 1/2; Calmyrna, fancy, 15 1/2; extra fancy, 16 1/2.

Apricots—Lb., bulk basis: Standard,

## POULTRY

We quote from producers, lb.:

Hens, large, 25@26; Leghorns 22@24

Small colored 22@24

Broilers 33@40

Roosters 25@26

Squabs, doz. 1.50@4.00

Ducks 14@20

Geese 18@19

Belgian Hares, live, 14@17; dr. 17@20

Turkeys 22@30

## LIVE STOCK

Prices gross weight:

Cattle: The following prices are for grass fed stock. Hay fed brings 1/2 to 1/3 c.

Sheep: Wethers, 10 1/2@11 1/2; ewes, 9 1/2@10

Hogs—Hard grain-fed, weighing 100 to more.

Steers, lb., 6@9 1/2; cows and heifers, 10 1/2@14; calves 7@9 1/2

50 lbs., 14; 150 to 300 lbs., 15 1/2; 300 to gross prices: Nonpareils, 21 1/2 c; L. X. L., 19 1/2 c; Ne Plus, 18 1/2 c; Drakes, 16 c; hard shell, 11 1/2 c.

Pecans 16@18

Pine Nuts 16@19

## HONEY

Comb, W. W. lb. 15@18

Lt. A., 11@12

Extr. W. W. Alfalfa 13@14

Extr. W. W. Sage 16

Lt. A. Alfalfa, 13; do Sage 14

Umber Sage 10 1/2@12 1/2

beeswax, lb. 38@40

14 1/2; ch., 15; ext. ch., 16 1/2; fcy., 16 1/2; ext. fy, 17 1/2; fy. Moorpark, 17 1/2; ext. fy., 18 1/2.

Prunes—60s to 90s, 6 1/2 basis; 50s to 60s, 1/2c premium; 40s to 50s, 1 1/2c premium

Apples—In 50-pound boxes, lb.: Fancy 15 1/2; extra choice, 14 1/2; choice, 14

Pears—Bulk basis, lb.: Fancy, 11 1/2; extra choice, 13 1/2; choice, 8; standard, 6

Raisins—F. A. Seymour of the California Associated Raisin Company, writes: "We can not confirm any more orders for seeded raisins—either carton or bulk—for November shipment. The car situation is such that we are unable to operate our plants to their capacity."

## BEANS

Jobbers' prices, cwt., new crop, re-cleaned.

Limas 13.00@13.25

Bayous 8.75@9.00

Small Whites 12.00@12.25

Mexican Reds 9.00@9.50

Large Whites 11.75@12.00

Pinks 8.75@9.00

Blackeyes 9.00@9.25

Red Kidney 13.00

Cranberry 12.75@13.00

## HOPS

Per lb.: California crop of 1917, 30@35; on contracts, spot, 1916 crop, 18@22; old, 8@15.

## RICE

California rice, new crop, cleaned, 100 pound head rice, 6.70; brewers', 5.25; screenings, 5.60.

Rough rice, 100 lbs., 3.20@3.40.

## HAY

Under date of Nov. 3, Scott, Magner & Receipts for the past week, 1334 tons, last week 1740 tons. A large percentage was of alfalfa. Most of the arrivals were on government requisitions. Thus the general receipts have been exceedingly small. The lack of cars on railroads seems to be a dominant factor of the market.

The market has remained firm throughout the week, yet demand has been very light. Although the weather has remained dry there are at this writing indications of showers shortly. It is to be hoped that should the rain come that it will be in sufficient quantities to start the grass on the ranges as a small amount would only tend to kill the dry feed and be of very little benefit to the new feed.

We quote today wholesale prices in carload lots as appear from dealers' transfers. For prices to consumers charges of cartage, commission and handling must be added according to conditions.

Fancy Wheat Hay (light 5 wire bale, ton)	26.00@27.00
No. 1 Wheat or Wheat and Oat Hay	23.00@25.00
No. 2 Wheat or Wheat and Oat Hay	20.00@22.00
Choice Tame Oat Hay	25.00@26.00
Other Tame Oat Hay	21.00@23.00
Wild Oat Hay	20.00@23.00
Barley Hay	20.00@23.00
Alfalfa	20.00@24.00
Stock Hay	17.00@19.00
No. 1 Barley Straw, bale	60@90

## GRAIN

Grain Exchange prices, ctl.

Wheat—Government prices: Common white hard, base price is \$3.50 per cental, or \$2.10 per bushel of 60 pounds delivered in terminal warehouses in bulk; soft wheat, base price 2 cents per bushel less, or \$2.08 per bushel; white club (including Sonora), \$2.06 per bushel. If wheat, after cleaning, weighs 60 pounds or more to bushel, base price stands; if 58 to 60 pounds to bushel, 3 cents per bushel reduction; if 56 to 58 pounds, 6 cents per bushel less; if less than 56 pounds, grain becomes sample grade and sells on its merits up to within 1 cent per bushel of 56-lb. wheat. Sacked wheat 4 cents per bushel more, less tare for weight of sacks.

Corn, California Yellow	3.50@3.75
Australian	3.75
White Egyptian	3.00@3.10
Barley, Feed, cwt.	2.42 1/2@2.45
Shipping	2.42 1/2@2.47 1/2
Oats, Red Seed	2.65@2.70
New Black	3.25@3.50
White	2.60@2.70

## FEEDSTUFF

Wholesale prices per ton:	
Bran	41.00@42.00
Cornmeal	85.00@87.00
Cracked Corn	85.00@87.00
Middlings	50.00@55.00
Alfalfa Meal	29.00@31.00
Cocunut Meal	40.00@41.00
Rolled Barley	50.00@51.00
Shorts	43.00@44.00

## SEEDS

Prices in round lots, lb.:	
Millet, re-cleaned	4 1/2@5
Alfalfa	20@21
Flax	6@6 1/2
Rape	2 1/2@3

## Citrus Fruit Market

Los Angeles, Nov. 7, 1917.

At midnight October 31 the citrus year for California citrus fruits, 1916-1917, ended. Citrus shipments were greatest in the history of the state, 54,504 cars. The record was previously held by the year ending in 1914, when 48,338 cars were shipped. The year preceding that record year, that of 1912-13 when the big freeze occurred, totalled only 18,960 cars. Shipments for 1911-1912 were 40,680.

## Shipments in Detail

Shipments from Southern California from November 1, 1916 to October 31, 1917: oranges 40,702 cars, lemons 7748, total 48,450; from Central California, oranges 5044, lemons 165, total 5209. From Sacramento, Butte and other northern counties, 845 cars of oranges; a grand total of carload shipments for the year, 54,504.

Shipment for year ending October 31, 1916: Southern California, oranges 31,757, lemons 6940, total 38,697; Central California, oranges 5416, lemons 69, total 5585; Northern California, oranges 610, lemons 1; total for the year of 44,893.

Shipments for the year ending October 31, 1915: Southern California, all citrus fruits, 40,160; Central California, 5893; northern 632; total 46,685.

Shipments for the year ending October 31, 1914: Southern California all citrus fruits, 41,978; Central California, 5951; Northern, 409; total, 48,338.

Not only has the total output been the greatest, but marketing conditions have been almost invariably good from the first day's shipments. In addition to this great shipment it will require another 30 days before all Valencias have been marketed. Navel shipments will be later than usual, and the coming year's navel output will probably not be 50 per cent of that of last year. We may also add that Florida's output will be greatly reduced next year.

## FROM THE AUCTION

October 31

New York, 12 cars Val. Val. \$1.45-\$7.55.

St. Louis, 1 Val. Market good on fancy stock, Val. \$2.80-\$3.60.

Boston, 5 cars. Val. \$3.25-\$4.60, Lem. \$3.40-\$8.05.

November 1

New York, 7 cars higher. Val. \$2.90-\$5.30, Lem. \$5.55.

November 2

New York, 13 cars. Val. \$2.50-\$7.45.

November 5

New York, 17 cars, Val. \$2.55-\$7.85.

Boston, 8 cars. Val. \$3.30-\$8.45.

\$4.10-\$5.60.

Shipments

Shipments from Southern California since November 1, oranges 333, lemons 45.

## MONTHLY WEATHER AND CROP BULLETIN

October in California was warm and dry, which was favorable for harvesting late potatoes, rice, beans, sugar beets, apples, grapes, olives, etc. It, however, was unfavorable for ranges and for fall plowing. Feed on the ranges is short, and in some few counties cattle are getting so poor stockmen fear their losses during the winter will be heavier than usual. Considerable dry plowing has been done; but no seeding of wheat or barley except in a few of the southern counties. While the bulk of the sugar beet crop has been harvested under excellent conditions, there is still a portion not hauled to the factories. In general sugar beets have turned out better than expected.

A splendid crop of rice and a large crop of beans have been secured. Late potatoes matured nicely and most of the

crop has been dug and marketed or is ready to be hauled to places of shipment. In a few places tomatoes were slightly injured by frost, but by far the greater part of this crop was gathered in the best of condition.

Apple drying, prune drying and raisin drying were practically finished during the month and all three crops were saved in fine condition. The harvesting of wine grapes is also nearly finished. This crop while not coming up to expectations in quality is above average in quantity. The orange crop in Tulare County is about two weeks late, and the crop here, as well as farther south, will be comparatively light on account of the damage by hot weather last June. Oranges are beginning to color and lemons are sizing up slowly in Tulare County. In Los Angeles County the month was favorable for oranges and lemons, except rain is needed for cover crops. The orange trees are thrifty with an occasional one in nearly full bloom. Valencias promise nearly a full crop if they grow to size. Very few lemons have been picked; but there will be a good crop to pick in January and during the remainder of the season if the weather is favorable.—E. A. Beale, District Forecaster, San Francisco.

## WEATHER CONDITION

San Francisco, Cal., Nov. 3, 1917.

	Rainfall	Temp.	Min.
	Wk. Season. Norm.	Max.	
Eureka	1.47 2.15 4.28	62	44
Red Bluff	.30 1.10 2.57	78	46
Sacramento	.00 .51 1.54	80	42
San Francisco	.00 .02 1.71	74	50
San Jose	.00 .01 1.36	76	38
Fresno	.00 .00 1.02	82	44
San Luis Obispo	.00 .10 1.91	86	42
Los Angeles	.00 .00 .86	84	50
San Diego	.00 .17 .55	78	48



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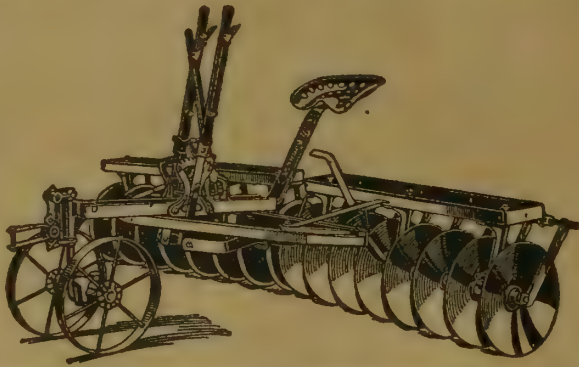
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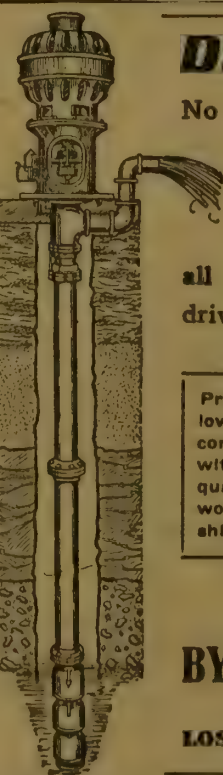
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LOS ANGELES

November 17, 1917

SAN FRANCISCO







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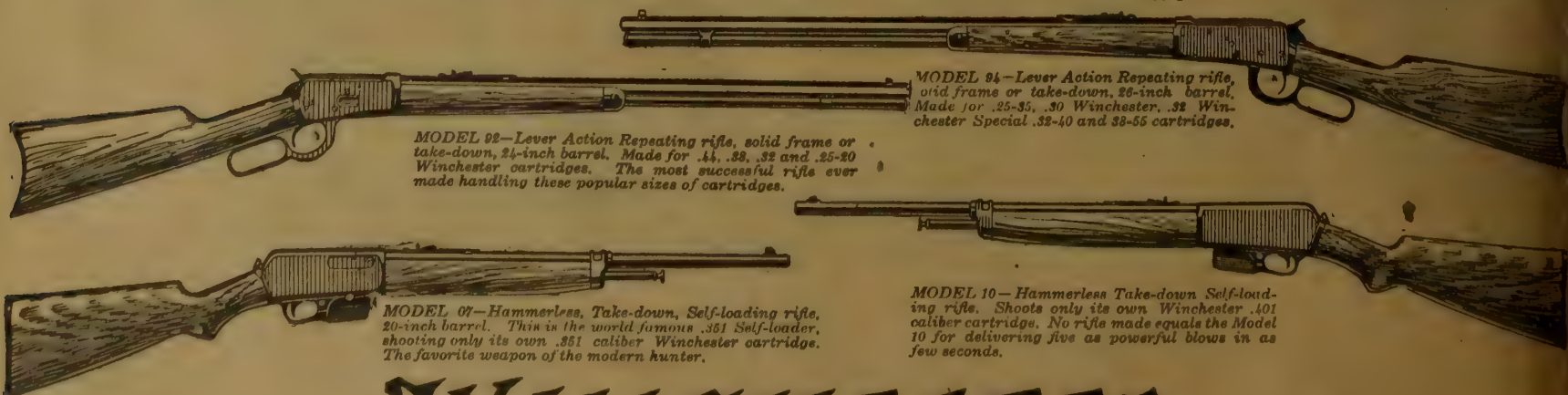
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# California Cultivator

Vol. XLIX No. 20

LOS ANGELES: November 17, 1917

One Dollar Yearly

## Serious Fungous Trouble in Onion Fields

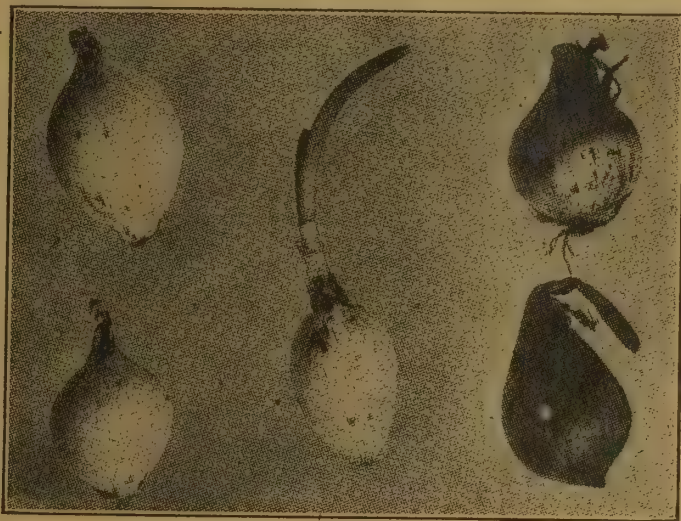
Black Mold Prevailing in Some Eastern Truck Farming Sections Discovered in San Fernando Valley, Los Angeles County. Sanitation and Cleaning Up Necessary

**O**NIONS infected with a black fungus growth were recently brought to the Cultivator office by H. M. Starr, an onion and garlic producer of the San Fernando Valley. Mr. Starr had endeavored to secure information as to whether this was a serious pest of the onion. The onion had been submitted to an expert and one or two had suggested that it was a common smut. The Cultivator sent the specimens which were left here to the Laboratory of Plant Pathology at Washington, and Lucia McCulloch, assistant pathologist, suggests that the fungus may be *Sterigmatocystis nigra* and closely related to the ordinary molds of bread and canned goods. However, the writer stated that the onions had been referred to other experts, and we later received a letter from H. A. Edson, pathologist in charge of truck and forage crop disease investigation, giving the information that this disease was not smut and stating that the principal injury to the onions occurs in storage. Mr. Edson added "the Ohio agricultural experiment station is now working on this problem. They have recently published a bulletin on its occurrence in Ohio and neighboring states, and have recommended measures for its control. The control measures consist of seed treatment with formalin at the proportion of one pint to 30 gallons of water. This treatment is of double value in that it is also effective against onion smut. In addition to seed treatment, general sanitary measures in the field are followed, consisting of the destruction of diseased plants and plant parts." Mr. Edson then referred the matter to Wayne Van Pelt, assistant botanist, Ohio agricultural experiment station, Wooster. Mr. Van Pelt writes "This black mold disease has been noticed on onions in this state only within the past two seasons. As yet we have not fully completed our results on control measures. However, I am enclosing an article which we published in our May, 1917, Monthly Bulletin, and trust it will give you some idea of our experience with the disease up to that time. General sanitation measures, such as cleaning up all dead and diseased parts in field and storage houses, will probably need to be strongly advocated."

Also quoting from No. 5 of Volume of the Monthly Bulletin of the Ohio station, we have the following regarding "Black Mold of Onions, a new Fungous Disease Causing Serious Damage in Storage Houses." This is written by Mr. Van Pelt, and we quote in full, also giving one illustration on this page from the same bulletin. Specimens of the California onions have also been sent to Mr. Van Pelt, and we hope to hear more specifically later.

### Black Mold of Onions

From inquiries and reports on onion diseases, to the experiment station during the last season, important re-



Black Mold of Onions

Several white onions diseased with black mold, and at the right below, a red onion infected with the same disease. The contrast is clearest on white varieties, although other sorts are likewise ruined by this mold. The earlier, small molded areas show rupture of the cuticle and production of spores; later the decay of the several layers within is indicated by the shriveling of the exterior.

sults of the work of a new black mold on onions, caused by the fungus *Aspergillus niger*, have been observed. This disease has become of general economic importance to growers and storage men of this State only within the season of 1916. The prevalence of this disease on storage onions from certain localities of Ohio, as well as from Virginia, has prompted us to car-

ry out certain experiments and collect notes for publication.

In general, the appearance of this disease of onions resembles closely that of onion smut, and those who are not familiar with the microscopic characteristics will be unable to distinguish between the two. The experiment station will gladly assist in identifying these diseases upon the receipt of liberal specimens.

## Tractor and Implement Demonstration

Santa Clara Valley is Site of Demonstration Which Gave Information to Thousands of Producers as to Hooverizing. Use More Farm Power and Labor Saving Implements

Written for California Cultivator By Leroy Anderson



HE Santa Clara Valley tractor and implement dealers laid the foundation for a bigger show than they anticipated when they planned the demonstration of power farming machinery for November 1, 2 and 3. Their fondest expectations as to attendance and interest were more than realized. That they had faith is evidenced by the size of the tract selected, which was 60 or more acres, and the size of the exhibition tent, which was 85 by 310 feet. As one approached the field he was in doubt whether a huge fair or a circus was being pulled off, and when he arrived he was satisfied to call it either or both. The tent was well filled with idle tractors, machinery for tractors or horses, spraying implements, pumps, motor fuel and lubricants.

The open field had been divided into nine or ten portions and each portion assigned to a tractor. In addition to this an adjoining orchard of ten acres was secured on the second day and most of the tractors preempted a "land" or two to show what they could do amongst trees. In fact a tractor or its plow that cannot negotiate trees is of little use in the Santa Clara Valley. Actual tractor work was confined chiefly to the after-

noons when the largest number of visitors was present. Each machine was kept busy to satisfy the demand of the many men who desired to see what each could do, and long before closing hour of the last day the entire field had been plowed. It was a barley stubble and now it is ready to sow again.

The genial citizen who engineered the auto parking said there were 800 autos on the grounds the first day, and the daily press said there were 5000 people. The second day brought a large attendance, and the last day, Saturday, the biggest of all. So it may not be stretching the case to say that 20,000 people visited the show. And they were not city folk out for curiosity; the great majority were farmers, each endeavoring to see which tractor would be best for his use, even if he could not buy right away. So it was a crowd with a purpose and withal a most jovial crowd.

This demonstration shows that Santa Clara Valley can stage as good a power farming exhibit as any other part of the state. It shows that farmers are thinking more and more seriously of the need of mechanical power on their farms. The extremely high price does not deter men from

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### Description of Black Mold

Species of this family frequently infest several different, common hosts; namely, bread, decayed and preserved fruits and vegetables. The first appearance, as noted on germinating onion seed, is a white, flocculent mass of threadwork. On neutral glucose agar, as well as on the onion sets and bulbs, the infested areas are first of a light brownish color, soon turning to a dark brown color. The general appearance of the disease, and type of growth are well illustrated by the accompanying figure. The dark areas, consisting of microscopic conidia, or spores, usually appear in the earlier stage as small, circular spots scattered about a portion of the onion, generally about the upper half. As the small areas develop, gradually there is being formed a single large, diseased mass which often involves the greater part of the onion layers. As shown in the figure, the infection usually starts about the upper portion of the onion, thus indicating that the spores gain entrance about the ragged and torn tops and then gradually develop downward between the layers of the onion. It has also been noted that spore entrance has been gained through cut and bruised places made when the onions are pulled and when handled from place to place, especially in storage and commission houses. The Spanish, or large white onion, when seriously infected with this disease is quite objectionable for sale.

The work of the disease causes the outer layers of the onion bulb to wrinkle and become dry, which, together with the dark spots covering the surface, leaves it almost worthless. This condition, however, is rarely found except on onions which have been in storage under prevailing conditions.

The injury to the young growing onion seems to be of no particular importance. The organism at this time appears to survive as a saprophyte (that is, lives on dead or decaying organic matter) on the dead layers of the original bulb.

The spores of this disease cannot be seen except by the aid of a compound microscope. They are of a dark brown color, spherical in shape, with minutely verrucose or warty outer wall. As has been stated, they live on the dead organic matter of the field; thus, when the onions are pulled a number of spores are left clinging to the new bulb. As soon as the onions are placed under favorable conditions for spore germination, as is found in many storage houses, these spores start to break down the organic substances of the onion, especially the carbohydrates. This work in a short time nearly decomposes the whole onion.

From an examination of a number of samples of onion seed it was found that a large percentage of the seeds were carrying these spores. After a number of these samples of seeds were placed under germination condi-

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## Autumn in the Orange Orchard

By William M. Bristol



WHEN the corn grower has cultivated his fields for the last time and nothing more remains to be done for the growing crop he says that his corn is "laid by." I have heard the same expression used in connection with the orange crop; and I do not know that a better term can be found to designate that condition which should exist, when, about the first of October, cultivation is ended, the winter cover crop is sowed and nothing remains to be done except to irrigate when necessary — and wait for the fruit to mature.

It is now too late to advise concerning the cover crop for this season. In fact it would seem as if the subject of winter cover crops were threadbare, in spite of the fact that many orchard owners still neglect to grow them. Just a few hours ago I walked through an orange orchard whose trees were almost crying aloud for humus, yet no cover crop had been planted or planned for. In fact, the ground had been

freshly cultivated so that any indigenous plants that might have been started by the last irrigation were thoroughly eradicated.

If it be asked how I know that those trees need humus my answer is that their sparse foliage of a pale green cast indicates it. It is true that they are on a rather loose gravelly soil deficient in clay and therefore likely to be depleted of its nitrogen by leaching; but a neighboring

orchard on similar soil, and which has had both cover crops and stable manure, has foliage both dense and dark. The contrast between the two orchards is so marked that it amounts to a demonstration of the effect of abundant humus.

The need of rotation of crops in ordinary farming has long since been accepted as proven. A moment's reflection should show that some semblance of rotation should be practiced in an orchard, and I know of no nearer possible approach thereto than the growing of some annual leguminous crop therein. The hypothesis that each crop, in the act of growing, impregnates the soil with poisons interfering with the continued reproduction of that same crop, may or may not be correct. In Will Carlton's poem entitled "Betsy and I are Out" it is related that, in spite of the prolonged controversy as to how it happened, the fact of the cow's death was accepted by both the old farmer and his wife. Rotation of crops being accepted as beneficial, it would seem that the wisest thing is to rotate, and if for any reason a leguminous crop cannot be grown, then, for the love of humus, sow barley or some other cereal, for the cereals will doubtless eat up the toxins thrown off by the citrus trees as thoroughly as legumes and will at the same time make humus. This is not an argument for cereal cover crops as a regular practice for they are much more difficult to turn under than legumes and are not believed to add to the nitrogen content of the soil as do the legumes.

It is not strange, perhaps, that one who believes as firmly as do I in cover crops should have convictions that differ from those of some of his fellow orchardists, and even from those of the fellows who answer the questions sent in to the editors of the horticultural journals. Speaking from both experience and observation my present belief is that a cover crop sowed in the fall and permitted to grow until the first of May costs less and is worth more than two crops a year partially matured. I was told recently of a man who had been growing both a winter and a summer crop with practically no time intervening between them. He had plenty of water and both crops grew finely—but he frankly admitted, the trees were not looking well. It seems reasonable that from the first of May to the middle of September the trees and their fruit should have a monopoly of the available plant food in the soil and the moisture also. In my own orchard the single cover crop plan has given such excellent results that the controversy seems permanently settled. Of course when trees are young, water plentiful and bean prices high, it is good practice to grow beans; and would vastly rather have two cover crops per year than none at all.

If an orchard is on sloping ground—as many of the best citrus orchards are—the need of a cover crop for protection against erosion during rains is imperative. On my own place on the East Highlands mesa there is a slope of 200 feet in the half mile. The complete system of paved waste ditches could not collect or carry the water which sometimes falls, however were it not for the cover crop, which except in case of a very heavy down-pour, practically prevents any run-off, and the only thing that ever tempts me to grow a summer crop in these side-hill orchards is the abnormal summer cloudburst which comes about once in a decade. To guard against this disaster I am planning to plant



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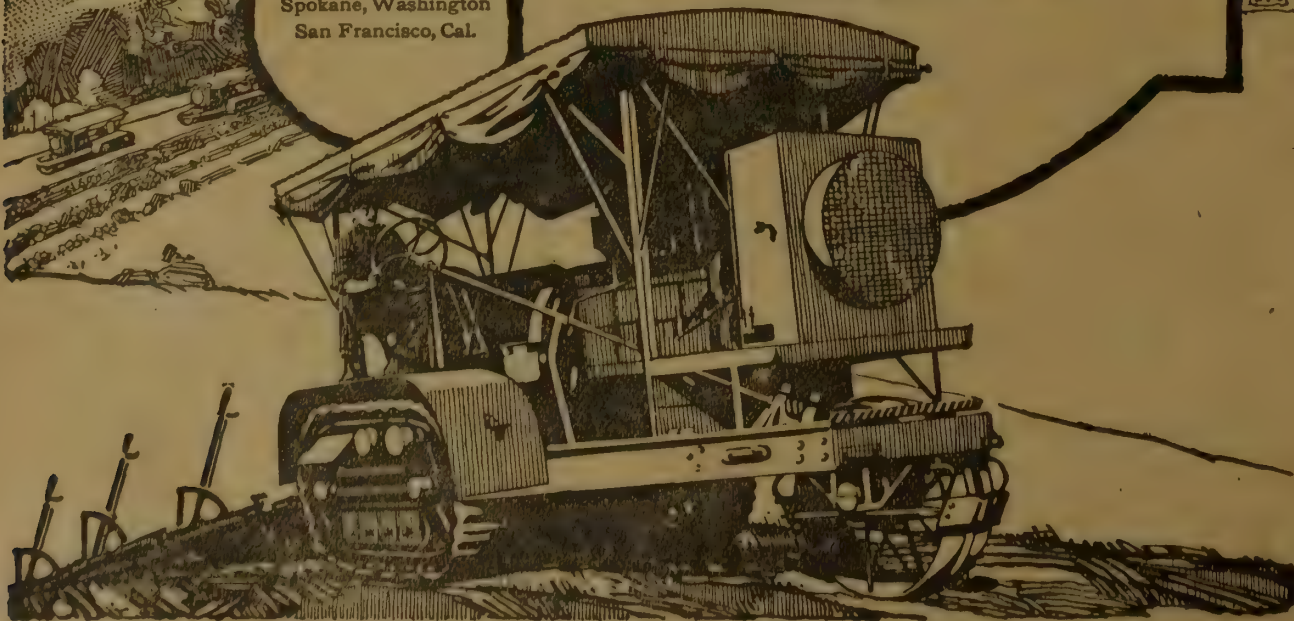
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on the steepest slopes next spring every third or fourth land to mellilotus alba, the summer-growing white sweet clover. It goes without saying that an orchard in which a cover crop is planted should be furrowed for irrigation — and for storm-water if upon steeply sloping ground.

Vast sums of money are expended every summer in protecting our mountain slopes against fire and hence against the erosion which inevitably follows denudation. I cannot understand why every orchardist should not preserve his valuable soil by protecting it against erosion through the medium of a cover crop. And, having gone to the trouble of sowing and growing a cover crop, I believe it to be wise to let it at least approach maturity for the sake of the greater root penetration and consequent loosening of the soil, as well as for the sake of the greater amount of humus gained.

Recently I saw a man who has an orchard of two year old trees industriously hoeing out and burning the tumble weeds which had escaped the cultivator during the summer. At the same time he was overlooking and leaving patches of devil grass that had started in three rows and along the line. He spent a week at the job — in other words, \$15 worth of labor. He turned about two tons of dry weeds, which, at the present price of almost any kind of straw, were worth \$20. The weeds had completed their growth and were taking nothing more from the soil. The logical thing, in order to return to the soil the nitrogen they had taken from it, was to let them rot where they had grown. A shovel of earth thrown on each one would have prevented it from being blown away and would have cost far less than the burning. I shall not write what I thought of his logic — or lack of it.

Excepting for the sake of comparison I presume the no-cover-crop experiments at the experiment stations could be abandoned; for they are on par with experimenting to see what citrus orchard will do without irrigation — and no one in California voluntarily tries that.

Reverting to my text, "Autumn in

the Orange Orchard," it is timely to observe that this season of scant crops affords an excellent opportunity for pruning. All wood which would have borne for the last time this year should come out, and in most inland orchards there are not enough oranges to delay decision on the part of the pruner as to where and how to use his saw. At the risk of making this article a record of personal procedure I am going to tell what becomes of the brush removed from orange trees on the Wayup Ranch. It has always seemed illogical to me to spend time and money in hauling out and burning any organic matter that can be returned to the soil. Immediately upon removal from the tree all wood exceeding one-half inch in diameter is stripped of smaller brush and goes to the domestic wood-shed. The trimmings are left under the tree until the following summer. They are then raked out and chewed up by a heavily weighted disk harrow from which alternate disks have been removed to give greater efficiency to the remainder. The work involved in this method of disposing of prunings is no greater than that required in hauling out and burning, so the organic matter saved is a net gain. If any one charges me with being a regular humus miser I shall not deny the charge. Somewhere I have read that an Irish peasant picks up every particle of fertilizer he finds on the highway. Of course the dignified California orange grower cannot stoop to that, but the mean little economies he can practice when and where no one is looking will be necessary if his industry is to be permanently prosperous.

"Autumn in the Orange Orchard" ought to be a paradox for the California orange grower; that is, autumn ought to release the grower from his orchard and send him on a vacation trip to become better acquainted with the marvelous state in which he lives. Our modern highways are a delight in themselves; and I know from experience that if he travels with his eyes and his ears open he will not only find recreation but will gain knowledge that will offset the monetary cost of the trip.

## Chemical and Physical Value of Mulches

IN answering a question as to value of stable manure and of straw the Cultivator said some months ago:

It is impossible to tell value of stable manure which you are buying without knowledge of the feed of the stock which produces it. The value of plant food in a ton of average manure, according to Van Slyke, is about \$2.50 for horse, \$2.20 for cow, \$2.00 for pig, \$3.20 for sheep, \$2.35 for deer and \$4.40 for hen. Note we say average manure." Where a horse is fed on grain and the bedding is so arranged as to absorb much of the liquid which manure has greater value. We are not able to turn to values of barley straw. Oat straw is quoted by Hopkins as having a value of \$3.30, wheat straw \$2.58. This would make appear that \$7.50 per ton for barley straw would be higher than could be paid economically, but it must be borne in mind that the figures given are based on plant food value without any reference to mulching and humus value. There is much more humus forming material in a ton of dry straw than there is in a ton of stable manure saturated with liquid. The value of bean straw is of course much greater than barley because of its higher nitrogen content. Its value on an analysis standpoint would possibly reach eight or nine dollars. Now come other questions along

this same line so we give information brought out at the time of the former quotation because of statement in another paper that the above figures were in error, that barley straw was of greater value. Correspondence was taken up with Prof. Lipman and others of the University of California. Prof. Lipman wrote:

I want to say that the misunderstanding is evidently based on an incorrect interpretation of the data submitted by Mr. Hendry. In accordance with the figures published as received from Mr. Hendry, it is true that barley hay shows a higher feeding value and probably also a higher fertilizer value, by implication, than the lima bean straw. That, however, if you will think for a minute, is merely due to the fact that the seed of the barley or the grain is included with the straw and that naturally raises very greatly the percentage of protein and fat as well as carbohydrates present in the barley hay. If, however, the barley straw is compared with lima bean straw there is no question at all of the superiority of lima bean straw. That is particularly so in the case of fertilizer values of these materials, since if either was used for fertilizers it would be used in the form of straw and not in the form of hay. You are therefore correct in your contention that the lima bean

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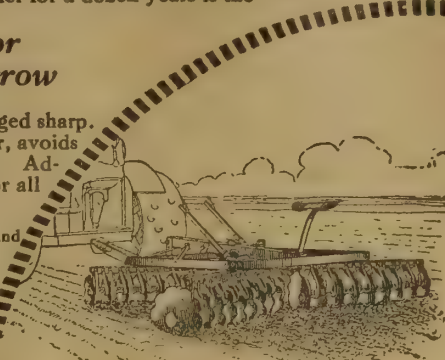
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straw is a better material as a fertilizing material than the barley straw, but not correct in the statement that the lima bean straw is a better material for feeding purposes or for fertilizer purposes than the barley hay.

As to blackeye straw Prof. Lipman also wrote:

I beg to inform you that the analysis of blackeye bean straw, which of course is very similar to that of cow pea hay, since blackeye beans are one variety of cow peas, is as follows: Water 10.95, ash, 8.40, nitrogen 1.95, phosphoric acid .52, potash 1.47.

According to present prices of potash and present prices of nitrogen, this material should be worth approximately \$15 per ton, (those figures are based on pre-war prices. They are now very much higher) but of course both nitrogen and potash prices are decidedly abnormal at this time owing to the European war, and hence the normal price of this material would probably be nearer \$6.00 or \$7.00 than \$15 per ton. Even then it must not be forgotten that the valuation of fertility constituents in hay, straw and green plants by our present fertilizer standards are most arbitrary and totally unjustified by the actual service, so far as we know it, that is rendered by the constituents in question, to soils to which they are applied. Obviously the question of availability comes in which may make more valuable or less valuable the constituents in question in the case of straw than in the case of commercial fertilizers.

We have little evidence upon which to make any definite statements with reference to these matters. In gen-

eral, of course, it is safe to assume that hay, straw and green stuff from leguminous plants are far more valuable than similar materials from non-leguminous plants even if judged purely from the viewpoint of their nitrogen, phosphoric acid and potash content. Therefore, bean straw and alfalfa hay will have greater value than barley, wheat or oat straw for possible fertilizer purposes.

Nevertheless, it should always be remembered that the value of these materials as mulches throws in to the background all manurial value which they may possess, especially as to the circumstances obtaining today in the lands of the hot interior valleys. In the light of what we know of the subject, therefore, I would advise people to pay a little more attention to the fertilizer value of mulching material when considering the general question of the profitability of mulching.

I feel strongly, that it is high time as I have often stated in public, that we give less attention to ultimate chemical compositions of things and more to their important effects which they are responsible in our soil fertility problems.

#### Analysis

P. L. Hibbard, also of the state university, sends analysis of lima bean and lima bean straw:

Lima beans—Total phosphoric acid 0.80, total nitrogen 3.07, total potash 1.94.

Lima bean straw—Total phosphoric acid 0.30, total nitrogen 1.37, total potash 1.57.

## Fruit Growers Convention

THE fruit growers of California will hold their fiftieth convention in the Senate Chamber, Capitol Building, at Sacramento, November 21 to November 23, which will be attended in a body by the county horticultural commissioners, who will also meet during the same week.

#### Program

Wednesday, November 21, 9:30 a. m.—Welcoming addresses; Annual report, G. H. Hecke, State Commissioner of Horticulture; Progressive Action by Agricultural Organizations—State Agricultural Society, John H. Perry, State Viticultural Commission, E. M. Sheehan, California Fruit Distributors, Chas. E. Virden, California Fruit Exchange, G. H. Cutter, California Associated Raisin Company, R. L. Payne, California Fruit Growers' Exchange, E. G. Dezell, Almond Growers' Exchange, T. C. Tucker, Walnut Growers' Association, Carlyle Thorpe, Farmers' Protective League, C. A. Bodwell, California Association of Nurserymen, Max J. Crow.

1:30 p. m.—Report of Committee on Deciduous Root Stocks, H. P. Stabler; Deciduous Root Stocks, Dr. W. L. Howard and A. L. Wisker; Better Fruits, Dr. H. J. Webber; California Soils and Cover Crops, Prof. W. M. Mertz, C. V. Freed, A. B. Humphrey, H. E. Pennywell.

7:30 p. m.—California Standardized Fruits and the Auction Market, Frank P. Ripley, Wm. Sproule, Geo. W. Ashley, Alden Anderson, Col. J. P. Irish, B. B. Meek.

Thursday, 9:30 a. m.—Have we reached the Limit of Profitable Orchard and Vineyard Planting?, H. C. Dunlap; Report on Cooperative Marketing, Prune and Apricot Growers' Association, F. M. Coleman, Pear Growers' Association, F. T. Sweet; Peach Growers' Association, J. F. Niswander; California Associated Olive Growers' J. C. Martin, Jr., Central California Berry Growers, Mark Grimes; Necessity, Importance and Wisdom of Farmers' Cooperative Marketing, Col. Harris Weinstock.

Thursday afternoon—Excursion to university farm, Davis. Tractor demonstration by Prof. J. B. Davidson; Statement of Horticultural Experiments now under way at the University Farm Orchards, W. L. Howard; Auto Sight-seeing trip over the farm; Statement of Purpose of the University Farm School, Dean H. E. Van Norman; Public Speaking Contest by three students.

730 p. m.—The Russian Situation, Major Stanley Washburn.

Friday, 9:30 a. m.—Address by C. C. Teague; Labor Problems of the Past Season, D. O. Lively; Development of New Labor During the War, M. F. Tarpey; Agricultural Labor Problem and the Draft, A. L. Wisker; Farmers' Union represented in discussion by D. M. Utter; Report of Agricultural Labor Committee, A. L. Wisker, Senator W. F. Chandler, Peter Cook, P. H. Davis, J. T. Lindley, E. W. Wylie.

1:30 p. m.—Housing, Treatment and Methods of Increasing the Stability of White Labor, Philip Baier; Compulsory Labor Laws of Maryland and West Virginia and their Application to California Conditions, Robert Devlin.

6:30 p. m.—Banquet. Address by E. J. Wickson, Robert Devlin, Marshal DeMott, A. H. Naftzger.

#### SHORT APPLE CROP

Western New York reports only about 15 per cent of a crop of apples. In 1916 the state produced almost a third of the total commercial barreled apples of the United States. This year's total will be nearly 4,000,000 barrels decrease from that of last year. New England states show a decrease of over 800,000 barrels. Pennsylvania's crop will be about 50 per cent of that of last year. Ohio's total will be only about 36 per cent. Missouri, Arkansas and other central states in some sections show increase over last year but in general perhaps not more than 68 per cent. Michigan's decrease is almost 800,000 barrels. It has only about 25 per cent of a full crop. On the other hand Illinois and Indiana show increase over crops of last year. One statement issued by the department says that it will be 49 per cent more than the 1916 crop. The immense output of the state of Washington puts it into the position of being the largest commercial apple producing state of the Union this year. The Wenatchee and Yakima sections alone will have an output of about 17,500 carloads. Great embarrassment obtains because of shortage of box material. Oregon will produce about 20 per cent less than in 1916. Colorado shows immense increase over 1916, estimated as high as 67 per cent. As to California, the department report says: "The Watsonville district is estimated with nearly a full crop, or about 4000 cars, the bulk of the California crop. Varieties here are chiefly Bellflower and Newton Pippin. Taken with the Sebastopol Gravenstein section the California state figure shows a one per cent increase over last year. A large portion of the apple crop will be used for drying."



BLACK MOLD OF ONIONS

Continued from Page 491

tions, it was observed that in several samples as high as 50 per cent of the seedlings were destroyed. The spores attacked the tender sprouts soon after germination and completely decomposed the new growth.

Occurrence

Within the last season specimens of onions affected with the black mold disease have been sent in from two localities outside Ohio. The first specimens received were sent in by Paul Hayhurst, Sabot, Virginia. Soon afterword onion sets were received from a seed company in Chicago, and found to be affected with the same disease.

Control

As to control measures for the black mold disease, the formalin solution has proved the most effective and practical, together with general sanitation methods, as the cleaning up of old onion tops and litter about the fields. Tests made with commercial formalin solution, of a strength of one pound or pint of formalin to 25 to 33 gallons of water, applied to the infected seed, prove this to be of sufficient strength to control the disease. As this same treatment is part of the control measures for onion smut, the two diseases may be destroyed by the one treatment.

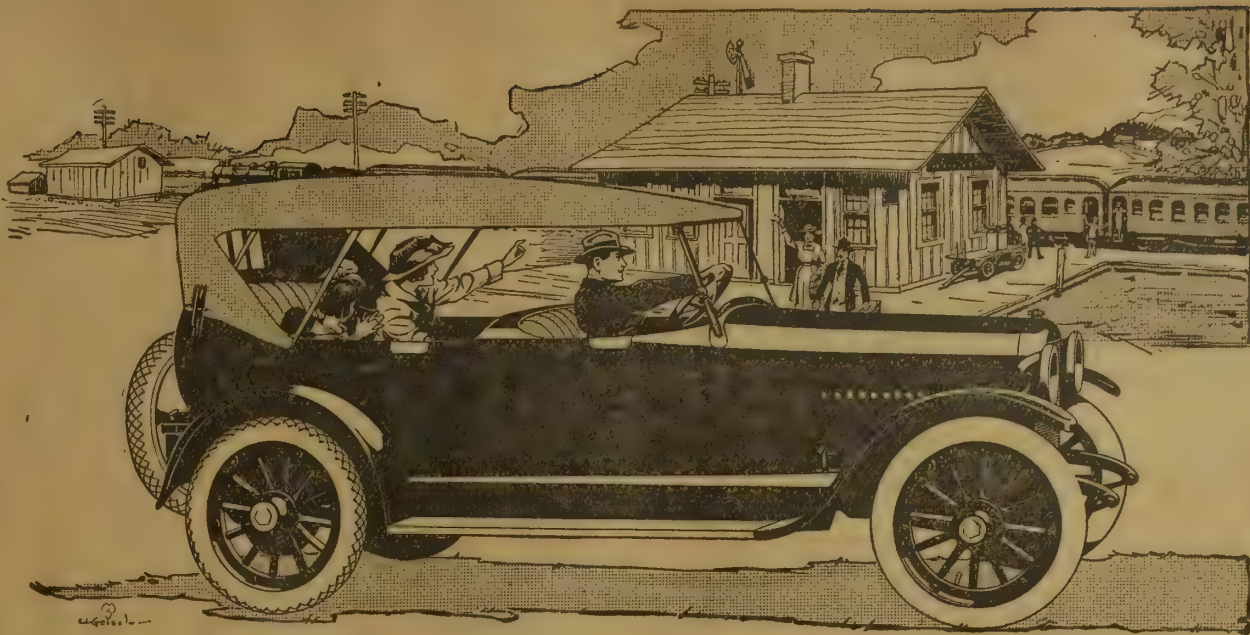
This strength of formalin solution is made up in small quantities by mixing one ounce of formalin (40 percent pure) with two gallons of water. When treating seed that is to be grown in fields which have been previously sown to onions the formalin solution should be applied by the drip attachment to the seed and soil when onion seed is sown. This is the recommendation given for the control of onion smut, for the soil, when treated with formalin solution in this manner, is kept sterile until the onion has started good growth and is able to resist the attack of the smut spores.

As *Aspergillus niger* is not such an active parasite under general soil conditions at this time, the bother of attaching a drip tube to the onion seed, as for the treatment of onion smut, can possibly be avoided, especially if there is or has been no evidence of the disease in the soil. The fields require to be thoroughly cleaned of old onion tops, rotted onions and other litter, the crates to be disinfected by dipping in formalin solution of about the same strength as for oat smut treatment, or by fumigation, and the seed treated before being sown. This would consist in applying the formalin solution to the seed with a sprinkling can, or other similar device, in such a way that the seed will be thoroughly moistened with the solution, then spread out so that the seed will gradually dry. While this method can probably be safely used where there has been no previous evidence of black mold in the soil, the more thorough and efficient method will be to apply the formalin drip solution to the seed and soil, as recommended for the control of onion smut.

The drip attachment as used for onion smut treatment consists of an ordinary tin vessel or old syrup can with perforated bottom and tube to carry the solution forward to drop with the seed. It is advised to apply about 500 to 700 gallons of solution to the acre. This treatment has been efficiently established among onion growers for smut control to warrant its general use on soils infested with black mold.

Methods of treatment for onion sets have yet to be determined. It may be possible to use the same formalin solution described for onion seed treatment; immersion of the onion sets in this solution for five or six hours previous to planting may prove effective to destroy the black mold. Experiments are being made to ascertain the most effective and practical dip for onion sets.

Onion growers and commission men may not escape damages resulting from careless and insanitary practices. Better measures in the field alone are not enough if crates or bags, storage houses, etc., are left reeking with spores of this mold fungus. General measures with fire and disinfecting agents are indicated as necessary wherever the crop has become attacked by the *Aspergillus*.



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## Garden and Plant Notes

Written for California Cultivator By Ernest Braünton



IT IS doubtful if there is anything more curious or uncanny than the carnivorous or flesh-eating plants that live, in part at least, on insects, meat, or almost any succulent organic food that is given them. It is said that a scientist once experimented with this class of plants, feeding them on various sorts of food, with great success. One day he gave each a large amount of fresh cheese, when all were seized with an acute attack of indigestion and died, some of them in convulsions. We do not, however, vouch for the truth of this story, and as the scientist is said to have died of grief after seeing the horrible sufferings he brought upon the innocent plants, we have no authentic means of verification.

As we have a reputation to sustain we will confine ourselves to known facts. In California we have two distinct and odd species of insect-devouring plants. *Drosera rotundifolia*, the

sundew, has a very wide range and is found from the Atlantic to the Pacific by way of the Gulf states and is also native to Europe. There are about 90 species throughout the world, though most abundant in Australia. The sundew is not found in the southern half of California.

The leaves are nearly circular in outline and covered with fine bristly hairs that excrete a viscid fluid which aids in holding the victims first caught by the infolding and grasping hairs. When an insect alights or falls upon a leaf the hairs bend inward toward the leaf-center, the exuding fluid becomes acid and at once begins to absorb or digest the flesh for the plant's nutrition. Raw meat is immediately strongly clasped and retained by the leaves until all is absorbed, but when dry wood, chalk, lumps of earth, or stone are used, no movement is visible. Bits of raw fruits excite the plant but little, showing that animal food is much preferred.

*Darlingtonia Californica* is a more attractive, interesting and beautiful plant and still more curious, also of much greater size. The rosette of leaves, each one of which is a tubular pitcher, often attains a considerable size. These pitcher-like leaves are in some vigorous specimens more than two feet high and three inches in diameter. While the tubes are green, the mouth is nearly white, and from the latter there hangs a tongue of forked form that suggests the tongue of a snake and is quite attractive in red and green. This tongue and the hood above, which is suggestive of a snake's head, bear many honey glands, attract insects toward the yawning mouth from which no victims are return to tell of the fatal journey. The mouth proper is smooth and well lighted through whitish translucent mottlings of the hood above. Insects step upon this smooth and slippery surface, their heels fly up and down the toboggan they go. The throat is filled with bristly hairs that are directed downward so that victims once caught cannot escape. Down they go until they tumble into the melting pot below where the liquid soon disin-

tegrates them and they are absorbed by the walls of the pitcher-like leaves. In midsummer some of the large pitchers are filled to the depth of a foot by a mass of insect-remains, a veritable graveyard of bugs and bees, worms, slugs, centipedes, etc. Many other insectivorous plants are found in the Eastern states.

### Montana Bitter-root

*Lewisia rediviva* is the name of the plant known by the common local name of bitter-sweet, the flower of which is the floral emblem of Montana. The generic name, *Lewisia*, was given in honor of Captain Meriwether Lewis, of the Lewis and Clark expedition. The specific name, *rediviva*, was given because of the plant's power to revive after months of drouth. The plant will also revive and open its flowers when placed in water after having been uprooted for several days. The *Lewisia* is quite variable and has an extensive range. In fact it gave its name to the Bitter-root Mountains in Montana and with some variations reaches into the Yosemite Valley region of California where it is listed as the variety *yo-semitana*. It belongs to the portulaca or purslane family and is a truly beautiful flower of waxy pink.

### Ornamental Loquats

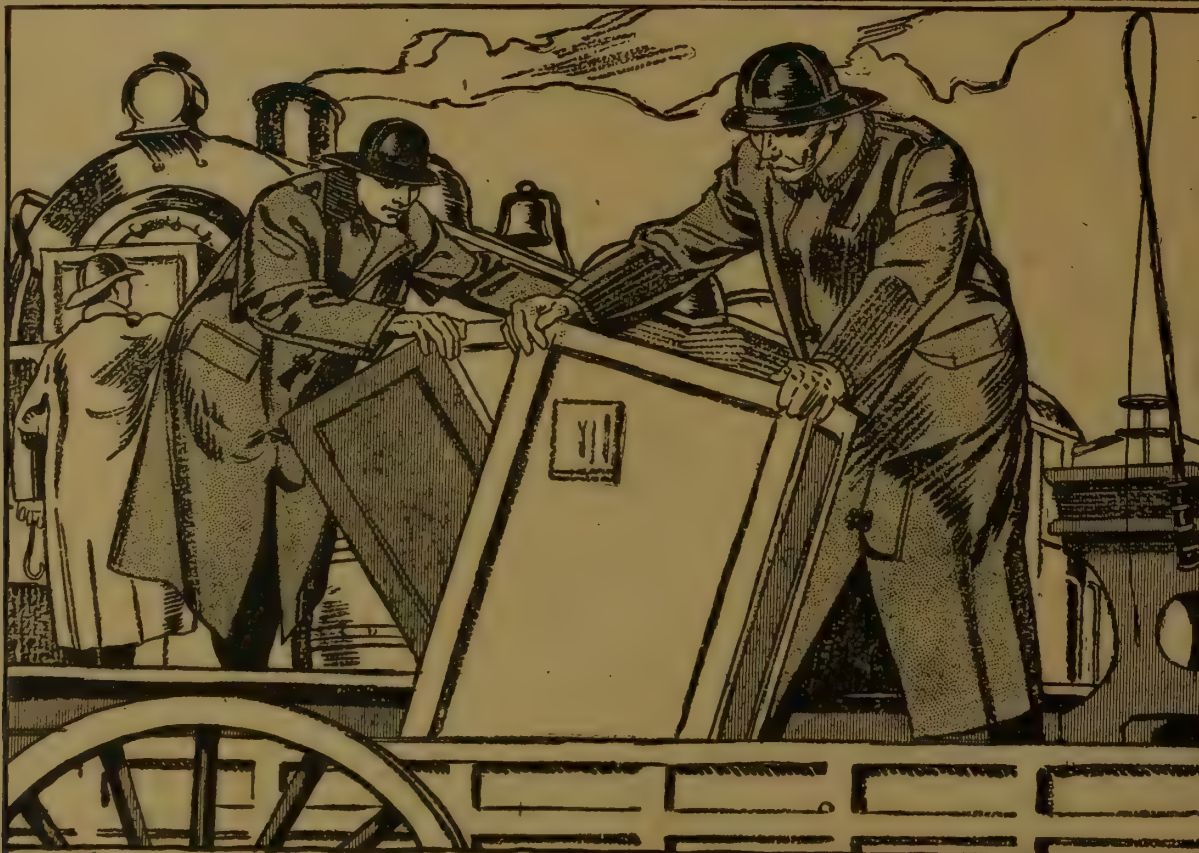
Now that fruits and all food stuffs are high in price and we are "adjured" to curb the cost of living, let us again consider what I long have preached—the use of economic evergreen trees for embellishment of home grounds. I have constantly and persistently advocated this class of plants for decoration of the home grounds—all down the list, from the grand magnolia-like avocado to the lowly carissa. Let us not forget the loquats whether budded or seedlings. Plant a group of them in natural positions. Not all need be of one variety. Use a Premier, an Early Red, a Red June, a Champagne, and a seedling. A group of five would be a fine one for appearance and one deeply appreciated after coming into bearing. Shall a tree be considered less beautiful because it bears an edible or useful fruit?

### General Fremont's Shrub

*Fremontia Californica* is a fine garden shrub and needs no pampering, coddling, or special care at any time. On the contrary it thrives best as a rule when it receives little attention. It is hardy throughout California and thrives in little or poor soil yet will amply repay a little ordinary garden care. It is still a rare plant in cultivation, though why I cannot say. For motorists returning from mountain trips frequently bring in flowering sprays for identification and are unanimous in declaring the shrub to be the most floriferous of all shrubs seen during the trip. Surely such plants are worthy of a place in the best of gardens.

### Graduated Planting

Nearly all deep borders are too nicely graduated in planting, with the result that they lack character. The taller plants, it is true, should be at the rear, but to show their character a bold clump should occasionally fall out into the lines of lowlier plants and should be flanked on either side by lower plants so that the full form and habit stands out in strong contrast to its surroundings. If this is not done what need is there of tall plants? Why not have a sloping bank whereon all the plants are of a height. Or place potted plants on graduated seats such as found in all grandstands and bleachers. To be short, if plants are tall, let their tallness be plainly apparent. And this cannot be accomplished



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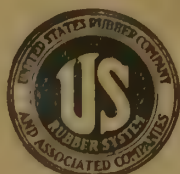
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except by contrast. Therefore let your planting be bold in character rather than tame.

#### Wild Gardens

Wild gardens should be as informal in all ways as it is possible to have without giving the whole the appearance of abandonment. A wild-flower garden (or a garden of wild flowers) is not necessarily a wild garden proper. The latter should have as a site a broken topography and if a canyon or ravine runs through it so much the better. Perfectly flat and smooth stretches are never good locations for natural displays. In Exposition Park in Los Angeles there is annually a fine display of wild flowers, with groups of native trees and shrubs, but the site is a very "tame" one and the whole thing looks out of place as it is located in the midst of city life where all just view, no matter from what direction one looks, a background of buildings and other evidences of civilization. A wild flower garden should be isolated and secluded.

#### Too Much Backyard

In planting new places avoid locating the house too close to the highway. In rural districts no excuse exists for such mistake for there are no precedents that one need to follow. The large backyard may give more privacy and usually gives more privations as well. Too much privacy is in a majority of cases a detriment for we do not all keep attractive those parts which all cannot see. Too much that unsightly soon accumulates where the backyard is roomy. Have a wealth of lawn in front—it adds much to beauty—it smacks of generosity and gives much of privacy, and privacy of

the entire home is quite preferable to the privacy of a backyard even though the latter be well planned and well kept.

#### Raise the Local Standard

Few things are more elevating to a community than neat, clean, well-arranged and well-planted home grounds. They are a decided uplift and a valuable asset. In kept and untidy grounds, on the other hand, so far from being an asset, are a liability. The effect of and influence of beautifying and cleanliness are almost magical in attracting visitors and home-seekers and home makers, and where the standard is already high there will flock those who will at once raise it still higher. Efforts of this kind are never lost and cannot fail to arouse in the minds of all the desire to do better. Are you doing your share, or are you a slacker?

#### Lime the Garden

Someone writes to ask how much lime should be incorporated into a heavy clayey garden soil. My experience would lead me to say at random: "All you can get." In my garden the top foot of soil is underlaid by a clay subsoil that at a depth of three feet is a finer material for bricks than ever was put into a brick in the city of Los Angeles. Where deeply and thoroughly dug up so that the top four feet was well mixed, that soil is best where the greater amount of lime has been applied annually for eight years. The most unproductive soil and the one in poorest physical condition is where the least lime is used. What amount to use is an open question. In clay soils you will not use too much.

## Celery Production of California

By R. G. Risser, Assistant Truck Crop Specialist for the Pacific Coast

**S**HIPMENTS of celery from California for the season 1916-17 were cut down materially in the northern portion of the state by repeated freezes. Over a large area where actual records of production are available the yield per acre was 79 crates in 1916-17 and 130 crates in 1915-16. Before the freezes occurred the cars averaged approximately 1100 dozen per car against 1500 dozen per car after the freezes. Besides reducing the size and weight of the celery, the freezes rendered much of the late celery in the northern portion of the state unfit for shipment, and a large area was never harvested.

Providing that there is not a repetition of this abnormal weather, shipments should run much higher this year. There is an increase in acreage 23 per cent and prospects are generally good. The area in celery in California is as follows:

	1916-17	1917-18
Contra Costa County	1602	2075
Sacramento County	995	967
San Joaquin County	655	840
Los Angeles County	900	1200
Orange County	150	200
Scatter counties	150	200
Total acreage	4452	5482

Included in the estimate of scattering counties are small areas in Alameda, Santa Clara, Santa Cruz, Yolo, Yuba and San Diego Counties.

A few cars of celery have already been shipped from El Monte, Sacramento and Orange County, but these early shipments are incidental to the movement. The main crop has begun to move from Walnut Grove, Anaheim, and Holt. Southern California will do some shipping for the Thanksgiving trade but the big volume will come later.

A car per acre is usually considered a normal yield or full crop. The standard load has been 160 crates per car when the celery is running large, but is increased to 180 crates later in the season if the celery does not make a good growth. It is probable that the season will start out with 180 crates per car this year as a result of the car shortage.

#### Book Review

#### THE STRAWBERRY IN NORTH AMERICA

"The Strawberry in North America, History, Origin, Botany and Breeding," by S. W. Fletcher, Professor of Horticulture, Pennsylvania State College, published by Macmillan Company, New York, at \$1.50.

This is a book of 234 pages, many fine engravings, with six chapters touching upon early history of the strawberry, going back to colonial days, to the beginning of garden culture, of commercial culture, the introduction of varieties, etc.; rise of commercial strawberry growing, packages, origin and botany, desirable characters in a variety, breeding of stem varieties for specific purposes, breeding methods, bud variation, naming and testing new varieties, etc.

This book in conjunction with the same author's "Strawberry-Growing," completes a survey of the strawberry as grown in North America. Modern cultural methods are presented in the other volume. The origin and history of the North American type—one of the most interesting chapters in our promology—are dealt with here.

Corn bread is worthy of a place beside the Thanksgiving turkey.

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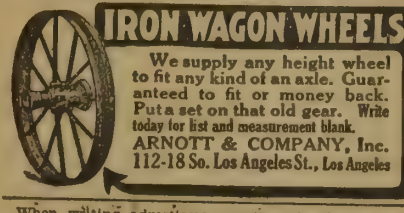
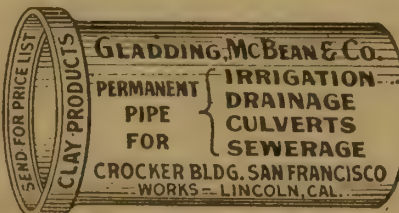
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## Questions and Answers

ANSWERS BY EDITOR AND STAFF

### Mildew on Raspberries

A subscriber recently sent raspberries showing whitish mildew appearance and some fruit of no value whatever. The specimens were referred to C. O. Smith, of the pathological laboratory, and he writes:

The raspberries seem to be affected with a fungus which is called Mucor. I do not know that there is any remedy for this particular trouble.

### Roses and Fuchsias

When is the time to prune roses? Mine, six years old, McArthur, Rainbow, Madam Abel Chatenay, have had good care but have grown larger until they must be reduced. Also my large fuchsias, six years old, trained against the house now eight or ten feet high,

have for the first time, this season, grown ragged, straggly looking, leaves are falling off and have ceased to bloom. What is the cause and remedy? Would it be wise to cut close to the ground? Large pelargonium which has been well watered is drooping and sickly, leaves wilted. — Subscriber, Long Beach.

Mr. Brauntun answers: "Both roses and begonias may be cut back as heavily as you please, but would advise leaving a framework of the larger and stronger canes, at least a foot high in case of roses and at least two feet high in the fuchsias. It is best to leave roses now until coldest weather (frost) is past, for they will not now make new wood and bloom before frosts. Fuchsias are rather more ten-

der and are best pruned in March. It is not possible to tell what is the matter with them except one is conversant with soil, care, etc. Your pelargonium doubtless gets too much water as they thrive in great heat and with little water. From the growth of all the plants mentioned an excess of nitrogen in your fertilizing is indicated. You need more phosphoric acid and potash."

### Covering for Tree Wounds

Is there some preparation, ready made or that can be made at home, which will be good to use on trees after pruning or sawing off big limbs, something that will seal over the wound until it is healed?—Subscriber, Anaheim.

Some coat a large cut with Bordeaux or any antiseptic wash. After it is thoroughly dry it is then covered with grafting wax, with asphaltum, with tar or even a good lead paint. If a lead paint and oil paint is used, how

ever, care should be exercised not to let run over bark of tree as it may prove injurious. Where paint is used it should be rather heavier or thicker than used in ordinary painting.

### Seedling Walnuts

What method of procedure would you advise with a two acre grove of walnut trees, just commencing to bear, which are of inferior seedling stock? The ground is partly sandy and partly heavy.—Subscriber, Anaheim.

If these trees are thrifty we would recommend grafting every tree in the orchard, using best scions obtainable.

### Limberneck in Turkeys

What is the matter with our turkeys? Some of us down here (California) have lost five to ten per cent of our flocks. They are taken suddenly sick and we sometimes find two or three dead under perches in the morning; sometimes they live two or three days. The symptoms are a very limber neck; birds seem unable to hold up their heads or keep them from switching around. They seem too weak to stand and refuse to eat or drink.—Subscriber, Calipatria.

Some years ago while I was still a novice at raising chicks I lost a number with this very same trouble. Sometimes they would run around, apparently all right, then, suddenly especially if they were caught or touched, their necks would twist in a most alarming manner. I learned afterward that this disease was limberneck,—just what the symptoms indicate,—and that it always comes from something wrong with the digestion. With my chicks it came, I am certain, from eating moldy mash. They were confined in Philo coops. The weather was damp and my yard heavily shaded, so that mash which was spilled in the bottom of the coop soon became a mass of mold. Now, what have your poult been eating? The dead turkeys, if they were left within reach, might account for some of the cases. It is a good plan when birds die on the premises to bury deep or burn the carcass, and burning is safer than burying. A stray dog often exhumes a carcass that is supposed to be safely out of the way or carries back one that has been removed a long distance. Eating green corn might cause indigestion, but hardly limberneck which is due to absorption of poison from the intestines. Moldy corn or any kind of moldy feed, on the other hand, is one of the most common causes. The best treatment is a good dose of physic. Give from 50 to 60 grains of Epsom salts or three or four teaspoons of castor oil to a full grown bird. The salts is best mixed in moist mash, but if the birds will not eat the dose must be forced down. The dose for young stock is in proportion to age. Better shut your turkeys up for a few days, at least until the range is carefully examined, and examine the feed to make sure it is a fresh and sweet.

Intestinal worms sometimes cause limberneck. If your birds are affected in this way, the physic will disclose the fact, and they can then be treated with turpentine or tobacco.—J. A. K.

### Treating Beans for Weevil

Will beans treated for weevil with carbon bisulphide be good for food?—Subscriber, Delhi.

Mr. Swain who is conducting a series of experiments at the Riverside experiment station has found that submitting beans to a carbon bisulphide gas where it is too great strength, say five pints to the thousand cubic feet, the germinating power is lowered, but that there is no injurious effect whatever where proper treatment, say not to exceed three parts to 1000 cubic feet, is followed, either for seed or eating purposes.

### Ashes on Garden

I have been told that tomatoes will not grow if the soil is heavily dressed with wood ashes, that ashes are injurious to cabbage plants, egg plants, etc. I put ashes on cabbage to kill green fly. Not much good. Also put earth, ashes and straw in box to make nest for setting hen. Got only one chick.—R. R., Redlands.

Of course wood ashes are very concentrated. Where all good wood is used they contain about four per cent

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potassium or five per cent potash and are very valuable to any garden. We do not think in any reasonable quantity would be injurious to any crop. Doubt not the subscriber is right in that they are but little value for the green fly, also perhaps of no value in nests of the sitting hen. If covered with straw, we do not see where there should be any injury from using them.

### Best Black Fig

Answering query as to best black fig for planting in California George C. Roeding says: "I believe the California Black or Mission Black to be the very best all-around black fig. The trees are strong growers and heavy producers, although the fruit is not as large as the San Pedro. The San Pedro fruit is considerably larger but the trees are not so hardy as the Mission and do not bear so heavily. Another thing to take into consideration is the difference in climatic conditions near the Coast and in the central valley. For instance, you have doubtless heard that the Kadota is larger than the White Endich. These figs are one and the same but when grown near Los Angeles they are very much larger than the figs produced in San Joaquin Valley and therefore are often considered separate varieties. The same is also true of the San Pedro, which is very much larger in Los Angeles County than in Fresno, in fact almost a third as large. I have particularly noticed this at Niles where the same varieties are much later than they are in the valley and also much larger. The California Black is being planted quite largely in San Joaquin Valley and the demand for the dried product seems to be increasing.

### Rebud

Have two trees (Valencias) in my orchard that are evidently sports—fruit is coarse and worthless—would you advise budding or taking out? Trees are seven years old.—Subscriber, Santa Ana.

Without question we would rebud, that is if all trees are healthy and thrifty. If the buds are taken from tested trees three years would see these trees in full bearing, whereas it would take another six or seven years before trees just from the nursery would bear. We should secure a budder who is thoroughly familiar and proficient in the budding over of old trees or there might be disappointment in results.

### Rennet

For making Jack cheese where would one purchase rennet? Unsigned. Any dairy supply house advertising in the Cultivator can furnish you rennet.

### Will

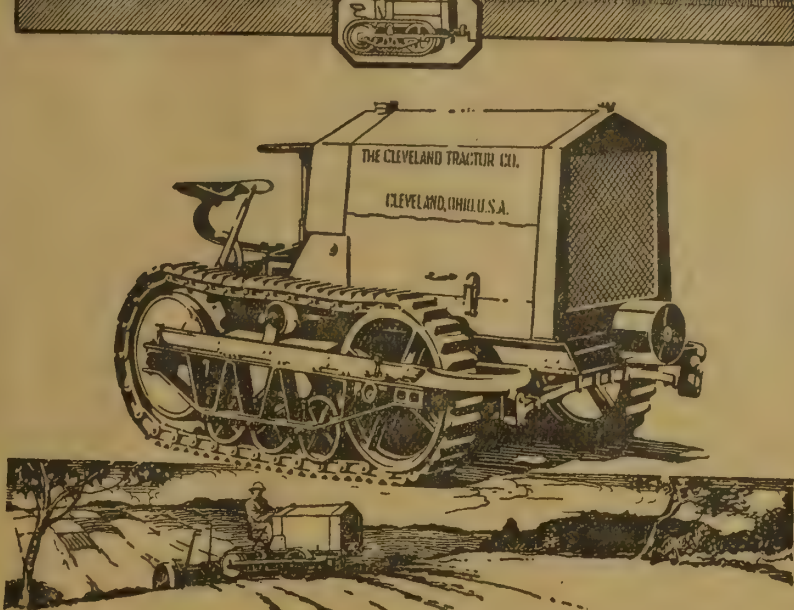
Is it necessary to go to a lawyer to make a will?—Unsigned.

If the inquirer had signed his name we could have sent former Cultivator giving the information. In a word, it is not necessary to go to a lawyer. If will is written entirely by the one making it, duly signed and dated, it is sufficient no matter how simple the form. Witness is not necessary, but best for security.

### SQUIRREL WEEK IN ORANGE COUNTY

Orange County is going after the pests. Horticultural Commissioner Bishop has taken up the fight and will prepare tons of squirrel poison and distribute through the inspectors in the various districts. The present week is designated the country over as squirrel week, and every farmer, every one owning even unfarmed lands, is expected to be in line and do his duty and "Hooverize." Any land owner who fails to clear his premises of the pests will have the work taken in hand by the county inspectors and the cost will become a lien on the land. Mr. M. J. Pickering, inspector of the La Habra section, is especially interested and doing some most efficient work. Every county in the state is observing or should observe "squirrel week" or better "squirrel fifty-two weeks."

# Cleveland Tractor



## Prepare Now for Bigger Crops Next Spring

Forget the old routine. Adopt improved methods. That's the only way to solve your labor problems and boost production in 1918.

Munition plants and factories in general are working at top speed. They have steadily drained farm labor from the fields. Now the draft has taken many more men.

You must cut down on labor requirements. That is exactly what the Cleveland Tractor, the country over, is helping wide-awake farmers to do.

This wonderful little machine will do your work better, faster, and at much less cost than you can possibly do it with horses and men.

Hauling two 14-inch bottoms, it plows  $3\frac{1}{2}$  miles an hour—8 to 10 acres a day. That is more than you can do with three good 3-horse teams and 3 farm hands. And at this high speed the Cleveland Tractor turns over the prettiest job of plowing you ever saw.

Figure up the saving—not only in labor—but in time and good, hard cash.

In addition, the Cleveland enables you to plow when you need it and where you need it. Because it crawls on its own tracks, it can go over almost any soil at any time. That is something you can't do with horses and men. Think of the extra yield that means.

Moreover, the Cleveland does not pack your seedbed. It is light—only 2750 pounds—and has 600 square inches of continuous traction surface. No other tractor built exerts so small a pressure.

The Cleveland gives you 20 h. p. at the pulley and 12 h. p. at the bar—economical, dependable power to do your hauling and stationary engine work.

Rollin H. White builds the Cleveland Tractor with all the scrupulous care he put into the manufacture of motor trucks. He uses only the best materials—only the finest motor truck parts and gears. He has protected all gears with dirtproof, dustproof casings.

He has so designed the Cleveland Tractor that it steers by the power of its engine. Just a light turn of the wheel and the motor does the rest. Anyone can drive it. It will actually turn in a 12-foot circle—less than it takes to turn a team.

These are real advantages—too big and too important to be overlooked. There are others just as big. Combined, they make the Cleveland the biggest labor-saving, time-saving, money-making implement introduced into modern farming.

Prepare now for bigger, better crops next spring. Decide now to make the Cleveland earn money for you, as it is doing for hundreds of others.

We are so crowded with orders that we cannot promise delivery of new orders before January 1st. So it is necessary that you order now for delivery early in 1918.

Write to us today for full particulars and name of the nearest Cleveland dealer. Use the coupon or address Dept. BF.

CLEVELAND TRACTOR  
COMPANY  
Cleveland, Ohio, U.S.A.

CLEVELAND  
TRACTOR CO.  
Dept. BF Cleveland, Ohio

Please send me full information  
about the Cleveland Tractor.

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Southern California Distributor

CLEVELAND TRACTORS

SCHEISER Land Levelers—Hay Derricks

214-216 No. Los Angeles St., Los Angeles

## DISC PLOWS AND OTHER TRACTOR TOOLS

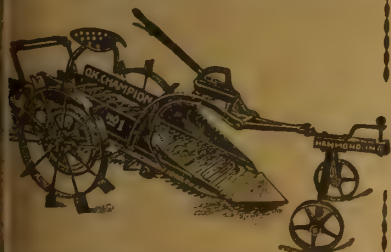
GROUND HOG plows—for Heavy Soils  
AUSTRALIAN KING plows—for Lighter Soils  
CUNNINGHAM LAND ROLLER AND PULVERIZER

All Sizes—We Can Save You Money—Write Us

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625 Market Street San Francisco, Cal.

Extra parts are always available without delay for standard advertised machinery. This class always found in the California Cultivator.

### O. K. Champion Potato Diggers



Every potato grower can save money by owning and operating O. K. CHAMPION Potato Diggers.

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122-124 N. Los Angeles St., Los Angeles

### Driver Agents Wanted

and demonstrate the Bush Car. Pay for it out of commissions on sales. My agents are making money. Shipments are prompt.

Price, \$34.75. P. 125x3 1/2 tires

Bush Cars guaranteed or money back 1918 models ready.

Write at once for my 48 page catalog and all particulars. Address J. H. Bush, Pres. Dept. 11 LN

115-Inch Wheelbase

Electric Ignition—Elect. Stg. & Ltg.

MOTOR COMPANY, Bush Temple, Chicago, Illinois

### Witte Engines

WITTE KERO-OIL. Easy to use—easy to own. Save 5 to \$200. Immediate Shipment. New Book FREE.

WITTE ENGINE WORKS

101 Oakland Ave. Kansas City, Mo.



## This Saw Cuts 25 Cords of Wood in One Day

It is absolutely guaranteed—hundreds in daily use.

Write for our booklet "How Dan Ross Cuts 40 Cords a Day".

Delivered anywhere in the U. S. A. only

\$160.

**Wade's Gasoline Wood Saw**  
(Portable)

This wonderful invention does TEN TIMES the work of TWO MEN in the woods.

With it you can make money out of your wood simply through the immense saving in time and labor. One man can handle it on a log and two can move it from log to log. Will cut a 40 inch log in five minutes. Write us today.

**REWADE & CO.**  
SINCE 1865

339 Hawthorne Ave., Portland, Ore.  
910 N. Howard St., Spokane, Wn.

Keep your harness oiled. Leather is so porous that unless you protect it, sweat, moisture and dust attack the fibre and your harness gives out years before its time. The preservative oils in Eureka protect your harness. Keeps it jet black.

## Eureka Harness Oil

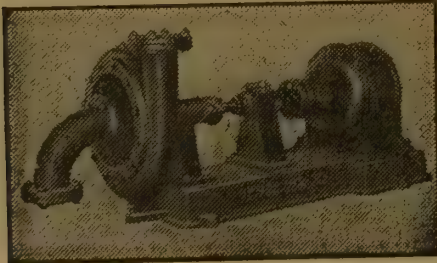
Standard Oil Company  
(California)

## Krogh Manufacturing Company

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Los Angeles, Cal.

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San Francisco, Cal.

**Krogh Pumps are Absolutely Water Balanced**  
**No End-Thrust Possible** **No Set Collars Used**  
**THE NO TROUBLE PUMP**



Krogh Direct Motor Driven Pump

Fitted with Ring Oil-  
ing Bearings.

Renewable Babbitted  
Bushings.

Ring Oiling Gland.

We also build deep well  
turbines, deep well plungers,  
horizontal and vertical  
pumps for mining, irrigation,  
drainage.



## He Was Out of Gasoline



UNDER the spreading chestnut tree a stubborn auto stands,

And Smith, an angry man is he, with trouble on his hands.

He cusses softly to himself and crawls beneath the car, And wonders why it didn't bust before he got so far.

The carburetor seems to be the cause of all his woe;

He tightens half a dozen bolts, but still it doesn't go.

And then he tries the steering gear, but finds no trouble there—

Till, wet with perspiration, then, he quits in sheer despair.

He squats beside the road to give his brain a chance to cool,

And ponders on his training at the correspondence school;

And then he starts the job once more, until by chance 'tis seen

The cause of all his trouble—he's out of gasoline.

—Edgar A. Ryan, in Judge.

It is a very easy matter to ask the garage man if the gasoline tank is full, and it is equally easy for the garage man to assert that it is. There are, however, many ways in which mistakes on this point may arise, and there is abundant proof of this in the many stories in circulation concerning automobilists who have got stuck by the wayside because someone told them "the tank was full," and they believed it. The only safety lies in exact knowledge. The same principle applies to the filling of oil tanks, water tanks, grease cups, lamps, acetylene generators and so on. Everything that holds supplies should be filled before starting out, even if the trip planned is only a short one, for it is impossible to foresee the end of the run. Better be sure than sorry.

One who uses a car frequently will inevitably form certain habits which are likely to affect the condition and working of the car more or less. The habits formed might just as well be good ones as bad, for with a little care at the beginning it will become second nature to do things as they should be done. So make it a habit, an invariable rule, to go over the car before starting out, no matter what the trip. See that all the tanks are filled and the lamps and generators properly supplied; see that the grease cups are screwed down a little to force lubricant to the bearings they serve; see that those parts which need oiling,

but are not fitted with oil cups or other lubricating devices, are given a little oil from a squirt-can; if the steering connections are provided with leather boots packed with grease, see that the boots are intact and contain a good supply of lubricant, and if the boots are fitted, lubricate the joints. And so on through the car. It is impossible to give any specific directions with regard to this or any other phase of the work of caring for the car, because there are so many different designs of cars that what would be quite clear to the owner of one might be unintelligible to the owner of another car of different make and different design of the details referred to. But a reasonable degree of familiarity with the car will enable a man to see in detail what can only be generally indicated in such an article as this.

The matter of lubrication deserves more than passing notice. It is sufficient to make sure that the oil reservoir is filled, for it may, and not infrequently does, happen that there is a stoppage in the oil ducts so that the frictional surfaces run dry; therefore assure yourself that the oil is actually feeding to the motor; just how to obtain the assurance will depend upon which of the many systems in use your car is equipped with. It cannot be too emphatically stated that lubrication is absolutely essential to the continued operation of the motor, the motor is deprived of lubrication the results will be far worse than the gasoline supply is cut off, because without oil the surfaces in friction contact will cut and score each other to the point of destruction, so far practical usefulness is concerned though the gasoline supply can be stopped without damage to the engine. And as the engine of an automobile runs at comparatively high speed, it takes it but a short time to use up the oil in the motor and pipes, and trouble then commences. See that there is plenty of oil and that it feeds regularly. A very big repair bill may very easily follow a shortage of oil in the engine. As to the oils to be used, the manufacturer of the car usually knows what oils give good results with his machine, and is obviously to his own interests to give accurate information on this subject. Don't experiment unless you know a great deal about the matter.

## Timely Suggestions

Short circulars or leaflets containing a fund of information are being mailed almost continually from the agricultural experiment station of the state university. Anyone interested particularly in the following should write the Agricultural Experiment Station, University of California, Berkeley, and the bulletins will be sent without cost.

One of the most valuable in the last bunch mailed and which is of interest to live stock men, is "Facts About Anthrax" by Dr. Haring.

Of interest to the homemaker is "Cooking the Tepary Bean" by Prof. Jaffa. "Homemade Vinegar" by Prof. Bioletti and Prof. Cruess is another.

For the vegetable gardener: "Vegetable Planting and Harvesting Calendar for Central California." This is a tabulated form containing a fund of information for planters in the great central valley of the state.

For the cotton planter: "The Importance of Using Good Cotton Seed," by Dr. H. J. Webber.

All of us are interested in the new "Twenty-five Ways of Conserving Labor," by Prof. R. L. Adams.

Another of interest is "Improving Rice Seed," by W. W. Mackie.

The two latest numbered bulletins are 284, "Irrigation of Alfalfa in Imperial Valley," by Walter E. Packard, and 287, "Vinegar from Waste Fruit," by W. V. Cruess.

Circulars: 167, "Feeding Stuff of Minor Importance," by F. W. Webb; 175, "Progress Report on the Production and Distribution of Milk," by Elwood Mead; 176, "Hog Cholera Prevention and the Serum Treatment," by P. T. Peterson; 177, "Grain Storage Seed," by Ernest B. Babcock; 178, "The Packing of Apples in California," by Warren P. Tufts; 179, "Control of the Ground Squirrel," by Joseph E. Dixon.

A small boy's idea of a food dictator is mother calling a halt at a thirteenth buckwheat cake. — Farm Journal.

**THE Martin**  
FARM DITCHER  
TERRACER  
AND ROAD GRADER

**All Steel—Lasts a Lifetime**

Simple and practical. Cuts V-shaped ditch up to 4 feet deep; cleans old ditches; grades roads; builds terraces, dykes and levees; works in any soil, wet or dry. 2, 4 and 6-horse sizes; large size fine for tractor. Write for catalog and list of users near you. No charge. No obligation.

OWENSBORO DITCHER & GRADER COMPANY, Desk 1B, DENVER, COLO.

## Ditching

—usually the hardest job on the place—make it the easiest and save time and help-hire besides by using

**K HAND POWER Stump Puller**

Write today for special offer and free booklet on Land Clearing

Works on any land, on hillsides and marshes where horses cannot operate. Easily rips out any stump that can be pulled by any horse power machine at about one-half the cost. Safer, better and cheaper than powder. One man with a K can outpull 16 horses. Works by leverage—same principle as a jack. 100 pounds pull on the lever gives a 48 ton pull on the stump. Made of the finest steel. Guaranteed against breakage. Endorsed by U. S. Government experts.

**WALTER J. FITZPATRICK**  
Box 261 182 Fifth St., San Francisco, California

ACTUAL PHOTOGRAPH



# Feterita

Written for California Cultivator By C. Alfred Wright

**T**O you who are raising feterita more for the fodder than for the grain I wish to give the benefit of my experience. If you have a reasonably frostless location so that the roots will not freeze out during the winter, more weight of fodder may be raised from the stubble the second and third years after planting than can be raised from seed the first year. Also two crops in one season may be raised from stubble though only one can be raised from seed.

In cultivating for the second season's crop I followed the methods of the southern cane planters, remembering that cane and feterita belong to the same family. Early in the spring, the last of January if you can get onto the ground, take one horse with a seven inch mouldboard plow and turn a light furrow away from the row. This drains off surplus moisture, allows the ground to warm up, and starts the young canes earlier. When the young growth is well start-

ed, say two or three inches high, bust out the middles with a large single-shovel plow, and smooth down with a five-tooth cultivator. The ground may also be harrowed crosswise at this time without injury to the grain. Cultivate at proper intervals to conserve moisture, keep down weeds and aerate the soil.

From the stubble a great number of canes spring up, three times as many as come from the seed, and being already rooted a heavier tonnage of fodder is produced though of smaller stalks and also smaller heads of grain. Being started early it should be ripe and ready to cut in July. Take it off the ground while it is yet a little green because it makes richer, more palatable feed if cut while the sap is yet in the stalk.

Now if a second crop is desired irrigate thoroughly, soak the ground deep, and the young growth quickly springs up again. Cultivate with the five-tooth cultivator. One thorough irrigation will produce a good crop, two a better one. Let's make three tons grow where only one grew before. Don't make the mistake of plowing up your stubble during the winter months.

**BEANS FROM EAST INDIES**  
Beans grown in the East Indies, arriving at the Port of Los Angeles, were condemned as unfit for food because of presence of hydrocyanic acid gas. The "Lima Bean Bulletin" says: "The explanation given for the presence of the acid was that unfavorable weather conditions prior to harvesting had started a deterioration in the beans as a result of which poisonous gas was developed. The condemnation of this cargo of beans may quite possibly interfere with what otherwise would probably have been a heavy importation of beans from India, since advices indicate a very large bean crop was produced in that country this season."

Owners and those interested in farm tractors will be interested in the short course in gas tractors which is being conducted at the university farm at Davis this week and next. It is also announced that this course will be duplicated next spring at the citrus experiment station at Riverside. There will be nine different types of tractors, and attendants at the short course will taught to inspect, adjust and repair. The labor situation is making discussion of the tractor a matter of greatest interest.

## More Beans

A Los Angeles County bean grower writes: "In re your question and answers department of November 3 issue, under caption "Some Beans" let me tell the inquiring party of my Blackeye bean crop this year.

March 1 I planted potatoes between three year old orange trees, and on June 7, 8, 9, dug 8000 pounds of tubers per acre. The potatoes had been irrigated May 11 and 31. After digging the potatoes the ground was harrowed twice and then drilled to Blackeye beans June 21 and 22, putting 16 pounds seed to the acre. August 2 and again on August 17 they were well irrigated, but owing to the size of the vines they were not cultivated. September 17 the beans were cut and October 30, 31 threshed and I had the pleasure of paying the thresher for 68½ field run sacks from 2½ acres. The pods were not two feet long but many of them contained 13 and 14 beans. The soil was sandy loam, part of which grew Limas in 1915 and the balance Blackeyes the same year. After the beans were a few weeks old we could very easily see the line where Blackeyes were grown two years before, the vines being much darker green this season. It was not convenient to thresh and keep tab to see whether the former cropping made any difference in this year's yield. The average was 2050 pounds per acre."

### Book Review

#### THE BOTANY OF CROP PLANTS

"The Botany of Crop Plants," a text and reference book by Wilfred W. Robbins, Ph. D., Professor of Botany, Colorado Agricultural College, published by P. Blakiston's Son & Company, Walnut Street, Philadelphia, \$2.00 net.

This is a book of almost 700 pages, round-cornered, well bound, fully illustrated with drawings and half tones, a most complete book of its kind.

There are 40 chapters touching upon the seed plant body, fundamental internal structure, roots, stems, leaves, flowers, fruit, seed and seedlings, classification and naming of plants. These eight chapters make up the first part of the book.

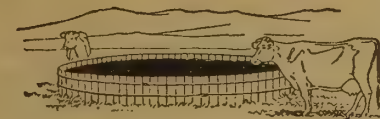
Part II, made up of the other 32 chapters, touches upon various botanical families. For instance, first, gramineae, grass family, the next upon triticum or the wheats, the next on avena or oats, another on hordeum or barley, another on zea, corn and maize, another on sorghums, etc.

Much of the material in this book is the same as has been used in college classes and is of greatest value to the student, but every farmer who is interested in the life about him will find the book of value as a reference book at all times. Not the least valuable part of it is a complete glossary and index. In the index alone there are

29 pages, which makes it possible to turn almost immediately to any topic desired.

"And does your husband still think you are an angel?" asked the privileged friend.

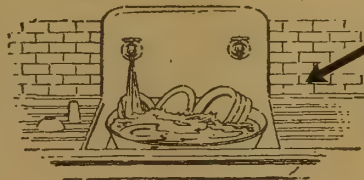
"I guess so," answered the bride of one short year. "At least he seems to think I don't need any new clothes."



WATER FOR STOCK



WATER FOR THE BATH



WATER FOR KITCHEN

## WATER WHERE YOU NEED IT

When Pa was a boy things were different

He drove the cows to water at the creek in the "lower eighty"

On Saturday night his Ma heated teakettle and boiler full of water which had been carried from the spring

The family bathed in the wash-tub—in the kitchen

All the water used for dish washing and cooking was pumped and carried to the house

Pa's and Ma's life was mostly drudgery and carrying water helped make it so

How different is this side of the picture

We have a big redwood tank on a tower with a redwood pipe leading to the stock tank in the pasture

Another redwood pipe line leads to the house where turning a faucet is the only effort needed to produce abundant water

Our redwood tank and pipe line will last a life-time and earn more dividends on the small investment than anything we have on the farm

Pa says he wishes his Ma had had an outfit like ours

Pacific Tank and Pipe Co.  
318 Market St.  
San Francisco. Dept. C6

Gentlemen:  
Please send promptly your catalogue of Water Tanks.

I need a tank to hold \_\_\_\_\_ gallons.

It should be mounted on a tower \_\_\_\_\_ feet high.

The water to be delivered from \_\_\_\_\_

Pipe { Length \_\_\_\_\_  
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## Pacific Tank & Pipe Co.

318 Market St  
San Francisco

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Established 1888. Twenty-eighth Year

**The California Cultivator**

A Journal of Horticulture, Agriculture and Live Stock

Rural Californian, Established 1877  
Combined with California Cultivator 1914.  
Livestock and Dairy Journal, Established 1901, Combined with California Cultivator 1916

Published By

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The California Cultivator is a Member of



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S. E. Leith, Fifth Avenue Building, New York  
C. A. Cour, Globe Bldg., St. Louis, Mo.

Entered at the Post Office at Los Angeles, California, as Second-Class Matter.

**Saturday, Nov. 17, 1917****OUR ADVERTISERS RELIABLE**

We guarantee our subscribers against loss through dishonesty of any advertiser in the Cultivator. We do not attempt, however, to adjust trifling differences between subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within 30 days from date of the transaction, and the subscriber must have mentioned the Cultivator when writing the advertiser.

**THIS WEEK'S COVER**

The makings of a lot of good California pork is illustrated on this week's cover page. The great central valley of the state, Imperial Valley and, in fact, all sections of the state, are producing thousands of tons of sorghum grains. Analysis shows them to be practically equal to corn as a feed for live stock. Then why doesn't the state produce more? To which we may answer: "It is producing more, and another year will see a still greater increase in production." Many a farm is installing grinding machinery, and the grain, some without expense of threshing, is grown, cured and fed on the place and the finished product driven to market on the hoof.

The sorghums are great money makers.

The grain heads used in the illustration were sent to the Cultivator office by W. L. Norris, and they are from the Korn Kontest which the producers and merchants of Earlimart, Tulare County, held a few weeks ago. Every grain is plump and hard and every head compact and heavy.

**SAVE THE WASTE**

The waste from the table which fills the garbage pail is not the only serious waste which is confronting the nation at this time. Dr. Mead of the University of California calls attention to the delivery of milk impractically all of our cities. Two or three or sometimes more milk wagons drive down every little street, each producer having his own particular customers.

It might be a slight hardship to the consumer to be deprived of his particular producer, but surely at such

times as these when labor is as much worth conserving as are the crusts of bread, it is a problem worthy of study.

**NEW SECRETARY**

D. C. Fessenden of Riverside has been appointed by State Horticultural Commissioner Hecke as secretary to the state commission. Mr. Fessenden has already taken up his new duties and we doubt not is perfecting arrangements for a great state convention to be held in Sacramento.

**IRRIGATE**

Thousands of acres of California orchards have been planted to green manure or cover crops. These are up and growing, at least in some of the orchards. Others are waiting for the rains, and the rains are not as yet sufficient. If a mass of humus forming material is to be turned under it must have a start at a period of the year when there is enough sunshine to warm up the soil.

**RAIN**

We are not specially long on rain in any section of the state as yet. We are thankful for a light shower given early in the month, and within the past few days northern and central portions of the state received another slight promise—and the South a promise unfulfilled—that "The storm is coming down the Coast and you will get yours in time." While we are waiting for the more plentiful rains, this is a good time to discuss with ourselves as to whether our soil is in condition to hold every drop which falls. It is also a good time to discuss the storing and utilizing of the many drops which will escape to the ocean unless some serious consideration is given.

Let's Hooverize the water.

**Y M. C. A.**

This is the week set aside by the Young Men's Christian Association to raise \$35,000,000 to devote to the social, physical and spiritual welfare of the boys in the trenches and the boys in the camps being trained for the trenches.

One of the best organized institutions in the world is the Y. M. C. A. It carries the spirit of home life to the very battlefield, and to every camping place where soldiers are gathered the home influence is extended. The equipment for this work calls for the expenditure of money. Much has been given through this great organization, but more is needed. Hence the great effort of this week, and California, as has been the case with the Red Cross campaign, the Liberty Bond campaign, and every other call made upon her, is responding with a most hearty "Here." This week's effort will be no exception.

**TRUE THANKS GIVING**

Thanksgiving this year calls for a more general and serious observance than any preceding year since the Civil War. We have blessings enough so that everyone may find truest cause for giving of thanks, and with it, may we not also make it the time of giving that others may be thankful our lives have been for a purpose? There is not only most terrible suffering on the part of Europe's people, but our own boys are going to the trenches, and while the richest government on earth is not going to see them suffer or see them want for any

of the ordinary comforts, is it not well that we should all look to their more complete comfort by at this time giving of our surplus?

As suggested last week, there is often—if not needless waste—a surfeit of good things on the Thanksgiving table. The expression of thankfulness at the harvest home festival has been combined with a day of feasting until we have given ourselves more than our comfort, at least, demands. Let that surplus be used to pass on comforts to the boys who are fighting our battles for us. In other words, as we expressed it last week, let us save the price of the "fixins" and expensive knickknacks of the Thanksgiving meal and send it through the Red Cross, Y. M. C. A., or K. of C. to our boys at the front that they may have a few extra comforts at the Christmas season.

Make contributions through your own local associations or, if more convenient, send to the Cultivator and they will be forwarded at once.

**WAR TAXES**

Our sports and even our vacations these days are subject to a form of tax. It became effective on the day of the passage of the War Tax Bill. Unlike the income tax, information as to these war excise taxes is not essential because we pay them involuntarily at almost every purchase we make, so whether we are informed or not, we will support the government. However, for general information, here are some of the items affected by this portion of the tax bill.

**War Excise Taxes**

Automobiles, motorcycles, trucks and wagons sold by the manufacturer, producer or importer, three per cent of the price for which sold.

Motor and sailing boats, yachts, etc., with fixed engines, and sailing boats of over 500 pounds, length not over 50 feet, 50 cents for each foot; over 50 feet and under 100 feet, \$1.00; over 100 feet, \$2.00 each foot. Not over five tons net, \$5.00.

Graphophones, phonographs, piano players, records used in connection with any musical instrument, three per cent.

Moving picture films, not yet exposed, one-fourth of one cent each linear foot. Picture films ready for production, sold or leased, one-half of one cent per foot.

Jewelry, three per cent of price for which sold.

Sporting goods and games, not including childrens toys, three per cent.

Perfumes, extracts, toilet soaps, toilet waters, cosmetics, in fact nearly all toilet articles, two per cent of price.

All proprietary medicines including pills, tablets, tinctures, bitters, liniments, etc., two per cent of price.

Chewing gum, two per cent.

Cameras, three per cent.

Floor stock of all the above named articles in the hands of the retailer on day this act went into effect must also pay on this entire stock one-half of tax imposed on the sale of such articles.

Taxes on the above have all been effective since the date of the passage of the act.

**CULTIVATOR CHISEL TEETH**

Status Quo Ante sat on the wall  
Status Quo Ante had a great fall.  
Not Kaiser Bill's scheming, nor all of his men,  
Can put Status Quo Ante together again.  
Some people in this world cast a crust on the waters and expect to get back hot, buttered waffles and maple syrup.—Memphis Commercial-Appeal.

Running a tractor under direction of a Prussian overlord and marketing our products with Prussian tax collectors at hand would seem—well, how would it seem?

**This Week's War News**

Halg is continuing the everlasting pressure on the western front, and slight gains are reported every day.

A plot to destroy over 200,000 tons of grain stored in Contra Costa County was discovered in time to avert the disaster. Phosphorus was the substance used in the effort to start the fires.

A feeling of unrest obtains throughout much of Turkey, and many Turks who have been taken captive freely express the feeling of their countrymen that Turkey has been sold to Germany.

Notwithstanding thousands of American soldiers have been transported to France no transport while carrying our soldiers has been sunk. The American navy is doing wonderful service in the U-boat zone.

Chaos still prevails in Russia. The Kerensky forces are rapidly gaining ground, and reports are that Petrograd is again practically under control of the government forces. The attempt to form a pro-German cabinet has failed.

In his great address at Buffalo President Wilson said: "My heart is with the pacifists but my mind has a contempt for them. I want peace, but I know how to get it and they do not," he declared. "This war is to be won if we want peace which will last more than a few minutes."

The British navy is often criticized for doing nothing, but apart from its other duties it has managed to enable 13,000,000 men to cross and recross the seas with a loss of only 3500, and to protect the transportation of 51,000,000 tons of coal and 25,000,000 tons of explosives. — San Francisco Chronicle.

The managements of railways assert that from now on until March 1 will be the tug of war in transportation questions of the United States. If the railways can hold up and move freight and troops as demanded up to that time they will have adjusted themselves so as to handle any future problem which may come.

One of the first requests of the new congress which will convene in December will be to pass an amendment to the present draft law, which will provide for registration of men who have reached their majority since last registration day and for other features which will make for more effective and more rapid work in building an army.

We face an enemy of fearful concentration of purpose. In one city in Germany the entire population, rich and poor, are going barefoot to save the waste of wool and leather. Are Americans that much in earnest? No, not yet. We hope they will not be called upon to be. But if they are—we may refer to Valley Forge, to the dark days of '64 and '65, and to Andersonville.

The Kaiser's guns are now able to reach the city of Venice. The pope is pleading for the sparing of some of Italy's most sacred landmarks, and while the Allies are rushing reinforcements as rapidly as possible, there is a most serious outlook for northern Italy. On both sides there are said to be over 8,000,000 men in action. Over 6,000,000 of these are Teutons, Huns, Turks and Bulgarians. The efforts of all these are centered on a 40 mile front. Latest dispatches state that Allies are holding the line.

Serve your country by saving food.



# Agricultural News Notes of the Pacific Coast

## Northern California

Yuba County is harvesting a million dollar rice crop.

Sacramento County finds her bean output far greater than anticipated.

Many owners of deciduous orchards in Napa County are planting cover crops.

Thermalito, Butte County, is thoroughly organized and ready for a farm adviser.

Nevada County is producing an exceptionally large crop of almonds this season.

Rice growers near Colusa report most of the crop under cover before the rains.

Serious forest fires have ravaged the hills of Humboldt County during the past two weeks.

Mrs. Hamilton, a live stock woman in Dixon, Solano County, has just shipped five cars of cattle.

Sutter County is shipping great quantities of baled straw for use in paper and pulp board mills.

California is now leading by millions of bushels all other states in the nation in the production of beans.

Farm bureau meetings in Glenn County, November 15, 16, Jacinto; 19, Orland; 22, 23, Plaza; 26, 27, Elk Creek.

Sacramento County farm bureau meetings will be held at Carmichael, November 20; Del Paso, 21; Franklyn, and Hood, 28.

The Western Berkshire Congress is making plans for its annual sale at its meeting at the university farm at Davis in February.

A factory at Redding, Shasta County, has orders for large logging trucks which are to be forwarded for use in the forests of France.

Eldorado County has secured the requisite number of farmers' signatures and will soon be fully organized and entitled to a farm adviser.

The state railroad commission and various shippers met last week to discuss matter of charging for switching after initial placement of cars.

Woodland, Yolo County, is pasturing its stock on sugar beet tops, corn and alfalfa fields and reports the stock feed situation never better than present.

The department of agriculture has agreed to appoint adviser for Tehama County until board of supervisors appropriate the full \$2000 for the first year's quota.

The Amador-Eldorado Live Stock Association will meet at Jackson, November 24 in annual meeting. Live stock protection and election of officers are features.

Sonoma County has delivered more and better prunes to the packing houses this season than ever before and proposes to add to the glory of Sonoma County prunes.

The state fish and game commission is investigating conditions in the Little River rice fields with especial reference to damage caused by flocks of wild ducks. This work was taken at the request of the Western Rice Growers' Association.

Ft. Bragg, the center of the lumber industry, way up in Mendocino County, has become an important factor in supplying food to the hungry world. This year she has shipped immense quantities of fish—one shipment running about 145 tons—of huckleberries and of beans.

## Central California

A Harvest Home Festival is to be held at Fresno.

The Associated Raisin Company reports assets totalling \$4,558,000.

Oakdale, Stanislaus County, has shipped over \$12,000 worth of almonds.

Chinese potato growers around Stockton are accused of hoarding potatoes.

Agents of the British army are buying dried fruits in the Santa Clara Valley.

Best methods of fertilizing alfalfa are being discussed by farm bureau centers of Merced County.

A new packing plant has just been completed at Lindsay, one of the largest and best in the state.

Merced County farm bureaus have secured pledges from 5000 acres in excess of last season's wheat planting.

"More water and greater conservation of water we now have" is the appeal of Stanislaus County producers.

Fresno County dairymen and creamerymen are organizing and getting together on a basis fair to both interests.

The Santa Clara Valley reports that the future output of prunes in California will be nearly double that of today.

Nearly 1000 sheep are dead, the result of eating grape leaves when pastured in a vineyard which had been sprayed.

George W. Wendt, formerly of Nevada, has been chosen to superintend live stock affairs at the Palo Alto stock farm.

The Peach Growers Association has paid interest to all stockholders. The season will net to the growers around eight cents.

Every shipping point of the San Joaquin Valley reports shipments of products of the soil in excess of any preceding year.

The Oakdale irrigation district is planning to pump water from wells to supplement the irrigation supply secured early in the season.

There is contention between the board of supervisors of Fresno County and the directors of the agricultural fair. The board is making certain regulations which are obnoxious to the fair directors.

The San Jose Grange Patrons of Husbandry recently voted unanimously in favor of the local prohibition movement. The Grange is now organized in 33 states of the Union and has over 1,000,000 members.

County Commissioner Rouillard of Fresno has discontinued for the time being four squirrel inspectors and a deputy having to do with the squirrel campaign. This because of certain private interests being advanced at the expense of the county.

Fresno County producers are discussing the matter of establishing colonies for laborers. They are also very sensibly insisting upon a ten-hour day. They have established a minimum wage of two dollars and board, or a minimum of \$2.50 without board.

For years Fresno has been experimenting with the growing of "currants," Zante Currants, or, more properly a small sour grape, now often referred to as "currant grape." The experiments have proved successful, and it is now predicted that they may soon be a commercial factor.

## Southern California

Hemet is canning Beaumont apples.

Banning, Riverside County, has shipped its last car of almonds.

Some producers have been holding alfalfa hay at as high as \$28 per ton.

Calipatria, the newest town in Imperial Valley, has ginned 150 bales of cotton.

San Bernardino County farm bureau centers are getting into more active service.

Blythe, Palo Verde Valley, in eastern Riverside County, is discussing the growing of flax.

The date growers association of Coachella, Riverside County, met at Coachella last Friday.

Walnut pruning is being discussed by members of the Farmers' Club at Mound, Ventura County.

Nearly all of Redlands visited the apple show at Yucaipa, San Bernardino County, on Redlands day.

The third annual farm assembly will be held at El Centro, Imperial County, date to be announced later.

County Horticultural Commissioner Armitage is leading in a squirrel extermination campaign in San Diego.

Orange County is making a campaign against stage drivers who are manifesting a "road hog" disposition.

The Claremont Pomological Club held its fall meeting at the citrus experiment station, Riverside, last Saturday.

Midsummer shortage of water is declared to be the cause of disappointing returns from many of the cotton fields of Imperial Valley.

The Associated Beet Growers of Southern California are discussing the erection of cooperative sugar factory somewhere in Orange County.

The light rain of last week did practically no damage to beans still out, and the greater portion of all varieties were threshed and warehoused.

One walnut grower near Elsinore, Riverside County, recently took a truck load of nuts to market, for which he received a check for \$3500.

There are over 8000 acres of grain sorghums in San Bernardino County, and the growers are now selecting seed for a still bigger crop next year.

Practically all of the beets in the southern part of the state were delivered by November 5. As soon as stock in hand is exhausted factories will close.

One citrus by-products factory handled last season 5100 tons of lemons which were not suitable for shipping. The output was 175,000 pounds of citric acid.

The Lima Bean Growers' Association has adopted the trade mark "Compass Brand Limas" and will build up through advertising and standard grade stock a valuable brand.

Chino, San Bernardino County, is still signing up growers who will unite in the securing of a cannery. It will be a branch of the San Antonio Association which now has a large packing plant at Ontario.

The lima bean harvest was entirely completed before the recent slight rain. Fruit dryers and bean growers have never been given a more favorable harvest season, and conservation was carried to the extreme in the gleaning which was more thorough than ever before.

## The Coast and General

Women will soon be assigned to routes as mail carriers.

The Philippine Islands export 131,558 tons of copra annually.

New York City is using women as train guards on the subways.

"Fence the ditches, pasture the banks," is urged by the University of Arizona.

The largest pack of salmon ever put up is the record of the Pacific Coast canneries.

One hundred head of horses were shipped to France from Lakeview, Oregon, last week.

The New York City peach belt shipped this year 6625 cars, as against 4459 cars last year.

Potato growers about Flagstaff, Arizona, are grading more rigidly and securing most satisfactory returns.

In the last national boys' and girls' club contest of the 33 northern and western states Arizona took two firsts out of the six contests.

The extension service of the University of Arizona is making interesting demonstration of its work at the state fair, Phoenix, November 12-17.

The fourth annual convention of the Potato Association of America is held this week Friday and Saturday at the new National Museum at Washington.

Chief Plant Inspector Ehrhorn of the Hawaiian Islands is leading in a campaign to save grains, beans and other products in storage from insect depredation.

The bureau of agriculture of the Philippine Islands has introduced a vast number of seeds and plants which are proving beneficial to the agriculture of the island.

The United States Food Administration has aided the state railroad commission of Texas in moving 1500 cars of livestock from drouth stricken sections to places of better feed.

The Northern Arizona state fair was held at Prescott, Arizona, October 18-20. An exhibit was made by the Arizona Goat Raisers' Association. The exhibit of mohair was exceptionally fine.

Because of discovery of a conspiracy plot Hoover has urged grain storage and live stock yard people of Seattle and other Northwestern points to protect their property by extra watchmen.

Over \$100,000 worth of cotton was destroyed by the fire in the camp of the Southwestern Cotton Company at Tempe, Arizona. This is the thirteenth fire which has occurred in the cotton gins of Arizona this season.

The interstate commerce commission has been petitioned by the railways to open the Fifteen Per Cent Case and give to the railways the advance in freight rates which was formerly requested. The railways assert that present conditions demand relief from some source.

About 8,000,000 acres of corn, or about 6.5 per cent of the crop, has been damaged by early frosts. The crop of marketable corn, however, will be far in excess of the 3,000,000,000 bushels, one of the biggest ever. In addition the price will be the highest ever, but presumably the grower will receive less than many have anticipated. While present quotations are far above it is thought the price to the grower will not exceed \$1.00.





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HEREFORD  
SALE SERIES - 1917**

600 LOTS-850 HEAD—250 FREE CALVES

**AMERICA'S GREATEST 12 DAY DRIVE**  
*Ever Inaugurated for the Conservation and Betterment of Her Best Cattle*

<b>Friday at Chicago, Illinois</b> December 7th <i>International Live Stock Exposition Arena</i>	<b>Fourteenth International Hereford Auction of the American Hereford Cattle Breeders' Association</b>
<b>Saturday at LaFayette, Indiana</b> December 8th <i>La Fayette Stock Farm Pavilion</i>	<b>10 Bulls 70 Females</b> J. CROUCH & SON <i>Traders, Lafayette, Ind., and Big Brothers</i>
<b>Monday at Millsdale, Illinois</b> December 10th <i>Santa Fe Railroad's Sale Pavilion</i>	<b>15 Bulls 60 Females</b> FRANK BEITH <i>Manager of Great-South Field, Millsdale, Ill.</i>
<b>Tuesday at Winamac, Indiana</b> December 11th <i>Baker's Sale Barn</i>	<b>15 Bulls 70 Females</b> W. H. AMBLER <i>Manager of Oak-Farm, Winamac, Ind.</i>
<b>Wednesday at Sioux City, Iowa</b> December 12th <i>Stock Yards Pavilion</i>	<b>10 Bulls 60 Females</b> R. W. CHRISTIE <i>Manager of Oak-Farm, Winamac, Ind.</i>
<b>Thursday at Kansas City, Mo.</b> December 13th <i>Stock Yards Pavilion</i>	<b>25 Bulls 60 Females</b> WALTER L. YOST <i>Manager of Oak-Farm, Winamac, Ind.</i>
<b>Friday at Kansas City, Mo.</b> December 14th <i>Stock Yards Pavilion</i>	<b>10 Bulls 50 Females</b> C. B. SMITH <i>Manager of Oak-Farm, Winamac, Ind.</i>

**100 BULLS, 500 COWS AND HEIFERS, 250 CALVES GO FREE**  
Many of the Best Herefords Ever Put in an Auction Sale

**BULLS** This one he brought right to get shown. That have won prizes and can win again.  
**COWS AND HEIFERS** With calves at side or served by great bulls. Whose calves will repay cost and keep.

**HORNED CATTLE SALE UNDER THE SUPERVISION AMERICAN**  
**POLLED HEREFORD BREEDERS ASSOCIATION**

**LIBERTY BONDS** **PREFERRED TO CASH**

**EXCURSION RATES ON ALL RAILROADS** **14th INTERNATIONAL LIVE STOCK EXPOSITION** **CHICAGO DEC. 1 TO 8**

*Special coaches and Pullman sleeping cars connecting three cities and steam heated selling quarters insure the comfort of our patrons. Call for Catalogue. Address: HOTEL BALTIMORE, THE SOTHAMS, Mgrs., KANSAS CITY, MISSOURI.*




## Breed Leaders

Every breed of livestock has its outstanding character the same as the human kind. A great dairy cow has proved her ability to produce anywhere up to 15 tons of milk annually; the trotting horse has secured his record around two minutes; the beefmaker has shown his ability to make the least amount of feed into the greatest amount of food; swine, sheep and others of the livestock family have shown themselves great characters. In addition—and here is where their worth is proven—these animals can transmit their productive power to their offspring.

Beginning with the issue of August 4 the Cultivator gave an account of Pietertj Bloom of the university farm dairy herd. Some things she has done and more than her daughters have done were chronicled. She was a most worthy leader in this series of articles. Others of her kind follow. More of the "handsome" type of animals will be given in the columns of the Cultivator during the next few months.

Written for California Cultivator By F. F. Stonerod

### TRUEDALE 367159

NE of the really great Short-horn sires in California is old Truedale, owned by the Pacheco Cattle Company of Hollister, C. N. and Tom Hawkins, owners.

Mr. Hawkins bought Truedale as a calf from Owen Kane, of Wisner, Nebraska in 1911. Of course he is not really an old bull but he has not been idle since coming to the Coast. His show yard performances are not impressive. He was shown in 1914 and stood second to a Glide entry that year, and since that time Mr. Hawkins has never fitted him for show, not because he failed

checo Lass 80th; second on junior yearling bull, Pacheco Lad 92nd. San Francisco; first on two year old heifer, Pacheco Lass 80th; first on junior bull calf, Pacheco Lad 109; second on two year old bull, Pacheco Lad 58th.

A sire who can produce such a large number of winners in three year must be an outstanding individual one who has the best of breeding and the ability to transmit those qualities which go to make up the ideal Short-horn. Truedale possesses all of these characteristics.

He is a son of Double Dale, he is Avondale, considered two of the breed's greatest sires. Truedale is a double grandson of Avondale. His



Truedale 367159

to win a championship but his value in the herd was so much greater than even his owner expected it would be.

Strictly speaking Truedale is not a show bull but he is a wonderful producer of show animals—as evidenced by his record. Every one of these prize winners are the get of Truedale, and their number and quality stamps their sire as a worthy individual to appear in our "hall of fame."

1915 winnings, P. P. I. E.; first on junior bull calf, Pacheco Lad 67th; second on senior bull calf, Pacheco Lad 58th.

1916 winnings, Sacramento; first on junior yearling heifer, Pacheco Lass 83rd; first on senior bull calf, Pacheco Lad 81st; first prize calf herd; first prize young herd; first in get of sire; second on senior yearling bull, Pacheco Lad 58th; second on junior heifer calf, Pacheco Lass 89th; second on produce of cow.

1917 Winnings, Sacramento; first on two year old bull, Pacheco Lad 58th; first on junior bull calf, Pacheco Lad 109; first and third on get of sire; second and third on produce of cow; second on two year old heifer, Pa-

dam was Lady Amanda 3rd, she was Lavender Lad. She traces to the famous imported cow, Acanthus, who has a large number of descendants in the United States and was the mother of many noted prize winners.

Truedale is a big boned, blocky bull carrying a wealth of flesh and weight in breeding condition about 2200 pounds. The photograph appearing on this page was taken on the Pacheco home of Truedale just after he was led out of his corral and brushed up a bit. He would show to better advantage if he were in high finish, but for the purposes of this article he is just what is wanted. Mr. Hawkins is justly proud of Truedale's record and considers himself extremely lucky in possessing him. Certainly a bull who produces a total of 61 females and 5 males in three and one half years, and a large percentage of them prize winners, all of them of the first quality, is no ordinary sire, and when the history of California Shorthorns is written some day the name of Truedale will occupy a prominent position on its pages.

## Swine Breeders Resolutions

WHEREAS recent press reports indicate that the food administrator, in an effort to stimulate pork production, contemplates establishing a ratio between the price of hogs and the price of corn, the California Swine Breeders' Association desires to direct the attention of the food administrator to the status of pork produc-

tion in California, and to offer certain suggestions.

California is not producing sufficient pork to supply home demand and annually imports \$30,000,000 worth of pork and pork products.

At present the swine industry of the state is not increasing, but decreasing.

The shortage of all kinds of hogs is

## Santa Anita Rancho

Anoakia Breeding Farm

**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by Imported Stallion Ibn are the choicest thoroughbred mares on Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahrudd, world renowned imported desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the best blood lines. Most of these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted female State Record Cows. Write for details.

Correspondence Invited

Anita M. Baldwin

W. H. TAYLOR, Superintendent

Santa Anita, Cal.



California Wonder

## KINGS COUNTY JACK RANCH

Breeders and dealers in American Jacks and Jennets.

Jacks and Jennets for sale at all times. Come and see them.

John Burrell

R. F. D. B. Box 74

Hanford, Kings County, Cal.

## WHEN BUYING BULLS

Do you consider the dam's production?  
Do you value transmitting ability?  
Do you care if the bull's dam tests high in fat per cent?  
Do you like mostly white colored animals?  
Do you want something choice at a reasonable price?

If so, communicate with me at once, or visit my ranch and be satisfied.  
Herd sire: PRINCE RIVERSIDE WALKER, son of Prince Gelsche Walker, the greatest proven sire in the West, and whose dam made 808.82 pounds butter in one year and whose half sister made 1095.1 pounds butter in one year.

W. J. HIGDON

Tulare, California

## Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count Glory 426982, grand champion at the California State Fair, 1916. Berkshire herd won Premier Exhibitor's banner at P. P. I. E.

514 Hearst Building  
San Francisco

CARRUTHERS FARMS  
Mayfield, Cal.



marked,—not only were 1917 spring litters below normal, but due to the high price of grain, swine raisers are marketing their brood sows, and unless this practice is stopped the decrease in 1918 spring litters will be at least 20 per cent below normal.

This sacrifice of breeding stock has been brought about because of the high price of grain and a lack of courage on the part of breeders and feeders to put high priced grain into hogs until they are assured that they will receive a profit on their feeding operations.

We would, therefore, urge that the first step necessary to increase the supply of hogs should be along the line of stabilizing hog prices on such a basis that the producer will be assured a profit. This we regard as fundamental.

This association notes with satisfaction and approval the recommendations submitted at the recent convention of hog growers held at Waterloo, Iowa, in which it was proposed that the food administrator, through an appointed commission of experienced

men, should ascertain the cost of production of hogs (the production cost to cover the grain and other feeds consumed, labor, interest, shelter, and particularly the risk from disease and death), and those costs to be measured in bushels of corn.

This association would urge that the consideration given the corn belt hog growers be extended to California producers, and that in view of the fact that barley is the most important hog feed in this state, and that pound for pound barley is not the equal of corn in hog feeding operations, that in arriving at the proper ratio between feed and pork at least eight cents of barley be figured the equivalent of 100 pounds of live hog, and that either the price of barley or hogs be established on such a basis as will place the California hog grower on an equal footing with high producers of the Middle West.

This association further urges that in the event a commission to determine the cost of production is appointed, that at least one representative hog grower be named on said commission.

## Anthrax

**O**WING to prevalence of anthrax and the deadliness of this disease subscribers have asked for information as to it and we quote from "Anthrax or Charbon," written by Henry J. Washburn, bacteriologist, and published by the bureau of animal industry, United States department of agriculture, Washington, D. C., which bulletin, we believe, may be had for the asking.

From its general statement we quote: "Anthrax, or charbon, is an acute infectious disease affecting ani-

mal will often bring about a cure, but at present this serum is not readily obtainable.

"The most effective method of dealing with anthrax is by prevention. The preventive measures recommended are (1) protecting individual animals by vaccination and (2) burning or deeply burying the carcasses of animals that have died of the disease, so as to avoid infecting the ground."

As to treatment the bulletin also says: "Medical treatment of anthrax in animals has not proved satisfac-



Dependable Motive Power

On the Cashion Ranch in the Salt River Valley of Arizona, devoted to raising horses and mules. Photo by courtesy of Phoenix Chamber of Commerce.

mals and occasionally man. Cattle and sheep are most susceptible, and none of the domestic animals are exempt. It is caused by a germ which multiplies rapidly in the body, especially in the blood, and produces poisonous substances which cause death. The germs probably are most commonly taken in with food, though they may gain entrance also through wounds. In what is known as the spore form they are very resistant to heat, cold, and disinfectants, and may survive in the soil for years.

"The symptoms of anthrax vary greatly, according to the acuteness of the attack. The early stages usually are characterized by high fever, rapid pulse, and labored breathing. In the most common form of the disease there are also local external swellings or tumors. Death ensues in from a few hours to several days.

"Medicinal treatment is usually of no avail in acute cases. When the progress of the disease is not too rapid, the injection of antianthrax ser-

um will often bring about a cure, but at present this serum is not readily obtainable. In cases of local anthrax, incision of the swelling followed by the application of disinfectants sometimes gives good results. In such cases, however, the danger of disseminating the infection through discharges from the wound would tend to make this inadvisable, unless great care is taken.

"Good results have been obtained from the use of serum in the treatment of the disease. For this purpose 30 to 100 cubic centimeters should be administered beneath the skin or into a vein. If no improvement is noticed within 24 hours the injection should be repeated. In a number of instances afforded to test the curative value of the bureau serum in cases of anthrax in man and in animals splendid results were obtained."

Formation of community hog chowera prevention associations is war organization not to be overlooked.

Don't let rats in your corn crib eat holes in our national defense.

# The Pacific Northwest Shorthorn Breeders' Association

Annual Fall Sale

At Portland Union Stock Yards

NOVEMBER 22, 1917

During the Pacific International Show 45 strictly high class females and 35 bulls have been selected from the leading Shorthorn breeders of the Northwest for this sale, and anyone who is interested in Shorthorns that will make good cannot afford to miss this great sale.

Auctioneer, N. G. Kraschel

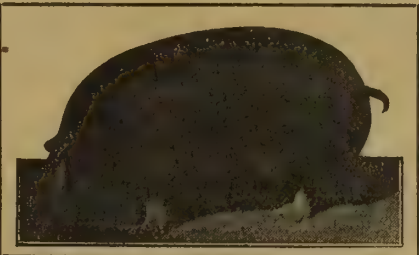
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## Poland Chinas, Medium Type

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain; 12 firsts, Junior Champion and Reserve Grand Champion Boar, Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

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## MONTELENA HERD

### Large Yorkshires

Have large litters. Service boars of exceptional quality, in best breeding condition. They are strong, active, long, deep fellows, with big bone and splendid heart girth. Come and see them, or write to

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Raising the Standard of California Bacon

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Booking orders for a few bred sows, in service to Maplewoode Duke and Highwood Standard 91st.

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HOMER HEWINS, Jr., Manager



# Unusual Holstein Offering!

Our consignment to the Quality Sale, Sacramento, December 5, 1917, consists of the following ten highly bred animals, all of show ring type and quality.



Miss Korndyke Mercedes

Miss Korndyke Mercedes 121428, Grand Champion cow—California State Fair, 1917. Heavy in calf to King Segis Alcartra Abbekerk, a 30 pound son of the \$50,000 Bull.

Miss Pontiac Nudine of Springvale 175955, who has a 30 pound record made at five years. Heavy in calf to King Segis Alcartra Prilly, a 30 pound son of the \$50,000 Bull, and Grand Champion Bull at California State Fair, 1917. Also a yearling daughter of this cow by a 30 pound sire and bred to King Segis Alcartra Prilly.

Oakvale Jennie Korndyke 173499. A five year old cow with a 27 pound record, who has a 30 pound full sister. Heavy in calf to King Segis Alcartra Prilly.

Two daughters of the \$50,000 King Segis Pontiac Alcartra. One from a 31.35 pound dam—one whose first seven dams averaged over 31 pounds butter in seven days. Both bred.

A daughter of King Walker 5th and out of a 30 pound cow. Safe in calf to King Segis Alcartra Prilly.

A daughter of the great sire It and from a 27 pound three year old daughter of King of the Pontiacs. Bred to King Segis Alcartra Prilly.

A daughter of King Mead of Riverside and from a 23.63 pound dam, whose dam is a 30 pound cow. Bred to King Segis Alcartra Prilly.

A great young bull born January 11, 1917. A high class show bull whose dam is a 31.70 pound five year old, and capable of increasing present record. His sire Spring Farm King, who is a 34 pound son of King of the Pontiacs and a full brother to the first 44 pound cow K. P. Pontiac Lass. The records of the first three dams and the sire's full sister of this bull average 34.41 pounds butter in seven days.

## BRIDGFORD COMPANY

KNIGHTSEN, Contra Costa County CALIFORNIA

### SHORTHORNS

### BERKSHIRES

## Hopland Stock Farm

Hopland Cal.

Registered Bulls—yearlings and two year olds. Bred on same lines as our Grand Champion cow at Sacramento, 1917.  
Boars and Glits by Iowana Rival Majestic, a son of Rival's Champion.

Prices Reasonable on Application

San Francisco Office

226 Southern Pacific Bldg

When writing advertisers, mention The Cultivator.

### TRACTOR AND IMPLEMENT DEMONSTRATION

Continued from Page 491

buying this power. Horses may not be so high to purchase but their feed costs like blazes. The demonstration shows further the splendid result of cooperation on the part of the dealers. We have had in previous years several demonstrations of individual tractors, but none largely attended nor exciting much interest. When all can be seen in the same tent and working on the same field, both interest and attendance are assured. The dealers who cooperated and the tractors exhibited are as follows:

Address is San Jose unless otherwise stated: Barney Motor Company, Gilroy, Avery; Bean Spray Pump Company, Bean Track-pull; John Leonard, Santa Clara, Best; L. Artana & Son, Fageol; W. J. Benson & Company, Yuba Ball Tread; Garden City Implement and Vehicle Company, Holt Caterpillar and Universal; Latham, Davis and Company, Cleveland; Harrison P. Smith, Samson; Joshua Hendy Iron Works, Sunnyvale, Invinible.

### TUBERCULIN TESTED

Sales Manager C. L. Hughes writes as to quality of the stock offered at the Sacramento Holstein sale by the California Breeders' Sale and Pedigree Company.

In the third Sacramento sale of registered Holsteins, held here on October 30-31, the cattle from seven consignors were originally tuberculin tested by five veterinarians. After the sale a number of purchasers availed themselves of the privilege of retest which was offered at this sale, and cattle from five consignors were tuberculin retested by two veterinarians. The result showed that there was not a single tubercular animal in the lot, and as the original tests were made by the same veterinarians who have tested the cattle at the former sales of this company, we believe this retest has proved a high testimonial to their thoroughness and efficiency in helping us to offer only sound, healthy cattle to the buying public.

### PACIFIC INTERNATIONAL LIVE STOCK SHOW

The Pacific International Live Stock Show to be held at North Portland during the week of November 19 will wrest from the American Royal Stock Show at Kansas City the distinction of being the greatest stock show west of the Mississippi River and second only to the famous Chicago International.

In beef classes alone the Pacific International will be the greatest purebred stock show held in the United States this year, there being a total of 46 Shorthorn, Hereford and Aberdeen Angus herds entered. Dairy cattle, sheep, hogs and horses will also be well represented.

### SHEEP IN THE WARM VALLEYS

The Cultivator has been receiving requests for information as to the advisability of raising sheep as a side line on ranches in the interior valleys. While we know that some of the finest sheep on the Coast are raised in these warmer sections, we wrote Charles A. Kimble, Kings County sheep breeder, and he writes of sheep doing well under these warm valley conditions as follows:

"From my experience I believe that the C. type of Rambouillet or their cross with either Hampshire or Shropshire will give good results. You want a fleece that does not carry too much grease and yet it should be of sufficient density to give a good covering to the body. I have a range over near Coalinga where it gets pretty warm, 120 sometimes, and no shade, and our sheep do very well."

We have word from the secretary of the Pacific International Livestock Exhibition which will be held in North Portland, November 19-24, that the show will this year have a great showing of California pure breeds. Jack London Estate, Hawkins & Son, Alexander & Kellogg, Wm. Carruthers, H. M. Ellberg, T. T. Miller, University of California and others will exhibit. The effort of the Northwest people is to make this show a rival of the Great International at Chicago.



Director 28637  
Our new \$1000 sire  
Prize winners at state fair.  
Boars, bred sows, and young stock  
for sale.  
Pairs and Trios unrelated  
**L. A. DENKER, Saugus, Cal.**

## Wanted Farm Foreman

Experienced in Raising Hogs  
and Growing Feed Crops for Same.

Address, Box B, 6th Floor, 814 So. Spring St.  
Los Angeles, California

### Bemmerly

## HEREFORDS

Perfection and Beau Donald breeding.  
Noted for their size, bone and quality.  
Now booking orders for service bulls  
for future delivery.  
Visitors always welcome.

**W. J. BEMMERLY, Woodland, Cal.**

### DUROC JERSEYS

Sows, glits and a few boars of the best  
breeding FOR SALE  
H. P. Slocum & Son R 1 Willows, Cal

READY FOR  
SERVICE

## Moorland Sir Cristeria

BORN NOVEMBER 1st, 1916

FOR 1000  
DOLLARS

# The Average Per Cent of Fat of His Three Nearest Dams, 5.16, is not Excelled by Any Sire on the Pacific Coast

The seven day records of his five nearest dams average, butter, 29.37 pounds.

He is a son of COLANTHA SIR PONTIAC AAGGIE, one of the four leading sires of California, who is the sire of 14 A. R. O. daughters, seven above twenty pounds, one a 32.87 pound Junior Three-Year-Old whose average test was 6.33 per cent. One of his sons won first at the California State Fair this year.

His dam, LADY CRISTERIA MECHTHILDE, was selected by Messrs. Hughes, McAllister and Morris for the December Guaranty Sale, and has a record of 26.93 pounds butter; she is by De Kol Spofford Promise and from CRISTERIA OVERTON MECHTHILDE SRD, who has a record of 28.43 pounds butter.

He is ready for service, well grown, long-bodied, more white than black and unquestionably a youngster of exceptional promise.

TERMS TO RESPONSIBLE PARTIES

## Gotshall & Magruder

Home of the State Champion Two Year Old

RIPON, CALIFORNIA



# HOLSTEIN BREEDERS' GUARANTY SALE

Will place at the disposal of the highest bidder the highest class group of registered Holsteins ever offered in one sale in America. That is a strong claim, but we are willing to leave its justness to any capable judge after an examination of the cattle and their pedigrees.

Space will not permit a detailed description of every one of the eighty individual attractions that make up this greatest of all Holstein sales, but a part of them are here briefly sketched:

A beautiful 32 pound cow that will make around 1200 pounds butter on semi-official test this year.

A 31.22 pound cow, now fresh, that is a great breeding cow as well as a wonderful producer.

A 31.28 pound cow that is one of the best candidates for a very large record. Bred to it.

A great 30 pound cow in calf to King Segis Alcartra Prilly, Grand Champion at 1917 California State Fair.

A 30 pound daughter of King Segis De Kol Korndyke. Now fresh.

A 30 pound cow that made 19,981.8 pounds milk and 786.9 pounds butter in one year. Bred to Prince Alcartra Korndyke, son of Tilly Alcartra.

Miss Korndyke Mercedes, Grand Champion at 1917 California State Fair and Fresno District Fair, and she is a 24.56 pound daughter of Hengerveld De Kol.

A daughter of King Korndyke Sadie Vale out of a 26.68 pound junior four year old daughter of a 34 pound three year old. The seven nearest dams of this heifer average 34 pounds butter in seven days, the second highest average in the world. Bred to it.

Five daughters of King Mead of Riverside, out of dams with records up to over 31 pounds. These are the first daughters of this sire ever offered either at public or private sale.

Four daughters of Segis Pontiac De Kol Burke, out of dams with records up to over 31 pounds butter in seven days. His first two year old daughter to finish yearly test will make over 925 pounds butter, the California record by a wide margin.

Three daughters of Prince Gelsche Walker the sensational young sire of a 36 pound junior three year old and a 34 pound junior four year old.

A daughter of it, out of a 26.48 pound junior three year old daughter of King of the Pontiacs.

A daughter of Annie De Kol Lakeside Model out of a 30 pound dam.

Two daughters of the \$50,000 bull King Segis Pontiac Alcartra, one of them out of a 31 pound dam.

A daughter of King Segis Pontiac out of a 30 pound dam.

A 25.77 pound three year old daughter of a 34 pound cow.

A 22.75 pound junior three year old that was Grand Champion at Riverside District Fair.

A daughter of Prince Gelsche Walker Korndyke out of a 28 pound dam.

A 21.59 pound daughter of Tidy Abbekerk Prince in calf to one of the best sons of King of the Pontiacs.

A daughter of a 32 pound cow that will make over 1200 pounds butter this year.

A granddaughter of King Korndyke Sadie Vale out of the California State record two year old K. P. Tola Joe, 27 pounds butter in seven days and she a daughter of King of the Pontiacs.

A 26.93 pound daughter of a great 28 pound cow.

Two daughters of King Morco Alcartra, out of daughters of Prince Gelsche Walker.

A daughter of King Korndyke Pontiac out of a 31.91 pound daughter of Korndyke Queen De Kol's Prince.

A great 26 pound cow that made 815.38 pounds butter in one year.

A granddaughter of King Korndyke Sadie out of a 19.51 pound two year old daughter of a 29.09 pound sister to two 30 pound cows.

A daughter of Admiral Walker Prilly, son of the five times 30 pound cow Lottie Walker Spofford, out of a 26 pound cow that made over 800 pounds butter in one year.

A 23 pound daughter of Annie De Kol Lakeside Model out of a 29 pound dam.

A daughter of Segis De Kol Pontiac Burke out of a 29 pound dam.

A richly bred 28 pound cow heavy in calf to a 30 pound son of Sir Veeman Hengerveld.

A 27 pound cow that milked 683.3 pounds in seven days.

A great 28 pound cow heavy with calf to a 32 pound son of Segis Pontiac De Kol Burke.

A beautiful two year old daughter of the above cow, that made 19.44 pounds butter in seven days as a senior yearling and milked as high as 63.6 pounds in one day.

A daughter of King Pontiac Segis Korndyke out of a 33 pound daughter of King Hengerveld Aaggie Fayne. She made over 20 pounds butter in seven days as a two year old.

A number of highly bred cows and heifers that already have good records, and will be fresh and tested again before sale date.

## To the Breeder Wanting a Real High Class Herd Sire This Sale is the Opportunity of a Lifetime

Only ten bulls will be offered, and every one has been selected because of his evident fitness both as to breeding and individuality to head the best herds.

A son of the 36 pound junior three year old, Miss Valley Mead De Kol Walker, and she will make around 1100 pounds butter on yearly test this year. There is a fortune in this bull for some breeder.

A son of King Valdessa, son of the great 41 pound cow Valdessa Scott 2nd, out of the world's record heifer FINDERNE Soldene Hengerveld, 35.33 pounds butter in seven days with first calf.

A beautiful, mostly white, show quality son of King Mead of Riverside out of a 33 pound cow that made over 1000 pounds butter in one year.

A son of King Valdessa out of a 30 pound daughter of the great King Hengerveld Aaggie Fayne.

A son of Spring Farm King out of a 31.70 pound dam that is a candidate for a much larger record.

A splendid young son of a great 32 pound cow that will make about 1200 pounds butter this year. You will like this fellow.

A son of Prince Aralia Walker, he by Prince Gelsche Walker and out of Aralia De Kol 3d who is now making a yearly record that will go above 1100 pounds butter and she is out of the former world's record cow Aralia De Kol. The dam of this beautiful youngster is a 25 pound three year old daughter of a 34 pound daughter of Sir Skylark Ormsby Hengerveld.

A son of Prince Gelsche Walker out of a 27 pound four year old. He is a good one, and sons of Prince Gelsche Walker will never sell lower than right now.

A great young son of King Morco Alcartra, son of Tilly Alcartra, and out of a 23 pound two year old daughter of Prince Gelsche Walker, and she is one of the most promising daughters of her sensational sire.

A most attractive grandson of King Korndyke Sadie Vale out of a 29 pound cow that has a 34 pound three year old daughter.

## Every Animal in This Sale Tuberculin Tested and Guaranteed Against Tuberculosis for 60 Days. Every Animal Guaranteed to be a Breeder.

Nothing has been left undone to make the substantial investments which these animals are worth safe for the buyer, and it is indeed the opportunity of a lifetime to secure the foundation upon which to build for fame and fortune in the Holstein business.

The Total  
Offering Will Be

**80 COWS, HEIFERS, and BULLS 80**

### COMMITTEE OF SELECTION

FRANK L. MORRIS  
JAMES W. McALISTER, Jr.  
G. L. HUGHES

### AUCTIONEERS

COL. BEN A. RHODES  
Los Angeles, Cal.  
COL. J. E. MACK  
Fort Atkinson, Wis.

Place of sale, State Fair Grounds, Sacramento, Cal. Owing to the large number to be sold in one day the sale will start promptly at 9 o'clock A. M. on Wednesday, December 5th.

Catalogs will be ready for distribution about November 20th, and a copy will be mailed free to all who request it.

Sale Under Management of

## CALIFORNIA BREEDERS SALES AND PEDIGREE CO.

J. M. Henderson, Jr., Pres. C. L. Hughes, Sales Mgr.

211-212 OCHSNER BLDG.

SACRAMENTO, CAL.

### CONTRIBUTORS

A. W. Morris & Sons, Woodland, Cal.  
McAllister & Son, Chino, Cal.  
Bridgford Company, Knightsen, Cal.  
Santa Anita Rancho, Santa Anita, Cal.  
Gotshall & Magruder, Ripon, Cal.

Palo Alto Stock Farm, Palo Alto, Cal.  
Toyon Farm Association, San Jose, Cal.  
The J. S. Gibson Company, Williams, Cal.  
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## Elliott-Brant Rancho Guernseys Are Persistent Producers

The results of our first two years of official testing show our herd to average 10,172.28 Pounds of Milk and 507.97 Pounds of Fat. One half of these cows were heifers with first calf who averaged 8,670.24 Pounds of Milk and 436.01 Pounds of Fat (only seven pounds under the average of all A. R. records). Our mature cows averaged 12,710.5 Pounds of Milk and 621.52 Pounds of Fat (120 pounds over the average of the mature cows of the breed).

A bull from these cows will increase the production of almost any herd.

**Elliott-Brant Rancho, - Owensmouth, Cal.**

## Itchen Daisys May King of Langwater 129997

(The Famous \$8,000 Sire)

The purchase of this great bull to be used in our herd at the highest price ever paid for a sire of the breed was only made after due consideration of his breeding and ability to transmit high production to his daughters. We believe he will prove his worth as time goes on, and he will be given every opportunity to do so. His limited number of daughters, all owned by Eastern breeders, have made remarkable records on their first test, and they are almost impossible to buy. Watch this space for detailed information about this bull from time to time. We desire to keep his name before the trade. His first calves will not come before next year but we will book orders for males only at this time.

## Revada Guernsey Farms

B. E. NIXON, Owner, GEO. HEMMING, Mgr.

Yountville, Cal.

## ABORTION IN CATTLE

PREVENTED AND CURED PERMANENTLY  
YOUR COWS MADE PROMPT, REGULAR BREEDERS BY

## STERILOID



### STOP LOSING CALVES

**TREATMENT:** If STERILOID is used at the first sign of abortion the cow will go her full time and use STERILOID. Cows get with calf after only one treatment. Write today for FREE BOOK. It explains the causes and symptoms of Abortion and tells how to cure Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

**GUARANTEE:** We will refund money in every case when STERILOID FAILS to make good. Price \$1.00. Mail postpaid. In plain wrapper.  
**MARTIN REMEDY CO.** Dept. L. 399-408 Columbus Ave., New York City, Reference, Colonial Bank.

## AYRSHIRES

The Economical Breeds  
when Feed is High

## CHESTERS

A Few Would Give You  
A Good Start

Melone Co. Oak Knoll Napa, Cal.



### -AND SAVE MONEY

by the regular use of

## Economy Powder

Its merits are known wherever hogs are raised.

Send for Sample and Free Stock Book

Economy Hog & Cattle Powder Co.

Hearst Bldg.

San Francisco, Cal.

## Hauser's Digester Tankage

GIVES GREATEST VALUE FOR LEAST MONEY.  
IT MAKES THEM FAT.

Hauser Packing Co.

Los Angeles

10  
2 Year  
Old  
BULLS

## SHORTHORNS

H. L. & E. H. Murphy

Perkins - - - California

8

BULL

CALVES

To keep thoroughly posted subscribers should read every advertisement in the California Cultivator columns.

## Field Notes From the Live Stock Men

Fred Gatewood, Fresno Poland-China breeder, is increasing his herd as rapidly as possible. His boar is Smooth Progress, a boar he got in Iowa last year.

Ed Sattison, Tulare County, has six Guernseys on official test and expects to make some nice records. Mr. Sattison's herd is strong in the Glenwood blood, the females of which are very scarce.

J. Bidegary, Fresno sheepman, sold 132,000 pounds of wool this year. He has 1500 pure bred Rambouillets and 400 Hampshires. The three thousand yearlings running in two pastures are worth seeing.

C. I. Starr showed Jerseys for the first time at the recent Kings County fair and won several prizes. His senior champion bull, Financier of L, is a good individual and comes from a big producing family.

At the Shorthorn meeting during the Land Show plans were discussed for the big combination sale to be held sometime in February. About 70 head will be offered and they will be the best to be found in California.

The beef breeders have been a long time waking up to the possibilities of combination selling, and once started it will grow just as fast as it has grown in other parts of the country. Details, dates, auctioneers, etc. will be published as soon as possible.

H. C. Muddox, president Citizens National Bank, Sacramento, is one of the recent additions to California Holstein circles. He is interested in a deal for a 1400 acre ranch just south of town, and if it goes through will stock it with cattle, sheep, and hogs.

Bill Bemmerly sold 15 head of his fine heifers to Ben Quigley of San Luis Obispo County during the land show. In fact the exhibitors were swamped with inquiries at that show and many important sales were made. Bemmerly is just about sold out of this year's crop.

J. S. Phillips, Fresno County Holstein breeder, has named his ranch Alana Holstein Farms. He has a small but select string as a foundation and exhibited them at the fair this year. Official test work will be conducted as soon as he can solve the labor problem.

Alex McCarty's young Poland-China boar purchased by Prof. Thompson in the East arrived at Riverina in only fair shape. It will be some time before he is right. He lost considerable flesh, but even in his poor condition one can see the possibilities for a great sire, and his owner expects much of him.

The scarcity of Guernsey females on the Pacific Coast is remarkable. Demand has exceeded supply for years and it will be some time before it is satisfied. There are other breeds perhaps which are to be found in larger numbers but considering her small number in this country the Guernsey cow in production performance is in a class by herself.

Four California Shorthorn herds at least will show at Portland during the Pacific International. Miller, Caruthers, Pacheco, and the Jack London ranch will fly California colors. Frank Brown said that for every herd we sent to Portland this year one would come to California next year. With big shows a certainty in California as soon as conditions are normal this friendly feeling between breed-

## THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

## Gombault's Caustic Balsam

IT HAS NO EQUAL

For — It is penetrating, soothing and healing, and for all Old Sores, Bruises, Wounds, Felsons, Exterior Cancers, Boils, Corns and Bunions. CAUSTIC BALSAM has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

A Perfectly Safe and Reliable Remedy for  
Sore Throat  
Chest Cold  
Backache  
Neuralgia  
Sprains  
Strains  
Lumbago  
Diphtheria  
Sore Lungs  
Rheumatism  
and  
all Stiff Joints

### REMOVES THE SORENESS—STRENGTHENS MUSCLES

Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than \$120.00 paid in doctor's bills."

Price \$1.50 per bottle. Sold by druggists, or sent by express prepaid. Write for Booklet. The LAWRENCE-WILLIAMS COMPANY, Cleveland, O.



**PROTECT YOUR STOCK**  
increase your profits, comply with the sanitary demands of health authorities, milk companies, etc., and at a saving of time, cost and labor!

Make your stables, dairies, poultry houses and cellars, bright, cheerful and free from lice, mites and the germs of infectious diseases! Instead of using whitewash and then a disinfectant, use

## CARBOLA

The Disinfecting White Paint

It disinfects and paints at the same time.

It is a finely powdered mineral pigment combined with a germicide 20 times stronger than pure carbolic acid, but absolutely non-poisonous. Will not harm man, beast or fowl.

Ready to apply as soon as mixed with cold water—no waiting, straining or bother as with whitewash. Can be applied with either brush or sprayer. Dries a clear white. Will not blister, flake or peel off. No disagreeable odor. If your dealer cannot supply you, send us your order and his name.

10 lbs. (10 gals.), \$1.00 and postage.  
20 lbs. (20 gals.), \$2.00 delivered.  
50 lbs. (50 gals.), \$4.00 delivered.

Trial package, enough to cover 250 sq. ft. and descriptive booklet, 25c postpaid.

Germall Seed & Plant Co.,  
Los Angeles, Cal.



### IF BOSSY Could Talk

she would ask for outside support for her over-worked organs of milk-production. Try Kow-Kure; it works with great tonic effect on the system, prevents disease, a sure remedy for Abortion, Barrenness, Retained Afterbirth, Scouring, Lost Appetite, Runches. Buy Kow-Kure from feed dealers and druggists. DAIRY ASSOCIATION CO., Lyndonville, Vt.

Booklet, "The Home Cow Doctor," free.

## Holstein Bulls

Well bred, vigorous, registered Holstein bulls of good type for sale. Steady sales have moved all our bulls of service age, but we have a few unusually good calves to offer at moderate prices.

**The McCloud River  
Lumber Company**  
McCloud, California

## Foundation Herds

of any size our specialty. Best blood line

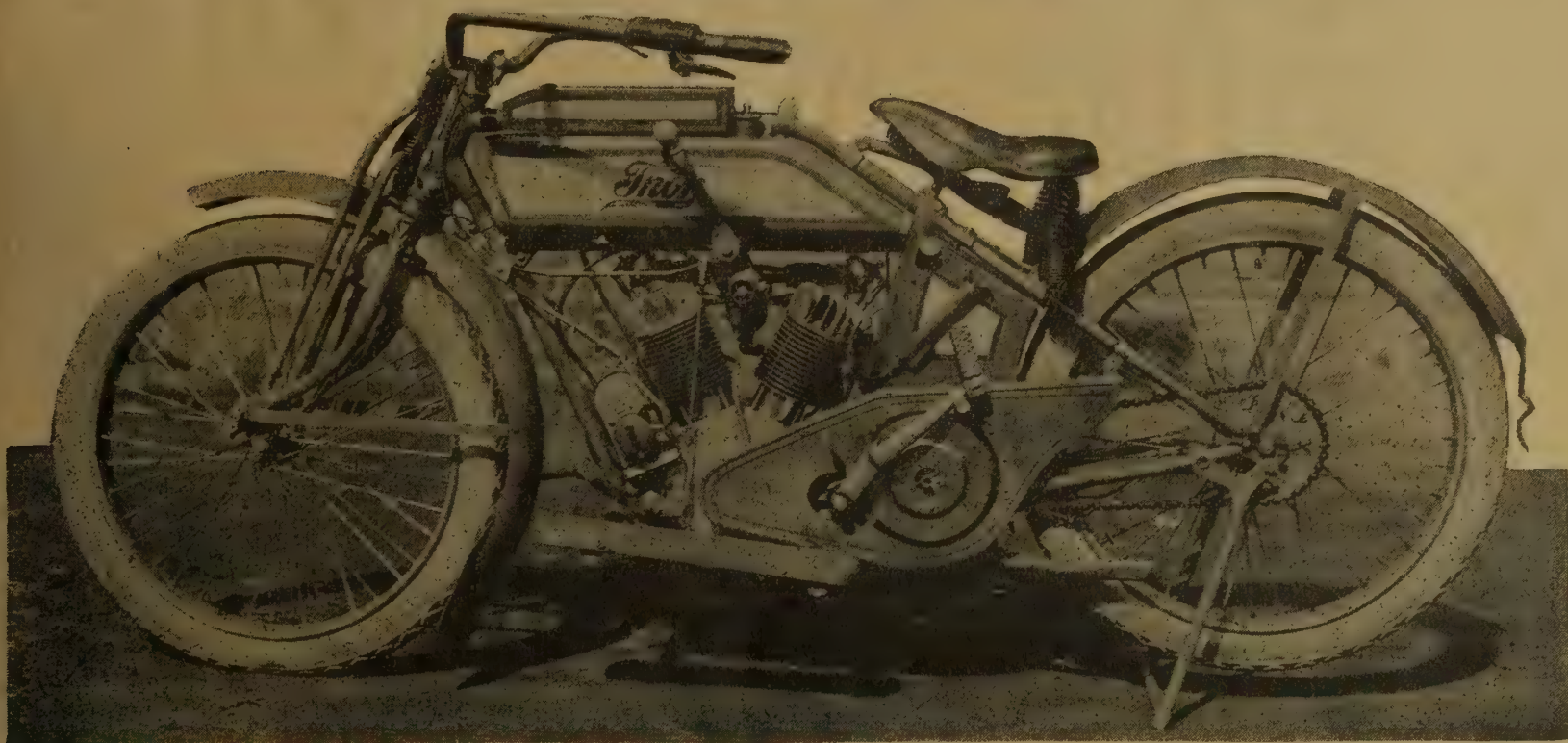
Write to  
**Butte City Ranch**  
The Home of Good Berkshires  
Butte City, - - - Call

At the bottom of your letter to advertisers put "California Cultivator" and prompt reply is guaranteed.



# Send in Your Names Boys

We Give Away Motorcycles and Other Valuable Prizes—Over \$500 in all.  
This is the Easiest Way to Get One.



Many have already secured machines by this easy plan. We pay for the work you do and you can work just during spare time. Write us today about it.

## Do You Want a Motorcycle?

Wouldn't you like to have one of the new 1917 \$290 Thor motorcycles without its costing you a cent? You can have one. California Cultivator is going to give away over \$500 in prizes in return for doing a little work that you can easily do just during your spare time, including this Thor motorcycle. The Campaign Manager has already given away 11 motorcycles that were secured with far less dollars in subscriptions than the same machines would have cost in dollars of a dealer. This is the easiest way to get one. Send us your name and address at once on the blank below so we can write and tell you all about it. This places you under no obligation to us whatever. You do not even have to be a subscriber to California Cultivator. High school students, farm boys, workmen, linemen, teachers and everybody can take part. There are lots of prizes and cash pay.

Here is an opportunity that you can make worth a good many dollars to you, if you will only take advantage of it. Someone is going to get this motorcycle—why not you? It might just as well be you as anybody and no harm will be done in trying. We are ready to turn over to you in Cash and Prizes what we would pay others for doing this work for us and you can do this work easily during your spare time.

This motorcycle will give you more pleasure than anything of equal value that you could own. Many others have already been given away, that were easily and quickly won, and the winners were very glad they saw the announcement like this and sent in their names. We had never heard of anyone of them before and none of the winners had ever taken a subscription before or done anything of this kind. You have just as good an opportunity as anyone else to win this \$290 motorcycle, the latest model new 1917 machine—the very best you could get. Will you try? It costs you nothing to enter this campaign.

Arthur Alliston of Whittier won the motorcycle given away Dec. 31, 1916 with far less dollars in subscriptions secured than the motorcycle would cost of a dealer. Here is what he says:

Whittier, Cal., Jan. 30, 1917.

Gentlemen: I entered the campaign which has just been completed by the Cultivator Company and was successful in winning the \$290 Indian Motorcycle.

The campaign was fair and square in every way and I was very much pleased with the way it was carried on. I would advise anyone that has little spare time to enter the next one which is soon to start. It is a valuable prize for a small amount of work.

Yours truly

ARTHUR W. ALLISON.

Use this blank and send in your name and address at once so we can write and tell you all about it. This places you under no obligation to us whatsoever.

## Fill out this Free Entry Coupon and Mail Today

Manager California Cultivator Motorcycle Campaign, 115 North Broadway, Los Angeles.

Dear Sir—Please send me free of cost full information about the \$290 Thor Motorcycle and other prizes you are going to give away.

My Name .....

My Address .....

In Care of .....

Street or R. F. D. .... State .....

## YOU WON'T KNOW HOW EASY IT IS UNTIL YOU START

You never will know how easy it is to win one of our motorcycles or how much money you can make until you enter and get started, which requires that you send your name and address for full information about the prizes and campaign. You might just as well become the owner of this motorcycle as anybody. You can have just as much fun with it as with an automobile and the cost of operating it is much less, and it will be given away absolutely free, freight charges prepaid. Sign and send the blank at once to Manager Motorcycle Campaign, California Cultivator, 115 North Broadway, Los Angeles, Cal.

## THIS IS THE BIGGEST PRIZE LIST WE HAVE OFFERED

This is the biggest prize list we have offered and everyone taking part not winning one of the big prizes will be paid in cash for the subscriptions they secure. The campaign will start soon. A certain number of points will be given for each subscription you secure and the boy or man having the highest number of points by 6 P. M. Monday, December 31, 1917, will be awarded this \$290 Thor Motorcycle. The Second highest will receive a \$125 Miami Motor bicycle, third highest will receive a \$30 talking machine outfit, fourth highest will receive a \$30 gold watch, fifth and sixth highest will each receive \$45 college scholarships, seventh highest will receive a \$15 gold watch. In case of a tie for any prize, prizes of equal value will be awarded to those in the tie. The \$290 Thor '17 Motorcycle is guaranteed to be new and in absolutely first class condition by California Cultivator.

## Highly Pleased With Their Machines.

### WELL REWARDED FOR THE WORK DONE

Anaheim, Calif., June 8, 1917.

Manager, Motorcycle Campaign.

Dear Sir: In regard to the motorcycle campaign finished a short time ago in which I was successful, I wish to thank you for the kind attention paid me throughout the campaign and the fair and square way in which it was carried on. I want to say that anyone entering one of your campaigns will be well rewarded according to the amount of work he does, as there are a number of different prizes all worth working for, and the business experience is beneficial.

Yours sincerely,

OTTO LENZ.

### SAYS IT'S EASY TO WIN

E. B. Preedy won one of the motorcycles given away February 28, and is highly pleased with his machine and the ease with which he earned it. Here is what he wrote:

Manager Motorcycle Campaign:

Dear Sir: I received the motorcycle, and it is sure a dandy. It is easy to handle. I have not found a place it won't pull. I would advise every boy to get busy on the next campaign, for it is easy to win and everything is straight.

—E. B. Preedy.

### HE LIKES HIS MACHINE

Manager Motorcycle Campaign.

Dear Sir: I am writing to let you know I received the first prize motorcycle and sure am pleased with it. It sure is a dandy. It was worth working for, and I also say the way you managed the campaign was sure on the square, and I think others who may enter one of your campaigns will say the same, and I hope those who enter will win out as easily as I did.—C. S. Kelley, March 29.

### MORE THAN PLEASED WITH HIS MACHINE

Manager Motorcycle Campaign.

Dear Sir: I received the motorcycle yesterday and I am more than pleased with it. I have ridden it about fifty miles. I want to thank you and the company for the machine and the promptness in sending it to me. The campaign was carried on absolutely fair and you did everything that you said you would do. My winning has caused great enthusiasm here among the young folks, and everyone thinks my machine is great. I am going to get my picture taken with the machine soon and I will send you one. Again thanking you for your honesty and kindness to me, I am, yours truly—Perle Tilley, May 12.



# The Morris Consignment Holstein Breeders' Guaranty Sale

Sacramento, Dec. 5, 1917

## Fourteen of the Best We Own

Two of the choicest daughters of PRINCE GELSCHÉ WALKER in calf to SIR AAGGIE DE KOL ACME and KING MORCO ALCARTRA, whose dams are both world record cows. One of these is full sister to a 23 pound junior two year old that made almost 95 pounds in 30 days. They are sisters to a 36 pound junior three year old and a 34 pound junior four year old.

Three excellent daughters of KING MEAD OF RIVERSIDE in calf to SIR AAGGIE DE KOL ACME and PRINCE GELSCHÉ WALKER. They are sisters to AAGGIE ACME OF RIVERSIDE 2D that has just completed the world's strictly official record of 1331.64 pounds butter in one year and 2424.74 pounds in two years.

Three outstanding daughters of SEGIS PONTIAC DE KOL BURKE in calf to SIR AAGGIE DE KOL ACME and PRINCE GELSCHÉ WALKER. Their half sister ARAIA DE KOL PONTIAC MEAD is just finishing a record of 930 pounds butter as a two year old, the record for the Pacific Coast and sixth highest of the breed.

A beautiful three year old daughter of ARAIA King out of a 32.76 pound junior four year old who has six 30 pound sisters. Due to calve about sale time to KING MEAD OF RIVERSIDE.

A 27 pound four year old that has four 30 pound sisters, heavy in calf to PRINCE GELSCHÉ WALKER.

A splendid daughter of ARAIA DE KOL PONTIAC SEGIS out of a 25 pound four year old daughter of a 28 pound cow, bred to KING MEAD OF RIVERSIDE.

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ers of both sections will be of great value to the breed as a whole.

California now has 46 Holstein cows who have made better than 30 pounds butter in seven days. This is a remarkable showing but is as nothing to what it will be in the near future. One of these days we will be reading about the forty pounder. Already there are several who have made more than 35 pounds. We are not going after the short time records exclusively either. We have world's strictly official butter record and several cows which have held world's records for one year's production.

## Veterinary

Answers in this column by Dr. Wm. Petrie, 2714 South Harvard Blvd., Los Angeles, are without charge. For immediate mail answer remit \$1.00. In writing questions give full symptoms or particulars of injury of animal. Unsigned communications receive no attention.

### Lock Jaw

I have a hog that can not open his mouth to eat thick food. It can only drink milk. The jaws seem to be locked. What can I do for him? — Subscriber, Cordelia.

Probably it is lock jaw, known in the books as tetanus. Very little can be done for the hog. He will probably recover without any treatment.

### Cough (Probably Tuberculosis)

We have a cow that will be fresh in about 30 days that is giving bitter milk and has a bad cough. Milk is not bitter when fresh but becomes so after standing 12 hours, and the butter will not separate from the cream. Cough is worse at times and the veterinarian says it is probably due to foxtail in the throat. Had swollen jaw which was blistered and lanced several months ago with no apparent improvement in the cough. Her appetite is poor and irregular. Feed bran, beet pulp, oat hay and alfalfa. What can be done for her? — Subscriber, Covina.

The cough and the condition of the cow as you describe it would lead one to suspect tuberculosis to be the cause of all the trouble. Have her tested by someone who knows his business. If the test does not show tuberculosis present then give her a good physic and change her feed.

### Glanders

Near here a number of horses have died in an open pasture of an apparently contagious disease. These animals have lived about one month after the first symptoms of the disease appeared. It first begins with sluggish movements and drooping the head. They also become covered with running sores. What it is? — Subscriber, Devore.

Probably it is glanders. It should be looked after by the state veterinarian. When the ulcers formed in the nose and about the head it was formerly called glanders but when the ulcers formed on the body and legs it was called farcy but it is the same disease, only attacking the lymphatic glands in a different part of the body.

### Breeding Hogs

How old should hogs be before you can breed them? — Subscriber, Cordelia.

Hogs should not be bred before they are eight or ten months old. Breeding them earlier is likely to stunt the growth.

### Indigestion

I have some pigs about four months old. Some are doing fine while the rest are not. They are not growing and grit their teeth a great deal. I thought they had worms and gave medicine for that but it did no good. Am feeding cooked barley, potatoes and corn meal three times a day and give them greens out of the garden and alfalfa hay. — Subscriber, Marina.

Probably it is indigestion. Change the feed by stopping the potatoes and give the barley and corn dry for a time. If you could get some good sour milk for them it would probably set them right very quickly.

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## Legal Queries

Louis B. Stanton, attorney, 248 Wilcox building, Los Angeles, will answer legal queries in this department. Immediate mail replies cannot be given except where fee to Mr. Stanton is paid. When replies are wished in Cultivator address query to 115½ N. Broadway, Los Angeles.

### Irrigation Law

Where can I get a copy of such laws pertaining to irrigation as the secretary of a water company should know to conduct the business in a legal manner? Is there such copy printed or free distribution? — Subscriber, Colton.

The secretary of state of California in years past caused to be published a book termed "Corporation Laws of California" which he distributed to certain applicants. This book was a great compendium of the various code sections pertaining to corporations of various kinds. There are several good manuals of corporation management providing forms for the ordinary pur-

poses of corporations, the names of which you can undoubtedly procure by writing to Bancroft-Whitney Company at San Francisco; such manuals are of various degrees of excellence, size, and price. Care, however, should be taken in the use of legal forms by one who is ignorant of the meaning, purpose, and effect thereof as their use has been one of the most prolific sources of litigation.

### Fencing County Road

Bordering my land there is a canal; on each side of the canal there is a road used by the public almost to the exclusion of the county road which is laid out between the canal company road and my land. Owing to the fact that the public uses the canal company's roads the county refuses to keep the county road in condition for travel. The county road was taken off my land. Everybody here pastures on the roads. If I could fence this county road bordering my land I would have about a quarter of an acre for pasture. Can I so fence it?—Subscriber.

Under the peculiar conditions existing in your case it might be well to take the matter up with the supervisor or, as he is otherwise termed, road overseer for your road district. The board of supervisors are empowered in their discretion to provide for the construction of gates on the public highways and to provide rules for opening and closing the same, provided that the expense shall be borne by the party for whose immediate benefit the same is ordered. In case such consent of the board is obtained anyone who opens and leaves open the gate or wilfully and unnecessarily rides over the ground adjoining the road on which the gate is erected forfeits to the injured party treble damages. If you do not obtain such consent of the board the road overseer of the district may require your fences to be removed, and if you do not comply within ten days from date of oral or written notice you are liable to a fine of ten dollars for each day it remains in place.

### Subleasing

What is the procedure in subletting a five acre tract which is set to trees? Under my lease I am to care for the trees and have the use of the ground between the rows. There is nothing in the lease against subletting. Am I required to procure owner's consent? Am I responsible to the owner if I sublet the land?—Subscriber.

You are doubtless entitled to sublet the property, but this does not affect your liability to the lessor and you could certainly be held for any injury, resulting from the acts or omissions of your sublessee; you in turn can hold the sublessee. The only method by which you could avoid this liability would be to have the subtenant accepted by the lessor as his immediate tenant.

### Unfulfilled Contract

If a contract purchaser of land makes a few payments and then discontinues and the contract is cancelled, has the seller any claim against other land belonging to the buyer for the unpaid balance upon the contract?—Subscriber.

If the purchaser discontinues payments and the seller elects to cancel the contract and recovers the land; then that contract is at an end and neither party has any rights under a properly cancelled contract. If, however, the seller elects to hold the party to his contract he is entitled to bring suit for the balance due upon the contract. Generally these contracts provide that in case of the default in any payment the whole amount due may be declared at the option of the seller at once wholly due; in that event the seller may offer the land to the purchaser, bring suit for the whole amount, take attachment and execution upon the land, sell the same and levy upon any other land or property of the purchaser. In other words, the contract is the same as any other contract of purchase and sale and can be enforced in the same way.

### Hay on Road

If one wishes to cut hay along the county road on right of way is it necessary to get permission therefor and from whom?—Subscriber.

By taking and accepting land for a highway the public acquires only a right of way; the property itself belongs to the former owner or his successors in interest; that owner would therefore own the hay growing upon the highway, and it would be necessary to obtain his permission to take his property. On the other hand in case the hay is wild the road overseer of the district may order the highway cleared and destroyed. He might by virtue of that power give permission to clear the highway.

### Trespassing Stock Law

Will you please give the date of passage of the trespass law of this state and the place in the statutes where found. I mean in regard to a substantial fence being necessary.—Subscriber, Germantown.

There are two general acts known as "Estray Acts." One is entitled "An act concerning trespassing of animals upon private lands, and the recovery of damages resulting therefrom." This act was approved March 23, 1907, and is found in the Statutes of 1907 page 999, or Title 172, page 411, of the 1915 edition of Deering General Laws. The other act relating to estrays contains a provision for fences in the northern tier of counties only and was approved March 23, 1901, found in the Statutes of 1901, page 603, and has subsequently been amended at each session of the legislature except that of 1917; it is also found under Title 172, page 412 of the 1915 edition of Deering's General Laws.

### NEXT TRACTOR DEMONSTRATION

A meeting of the National Tractor Demonstration Committee was held at the Auditorium Hotel, Chicago, in October for the purpose of discussing the question of tractor demonstrations for next year. After a very thorough discussion of the subject, a motion was made and carried to have one big national tractor demonstration in 1918, incorporating:

1. Tests on fuel consumption in plowing, disking and other kinds of field work.
2. Tests on different types of traction wheels, wheel equipment and on tractive efficiency. To include tests running wheels in furrow, on unplowed ground, and also on plowed ground.
3. Tests on steering mechanism.
4. Tests on belt work.

The committee is of the opinion that this demonstration carried out on the lines above mentioned, should be one which will better establish the farm tractor and help develop the tractor industry. This demonstration is planned to give those interested, more detailed information as to fuel, traction and power. At least one ten-hour plowing run will be held during the demonstration. It was further decided that the committee may sanction not more than five other demonstrations at points to be decided later, which would be conducted along the lines of previous demonstration, but not include any tests.

It was the consensus of the committee to hold this demonstration at some point in the vicinity of Detroit or Cleveland, if suitable land can be found; 3000 to 5000 acres will be required in one body, or made up of adjoining fields.

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Write us concerning your fruit tree troubles. Part of our business is to help make your business successful.

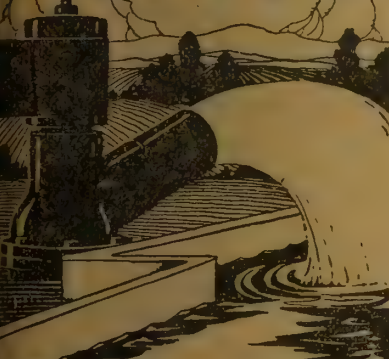
Write for the pamphlet on the subject in which you are interested.

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until Spring if you intend to install a new pump. Place your order immediately in order to insure prompt delivery. We manufacture pumps of every size capable of handling any amount of water from any depth, ECONOMICALLY.

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comes from the non-friction of the ball tread.

The TRACTOR rolls over the hard steel balls requiring little of the power to pull itself —most of it pulls at the draw-bar.

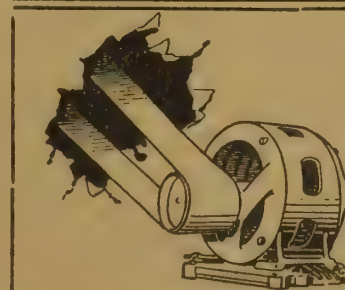
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Riveted Pipe—4, 6, 8, 10, 12, 14, 16, 18 inch.  
All above pipe and casing is practically as good as new, with good threads and couplings on each joint. We also carry valves and fittings, pumps, engines, boilers and rail. See our stock and get prices before buying elsewhere.

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# The Best Laying Mash

Written for California Cultivator By Jean A. Koethen



CULTIVATOR reader writes to ask: "What is the cheapest and most efficient dry mash to feed laying hens?"

Had his question read "What is the cheapest and most efficient mash," the question would have been more easily answered, for the cheapest and most efficient mash is not a dry mash at all, but a wet mash, made up of cooked vegetables, uncooked greens chopped and mixed in, and the whole thickened with ground grain and meat meal. If the mash can be moistened with sour milk or any other kind of milk the meat meal may be omitted and the mash will be ideal for the purpose.

Such a mash is both cheap and efficient for four reasons:

It contains a variety, and variety is the spice of life with chickens even more than with the rest of us.

Such a mash may contain as much as 50 per cent vegetables and other greens, thus lowering the cost of feed while adding to its efficiency, for most hens need more of such feed than they get. Greens and vegetables keep health and digestive power at the maximum, and contain enough protein and ash to be of considerable help in egg manufacture.

When a wet mash is properly fed, that is, no more given at once than the hens can clean up in 15 minutes or less; there is absolutely no waste.

A wet mash is more appetizing; hens like it better and eat it more eagerly, with a consequent stimulation of production.

I have never quite understood why it is that a moist mash, with bits of green sticking up in it should be so much more attractive to hens than a hopper of dry mash. They actually fall over themselves in their eagerness to pick out the bits of green, and the ground grain goes with the green. Perhaps it is merely a matter of impression, the idea that anything that looks good must taste good, but hens do like a mash of this sort immensely, and appetite with a hen counts a lot. Sprouted oats make the same good impression and are eaten with the same eagerness. A hen will eat anything if she has to but I have a suspicion that food which is eaten eagerly is more effective in producing eggs than that which is eaten simply to satisfy hunger.

My correspondent asked, however, for the formula for the cheapest and most efficient dry mash for laying hens, and this I cannot give him. I wish I could. I wish I knew of some one else that could. There are many good mash formulas, all apparently equally efficient, but the cheapness of any one depends on the grain quotations for that particular day or week. Bran has always been the basis of the dry mash, and bran, being a by-product, has never gone to a prohibitive price. The same is true of wheat middlings or shorts. Shorts at \$3.15 a hundred seems dearer than bran at \$1.90, but when you consider that shorts contain more protein, more fat and less than half as much ash, it is easily to see that there is not much difference.

With us in California a wartime ration must eliminate the ingredients that are too expensive and utilize these at hand or which can be had for least money. For the present we must cut out corn meal, for that is the dearest of all ground grains. For-

tunately we can do without corn more easily than most people, for it does not suit our climate very well. Few of the published formulas contain alfalfa meal, but I understand it is coming into favor more and more. I have always used it, because it adds bulk to the ration and contains a good deal of protein. It is cheaper than any of the ground grains, and my hens like it. Ground oats vary in price and cannot always be had at any price. When they can be had reasonably, they are one of the best dry mash ingredients, indeed, at the Missouri station at one time, the only mash fed was ground oats in one hopper and beef scrap in another. I do not know how satisfactory the combination proved, but while ground oats alone might not be the best ground grain, in combination they are excellent.

It is generally considered good practice to let the mash contain twice as much bran as any other grain. The following is a good formula: Wheat bran 200 pounds, ground oats 100, middlings 100, alfalfa meal 100, beef scrap 40, fish scrap 35.

It is not necessary to use both fish scrap and beef scrap. The two together are little better than one alone, but 75 pounds of either might be used without affecting the efficiency of the mash. As the 75 pounds of animal protein is less than 15 per cent of the whole mash, a little soy bean meal, say about 25 pounds, might be added. This would increase the whole protein content of the mash without the dangers which attend excessive use of beef scrap and would narrow the ration somewhat. The vegetable meals, soy bean, coconut, oil cake and others are not sufficient alone, but are excellent when used with beef scrap or fish meal. If ground oats cannot be had, and they could not the last time I asked, try the oat chop, which differs from ground oats in that it contains the hulls while the ground oats do not. Oat chop is very good in the mash—I have been using it alone with alfalfa meal and beef scrap and part of the time some bran—but ground oats are better. If any feed seems to contain too much hull, the best remedy is an extra amount of green feed and vegetables. Our war gardens must all contain some undersized potatoes, some turnips and carrots which could not be put to a better use than by being cooked and fed to chickens. In this respect we Californians are very fortunate. We may not be able to feed corn, unless we raise it, but we can raise two vegetable crops a year.

There are so many ways of mixing mashes you just have to pay your money (if you have any) and take your choice. Only don't forget the green to go with it and a little real meat now and then, and if you should happen to have a goat or a cow, remember milk is the one best poultry feed.

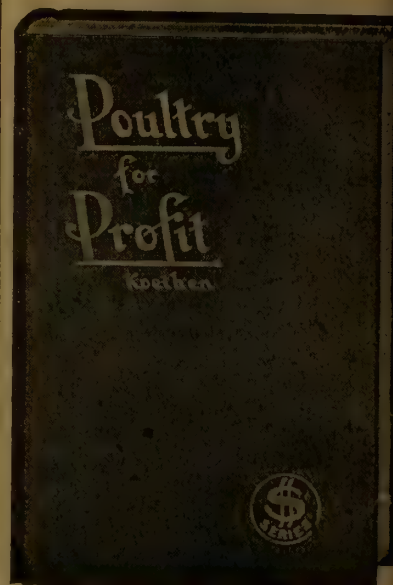
Do not allow little chicks to occupy disinfected coops for at least 24 hours. The fumes arising from the application of coal tar products will kill the young chicks, but will not be sufficiently strong to injure the old hens.

### TRY THIS ONE

Needy One—"I say, old man, could you lend me a dollar for a day or two?"

Other One—"My dear fellow, the dollar I lend is out at present and I've several names down for it when it comes back."

# Poultry can be made to Pay



THERE are two methods of gaining knowledge, necessary to make poultry a success; experience—which is a long, drawn out, expensive road and the one too commonly used. Another method is by the careful studying of books written by practical poultry people who have made mistakes and successes and are willing to give this information in order that you may take the short road to poultry success.

## Poultry for Profit

BY

Jean A. Koethen

(Graduate of University of Calif.)

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## Storrs Egg Laying Contest

Storrs, Connecticut, report for the fifty-second week ending October 30, 1917.

The sixth international egg laying contest at Storrs was formally closed with the laying of the last egg late Tuesday afternoon by Rhode Island Red hen No. 322, from Attleboro, Massachusetts. A pen of Barred Rocks that plodded along in second place for more than 50 weeks, finally finished first. White Leghorns were in second and third places for the year, Barred Rocks fourth and Rhode Island Reds fifth. All five previous contests were won by either White Leghorns or White Wyandottes. Twice the honors went to England, then to a Pennsylvania pen of Leghorns, Connecticut and Rhode Island had their turn and now New Hampshire stands at the head of the list as can be seen from the summary below. These New Hampshire Barred Rocks entered by Applecock Farm of Fitzwilliam not only won in the contest just ended, but they have set a new high record for Plymouth Rocks as no pen of this breed has been able to equal their record in any previous competition.

The 1000 birds in the contest were of nine different breeds and varieties, and represented 16 states and two allied countries. The combined weight of all the hens was less than two and a half tons and yet they laid over ten tons of eggs. In other words, the average yield of 163 eggs for each hen was more than four times her own weight. The grand total for all pens was 163,387 eggs which is the largest number of eggs ever collected at Storrs from the same number of hens. This record is 100 eggs ahead of last year's contest and more than 11,000 ahead of the contest two years ago.

The subjoined table shows the number of birds in each breed, the average annual individual egg yield, and the average for all varieties engaged in the contest.

90 Barred Rocks	169.2
160 White Wyandottes	163.6
210 Rhode Island Reds	158.4
430 White Leghorns	167.4
110 Miscellaneous	152.1
1000 Average for all breeds	163.4

Barred Rocks also won highest individual honors. Hen No. 9, owned by Merritt M. Clark of Brookfield Center, Connecticut, laid more eggs than any other one hen in the contest. Her record for the year is 277 eggs, the best bird of the breed ever trapped at Storrs. Tom Barron's White Wyandotte, No. 268, from Catforth, England, was the best in her class with the score of 263 eggs. A. Allan's Rhode Island Red No. 463 from Newport, R. I. was high in her group with a total for the year of 249 eggs. Hilltop Poultry Yards' White Leghorn, No. 796 from Suffield, Ct., was at the top in the Leghorn division with a yield of 246 eggs. Over 165 individual birds, including Barred, White and Buff Rocks, White and Buff Wyandottes, Rhode Island Reds, Leghorns and Orpingtons, laid more than 200 eggs each during the year.

The following list shows the 20 best pens in the order of their production, also their records for the year.

Applecock Farm, Fitzwilliam, New Hampshire, 2119 eggs; A. P. Robinson, Calverton, New York, 2090; Windsweep Farm, Redding Ridge, Connecticut, 2022; Merritt M. Clark, Brookfield Center, Conn, 1991; A. Allan, Jr., Newport, Rhode Island, 1990; J. O. LeFevre, New Paltz, New York, 1967; Hilltop Poultry Yards, Suffield, Connecticut, 1950; Cloyes & Sullivan, Hartford, Connecticut, 1936; E. A. Ballard, Chestnut Hill, Pennsylvania, 1921; Braeside Poultry Farm, Stroudsburg, Pennsylvania, 1917; F. M. Peasley, Cheshire, Connecticut, 1902; Clifford I. Stoddard, Woodbridge, Connecticut, 1897; Windsweep Farm, Redding Ridge, Connecticut, 1890; A. B. Hall, Wallingford, Connecticut, 1889; Frank R. Hancock, Jacksonville, Vermont, 1881; Obed G. Knight, Bridgeport, Rhode Island, 1855; Geo. A. Standard, Ottawa, Kansas, 1845; Pequot Poultry Farm, Southport, Connecticut, 1833; Agricultural College, East Lansing, Michigan, 1830; Will Barron, Bartle, England, 1826.

## Crate Fattening Rations

Material to be used for fattening chickens in crates should depend somewhat on the cost and on the purpose for which the fowls are being fed. If a hard white fat and white skin are desired, oats and barley should make up a large part of the ration; if yellow fat and skin are desired, cornmeal should be the principal ingredient of the mash.

A simple, efficient ration for farm use consists of 60 pounds cornmeal, 40 pounds wheat middlings, oat flour, barley meal or buckwheat middlings or 40 pounds of a mixture of equal parts by weight of these materials) and five pounds of finely ground beef scrap. This mash is mixed with sour milk, either skimmed or butter milk, in the proportion of about 1½ pounds of milk to each pound of mash. The mash mixed ready for feeding should have the consistency of buckwheat cake batter. It is not necessary to mix the mash fresh for every feeding as a slight fermentation makes it more palatable and more digestible.

The chickens to be fattened should be given nothing to eat or drink for at least 12 hours after they are placed in the crates.

At the first feed only about one-third as much of the mash should be given as the chickens will eat. The amount fed should be increased at

each feed until by the fourth feed they are being given all they will clean up in from 20 to 30 minutes. After the fourth feed every effort should be made to stimulate the consumption of mash.

Feeding should be done at the same hours each day. Regularity is essential.—M. C. Kilpatrick.

### STATE BEE KEEPERS' ANNUAL

The annual convention of the California Bee Keepers' Association at Sacramento discussed marketing and the formation of an organization. No definite plans were outlined but it was unanimously decided to hold a conference of bee keepers in Los Angeles in the near future. Presumably this will result in the formation of a marketing organization which may aid in marketing the 1918 crop. The election of officers resulted in F. A. Alexander of Ontario being chosen president. He succeeds B. B. Hogaboom; M. L. Richter of Modesto was reelected secretary and treasurer. Other directors are; W. C. Kerr, C. F. M. Stone and J. O. McCubbin.

### Book Review

#### "VEGETABLE FORCING"

"Vegetable Forcing" by Ralph L. Watts, dean, school of agriculture and experiment station of Pennsylvania state college, published by Orange Judd Company, New York, \$2.00 net.

Vegetable forcing occupies an impor-

tant place in American horticulture. The subject is taught to large numbers of students, and it has enlisted the interest of thousands of gardeners who are attracted by the idea of growing vegetables under artificial conditions. To meet the needs of these two groups of people has been the constant aim of the author. This is a book of 432 pages with illustrations on almost every page, and 23 chapters packed with information as to vegetable growing,

especially growing in green-houses, hot beds, cold frames or other special structures. Amongst the illustrations are those showing glass houses covering acres, with teams, manure spreaders and other implements at work as if in the fields. The chapters touch upon greenhouse construction and heating, handling of soils, fertilizers, insect enemies and diseases, propagation, watering, heating and ventilating, marketing, then devotes a chapter to practically all the forcing vegetables from asparagus to tomatoes.



## Speed Up Your Laying Hens

Eggs are selling at way-up prices. This is your egg harvest time. Put your hens in laying trim by feeding

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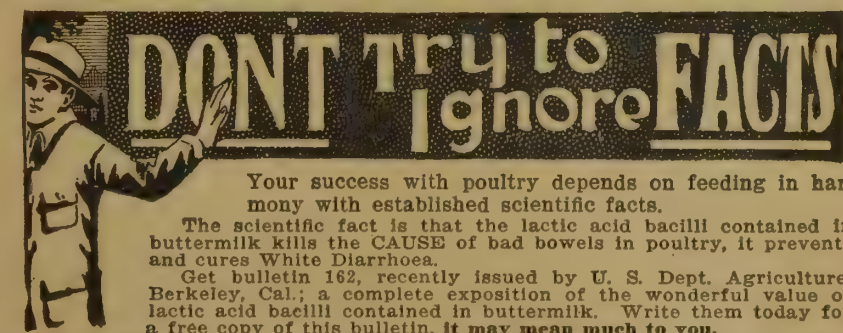
Feed your hens and pullets Pan-a-ce-a to help them turn the greatest possible amount of their feed into eggs. Feed Pan-a-ce-a to liven up the dormant egg organs and make them active. Feed Pan-a-ce-a to all your poultry to improve the appetite and digestion, to enrich the blood, to make them healthy.

There is a dealer in your town that will supply you with Dr. Hess Poultry Pan-a-ce-a. If it does not make your hens lay, he will refund your money. Packages, 25c, 50c and \$1.00; 25-lb. pail, \$3.00; 100-lb. drum, \$11.00.

Dr. Hess & Clark, Ashland, Ohio

**DR. HESS STOCK TONIC**  
A Conditioner and Worm Expeller

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Your success with poultry depends on feeding in harmony with established scientific facts.

The scientific fact is that the lactic acid bacilli contained in buttermilk kills the CAUSE of bad bowels in poultry, it prevents and cures White Diarrhoea.

Get bulletin 162, recently issued by U. S. Dept. Agriculture, Berkeley, Cal.; a complete exposition of the wonderful value of lactic acid bacilli contained in buttermilk. Write them today for a free copy of this bulletin, it may mean much to you.

A-1 Buttermilk Mash, containing DRY BUTTERMILK costs but a few cents more than non-buttermilk mash; learn why it's worth a great deal more.

Get more and better eggs. Raise more and stronger young chicks.

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**Pear Trees**—Offer several thousand Bartlett, 2 and 3 feet, heavy caliper at 9c each. French prunes. Trees of all kinds. No agents; we sell direct. Write for price list. **Carlton Nursery Co., Carlton, Ore.**

**By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator.** The cost is only 5 cents per word per issue, with a minimum of 35 cents.

**For Sale**—Valencia trees, extra fine yearlings, straight, thrifty, sour root, high buds, not fertilized, fine soil for balling. Will contract for spring planting. **S. R. Coate, Anaheim, Cal.**

**For Sale**—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. **Randall Bros. Nursery Co., Whittier, Cal.**

**For Exchange**—Nursery trees, lemon, orange, grapefruit and olive, for horses, wagon, implement, hay tools. 2214 Third Street, **Ocean Park, Cal.**

**Olive Trees**—Mission, Manzanillo, Ascolano. Propagated by me from trees of known bearing qualities. Guaranteed. **L. T. Schwacofer, Hemet, Cal.**

**Citrus Trees**—All kinds, any quantity. **Butler's Morning Side Nursery, Lomanda Park, Cal.**

**Citrus Nurseries, Murphy Oil Company, East Whittier, California.** Selected stock for sale; inspection invited.

**Quality Trees, Seed potatoes, Cash Nurseries, Sebastopol, Cal.**

### WANTED

**Wanted**—Hog mah, capable of handling one of finest registered Poland-China herds in state. Want energetic man of sterling character and brains, thoroughly experienced, yet willing to follow instructions. Give age, full experience, references and salary expected at start. Address **Strong, Care Cultivator.**

**Wanted**—A man who knows Men, Tractors, Soils, Beans and Citrus Trees. Scientifically and can get results under model conditions. To Superintend a fourteen hundred (1400) acre modern irrigated ranch in San Fernando Valley. The Sunshine Co., 607 South Hill street, Los Angeles, Cal.

**Wanted**—The best USED A. C. 5 h. p. motor that can be procured for cash, also a good 2 horse road grader. "The Glide make preferred." These machines must be in perfect condition, ready for service. Address **Box 27, Lakeside, Cal.**

**Wanted**—Hogs of all sizes, weights or colors. Any number from one to several thousand considered. What have you? **Durbin & Forbes, 722 San Fernando Building, Los Angeles.**

**Beans! We Buy All Kinds of Beans**—Send samples. Also Sudan Grass. **WESTERN SEED COMPANY, 116 East 7th St., Los Angeles.**

**Wanted a good dairyman** to handle dairy on shares. Apply **James Mills Orchards Corporation, Hamilton City, Cal.**

### SEEDS AND PLANTS

**We Have Field Selected a large stock of GREEN GOLD BRAND alfalfa seed.** More than half of our stock is already sold. Good alfalfa seed will be scarce. Order now while quality is highest and price is low. **Bombberger Seed Co., Box 286, Modesto, Cal.**

**ORDER YOUR SEEDS NOW**—If you are going to need any seed for next season now is the time to render your order. It may be impossible for you to buy what you need later. **V. A. Peterson Alfalfa Seed Co., Arbuckle, Cal.**

**ALFALFA SEED OUR SPECIALTY**—Alfalfa Seed—Common variety, hairy and smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. **El F. Sanguinetti, Yuma, Arizona.**

**Rhodes Grass**—The strongest and best feed. Most drought resisting forage known. Will grow on hard alkali ground where nothing else will grow. **Imperial Valley Nursery & Seed House, El Centro.**

**Rhubarb**—\$1127.00 from one acre. A crop every month of the year. Write to me and I will tell you how you can do as well. **J. M. Stone, Lodi, Cal., Route 4.**

**Mr. Alfalfa Grower**—If you want good seed at the lowest price, write me for samples and prices. **Smooth Peruvian a specialty, O. C. Nordahl, Bard, Cal.**

**Vetch Seed**—New crop clean seed, \$4.00 per 100 lbs., on car. Alaska, Red Clover. Price on application. **Carlton Nursery Co., Carlton, Ore.**

**Roses** 50 cents per dozen. Write for catalogue. **Kavan Nurseries, San Bernardino, Cal.**

**New Crop Alfalfa Seed** now ready. Not the lowest in price, but high in quality. **Leo Turner Yuma, Arizona.**

### TURKEYS

**Our Geese and Turkeys Win Again**—Grand Champion Sweepstake Special, for best pair of birds in show. For size, vigor and quick maturity, our stock are best. East or West. Stock and eggs in season, also Collier puffs. Correspondence solicited. **John G. Mear, St. Helena, Cal.**

**For Sale**—Mammoth Bronze turkeys, The Best in The West. **Geo. A. Smith & Son, Corcoran, Cal.**

### HOGS

**Registered Durocs**—We offer for sale a choice service boar out of a daughter of M desto King and by a grandson of Burk's Good E Nuff; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col.; three young boars out of a great sow of Crimson Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. **Derryfield Farm, I. O. O. F. Building, Sacramento, Cal.**

**Chester Whites, the Billiken Brand**—The big winners at the California State Fair; Billiken was Grand Champion boar; a son was Reserve Grand Champion and a daughter was Grand Champion sow. Do you want some of this strain? Twenty gilts bred to farrow during October and November. Fifty Billiken pigs, both sexes—March and April farrow. Every animal is cholera immune. Write for prices and booklet on Chester Whites. **C. B. Cunningham, Mills, Sacramento County, California.**

**Grape-Wild Farm Berkshires**—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. **A. B. Humphrey, Escalon, San Joaquin Co., Cal.**

**Make Big Money** with our famous **Whitten Ranch Poland-Chinas**—the prolific, fast growing, easy feeding, money making kind. Special sale of service boars and bred gilts. Prices reasonable; satisfaction guaranteed; everything immune. Send for free illustrated book, "Hogs for Profit," packed with valuable information. Ranch in Tulare County but address owner, **R. H. Whitten, 519B Marsh-Strong Bldg., Los Angeles.**

**Superba, World's Grand Champion Poland-China boar** and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. **Rough's Greenfields, Arlington Sta., Riverside, Cal.**

**Berkshires**—First prize junior boar; first and second senior boar pigs including junior champion; fifteen spring and fall open gilts sired by Ames Rival 115, champion boar; and two junior yearling bred sows priced cheap for immediate sale. **F. D. Hall, Ferris, Cal.**

**Rancho Rubio Durocs**—Some extra good gilts sired by Orion Model and California Keen 5th and out of my best sows. Write for prices bred or open. Weaned pigs either sex. **Elmer Lamb, Ceres, Cal.**

**PLW. Duroc-Jerseys**, the most consistent winners wherever shown. **Peters, Lamson & Walker, Devore, San Bernardino County, Cal.**

**Bernstein Sells 20 head of choicest Poland-Chinas at the Big Sale October 19** at Hanford, Kings County. **W. Bernstein.**

**For Sale**—Why pay \$300 for a sow when \$20.00 will buy a July gilt. Big, smooth, long Poland-China. Registered, crated, f. o. b. **N. M. Lester, Gridley, Cal.**

**Big Type Durocs**—Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. **F. M. Johnson, Napa, Cal.**

**Most Money in Duroc-Jerseys**—Bred sows and weanlings, either sex all the time. **Delta Farm and Live Stock Co., Colton, Cal.**

**Large Yorkshires**—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. **A. L. Tubbs Co., Callistoga, Cal.**

**Large Type Poland-Chinas** are prolific and profitable. Can furnish boars any age at reasonable price. **J. A. Crawshaw, Hanford, Cal.**

**Large Type Poland-Chinas**—Very best stock. Prices reasonable. Weanlings my specialty. **C. R. Hanna, Riverside, Cal.**

**Berkshires**—Sired by Star Leader, the \$1,500 boar, ready for service. **Kounias Registered Stock Farms, Modesto.**

**Durocs**—P. & L's Defender by Defender heads herd. **Joseph Prendergast, Route 2, Box 87A, San Bernardino, Cal.**

**Model Herd Berkshires** bred for size and quality. Weanlings and gilts. **J. L. Gish, Laws, Cal.**

**Carruthers' Farm Berkshire Hogs**—Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

**Poland-Chinas**—A few good breeding boars. **S. F. Williams, Orland, Cal.**

### PATENT ATTORNEYS

Patents that protect are secured through **The PACIFIC COAST PATENT AGENCY, INC., Savings & Loan Building, Stockton, California;** send for our little booklet on "PATENTS."

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**Lumber**—Sash—Doors—Plumbing Supplies—Building Materials of all kinds, new and 2nd hand. \*A \*R \*W Shingles 50c per bundle. Send list for estimate. **Dan P. Dolan, 1670 Mission Street, San Francisco, Cal.**

### CATTLE

**Guernseys**—We will sell stock from our prize winning, high producing herd, at reasonable prices, valued according to individuality and breeding. Our supply is limited but if the buyer wants a number of animals and will write us we will furnish him with particulars. **Revada Guernsey Farm, Yountville, Napa Co., Cal.**

**Pedigreed Bull Calves**, Registered \$50.00, unregistered \$25.00. Service bulls \$75 and up. Good individuals from producers. Cows with yearly records at a profit, tuberculin tested. Write or come and select. **Horses, N. H. Locke Co., Lockeford, Cal.**

**Registered Holsteins** out of A.R.O. Dams. Grandsons of King Korndyke Hengerveld Ormsby who has 20 A.R.O. daughters with records of over 25 pounds. Look up this sire. **Geo. Kounias, Modesto Farms, Modesto, Cal.**

**D. O. Lively** announces a purchasing trip East. He will execute orders for customers for any kind of livestock and save money for buyers. **215 Hobart Bldg., San Francisco.**

**Venadera Jerseys**, the herd with official yearly records. Calves of both sexes for sale. **Guy H. Miller, Route 1, Modesto, Cal.**

**Veramont Stock Farm Pure Bred Herefords**, Location **Plumas County**. Ideal for stamina and vigor. Bulls for sale. Address **H. M. Barnegover, San Jose, Cal.**

**Registered Holstein Bulls** from high producing dams for sale at reasonable prices. Also a few choice females. **McAllister Sons, Chino, Cal.**

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**Young Holstein Bulls**, bred right, grown right, priced right. **Creamcup Herd, M. Holdridge, Modesto, Calif.**

**Registered Holstein Bulls** of various ages for sale. **Millbrae Dairy, Millbrae, Cal.**

**Registered Jerseys**—both sexes for sale. **J. R. Carhart, Fullerton, Calif.**

### MACHINERY

**WHY BUY NEW? SAVE HALF**—Material guaranteed. It's second-hand after used few times, but not worn out. Engine snaps: 6 Stearns, \$89; 2½ h. \$39; 4 Pons, \$125; 18 Western, \$295; 34 Lambert, \$390. Many others.

**NEW, USED WOOD, CALV. TANKS**—All sizes; galvanized wagon tank, \$48; 3500 well corrugated galv. tank \$72.50; 10,000 gal. redwood, \$75; 10,000 galvanized, \$135; 16,000 corrugated galv., \$195; 5000 gal. redwood, \$48; 25,000 gal. redwood \$125.

**WINDMILLS, SPECIALLY PRICED**—8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel.

**PUMPS, CYLINDERS, PIPE**—1½ and 1¼ hor. centrifugals; 2½-in. two-stage hor. centrifugal pump, \$38; 2-in. rotary; 3 hor. cent., \$35; 5-in. two-stage B. J. hor. cent. pump, \$175; deep well double-acting No. 2 Ames, \$145. Large Bulldozer Jacks, \$68. Small Bulldozer, \$42.50. Plunger pumps 5x6 air compressor, \$29. Pipe fittings; new complete gas plant for private home, \$75.

**RANCH MACHINERY**—Walking and riding plows, harrows, cultivators, scrapers; brand new ¾-in. cable, 6c; water troughs, \$4; bone grinder; feed mill; sprayer; mowers, rakes, belting, sundries. Down town office **DEMMITT CO. UP-STAIRS, 120 N. Main, Yards, 816 Yale, Los Angeles.**

**For Sale**—One 26 inch Cyl. Owens Bean Thresher, complete; derrick wagon for same; cookhouse; 3 beanbeds—6 nets. Above property in good condition can be seen at my place near Oxnard. Price \$1,000. **Herman Nauman, R. 1, Oxnard, Cal.**

**For Sale**—"K" hand power stump puller. Complete outfit, machine, 220 ft. of cable, blocks, etc. Outfit practically new. Cost me \$150. Will sell for \$90. **A. L. Getz, 1125 O'Farrel St., San Francisco.**

**Gasoline Engines**, the largest stock of used gas engines in California from 3 h. p. to 100. Thoroughly overhauled. **Machinery Exchange, 733 North Spring St., Los Angeles.**

**For Sale**—Titan Tractor 10-20 h. p. used only 60 days. Fine running condition. \$1000. Call 901 East 8th St., Los Angeles or **Buenaman Ranch, Victorville, Cal.**

**Disk Plows**—Rolled Cold. Auto trailers built to order. **J. O. Parrish, 359 South Garey Pomona, Cal. Phone 3132.**

### MISCELLANEOUS

**Famous Hairy Peruvian Alfalfa Seed**—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. **El F. Sanguinetti, Yuma, Arizona.**

**For Sale**—"Pony Rig," black and white mare, good driver, good saddle, nice buff harness, rubber tired buggy, with canopy top for sale cheap for cash. Address **B. Care Cultivator.**

**Stacked Lime**—Send for sample and information. Price right. Let me help you. **H. B. Matthews, 350 Woodberry Road, Pasadena.**

**To Reduce the high cost of living**, send for our Wholesale to Consumer Catalogue. **Smith's Cash Store, 112 Clay St., San Francisco.**

### LIVE STOCK

**Butte City Shorthorns, Shropshires, Berkshires and Ponies**. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. **Butte City Ranch, Box C, Butte City, Glenn Co., Cal.**

**For Sale or Trade**—Registered Percheron stallion; black, age five years; sound; weight 1950 lbs., height 17 hands. Good breeder and fine action. Will trade for registered Holstein cows. Picture, price and pedigree on application. Address **D. B. Adams & Son, R. P. D. 1, Modesto, Cal.**

**Registered Shires**—Blackhawk Stock Ranch. Importers and Breeders **Easton & Ward Burlingame, Cal.**

**For Sale**—600 sheep, 320 ewes, bucked for January. Two to four years old. Quick sale \$10. **W. C. Fidler, San Diego, Cal.**

### FARM LANDS FOR SALE

**For Sale**—Bees and homestead relinquishment, 200 colonies of 3-band Italian bees, in excellent condition, 100 extra new hives, all 2-story with all equipment and supplies necessary to operate, everything first class, and in one of the best locations in the country, average 2 pounds per colony for two successive seasons, no failures. These together with homestead relinquishment of 320 acres, frostless land, 12 miles from station, cultivate about 50 acres, and it will produce deciduous fruits, beans, grain, etc. without irrigation, good domestic water fenced and necessary buildings. Ready for selling have other interests. This a SNAP that cannot be duplicated. Easily worth \$5000 but will sell for \$40 cash during November. Do not answer this unless you mean business. Address **Geo. J. Brown, Box 37, Tustin, Cal.**

**For Sale**—Vineyard and Ranch in Low California. 450 acres; 90,000 grapevines full bearing, Zinfandel, Burgundy and Mission varieties. Rest of land used for farming. Winery with all necessary apparatus. Storage tanks for 75,000 gallons. Only winery on Pacific Coast of Mexico. High protective tariff. At present import duty on wines 90 cents U. S. per gallon. Will sell reasonable figure, part cash and balance in exchange for income property. Retiring from business. Address **Donadaegui, Ensenada, Lower California.**

**Lake County, California**—Climate uncalled. We have two 160 acre ranches both have an abundance of running water, fruit, grain, wood and pasture land. Orchards of walnut, prunes, pear, peaches, apples, berries, etc. Three room cottage, five room house, barns and outbuildings. Fenced and cross fenced. Three miles to good small town, one mile to school. Price \$7,000.00 and \$7,500.00. No exchange. Terms. Address **Box 2, Kelseyville, Cal.**

**For Sale or Trade**—160 acres relinquishment \$2000. Land perfectly level and improvements on all sides, 40 acres cleared. Water can be developed on land. Posts for 20 acres of fencing. See H. J. Blanchard, Covina, or Terra Bella, Tulare Co., Cal.

**Arizona**—Gila River bottom lands \$15 to \$40 per acre. On railroad. Power line and highway building. Two crops year rule—no exception, value \$150 to \$500 per acre. Splendid climate and water. Particulars. **T. C. Davison, Box 101, Ontario, Cal.**

**For Sale**—80 acres improved ranch, 10 miles west from Bakersfield. Lots of buildings and plenty of water. One mile to store, school and half mile to bank yard. Price \$150 per acre. **W. F. Mark, Los Angeles, Cal.**

**237 Acres Rich Manteca land**; large buildings; irrigation, fine for alfalfa, dairies; all crops; \$160 per acre. **Walter S. Buchanan, Manteca, Cal.**

**Oregon, California Government Land**—Latest Green Booklet Free. Tel. "How, Why, Where." Write **Joseph Clark, Sacramento.**

### POULTRY

**Spring Chicks**—We are booking orders now. **S. C. White Leghorns**, only selected and fully matured stock that bred to lay used in the breeding pen which assures strong and vigorous chicks. \$12 per 100; \$100 per 1000. **H. J. Schlotthauer, Exeter, Cal., Route A.**

**Day Old Chix**—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpington. Other popular breeds a matter of correspondence. **Enoch Crews, Seabright, Cal.**

**Poultry Wanted**—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. **National Poultry Co., 607 E. Third St., Los Angeles, Cal.**

**200-250 Egg Leghorns, Reds, Rocks, Wyandottes, Anconas, Orpingtons, Minorcas**. Chicks, eggs weekly. Booking orders December-June delivery. Get pricing strain, feed high. **C. Beeson, Pasadena, Cal.**

**"Eastman's Bred to Lay"** Barred Plymouth Rocks. Choice Cockerels. Fairmead Poultry Farm, Fairmead, Cal.

**Buff Orpington, Buff Leghorns, Bourbons, Red Turkeys**—Breeding stock. **Ferris Ranch, S. Reservoir, Pomona, Cal.**

### ELGIN BOARD WILL CLOSE

At the request of the United States food administrator the Elgin Butter Board will be closed for the duration of the war. A half century ago Elgin was the center of the creamery industry in Elgin, Illinois. The small creameries in this territory, generally known as the Elgin district, were pioneers in the practice of offering their butter for sale at meetings of the Elgin board of trade which were attended by butter buyers from Elgin, Chicago and other cities.

For many years the quotations established for creamery butter were the basis on which creameries generally sold their butter and purchased their butterfat. Of recent years Chicago has absorbed the milk from the district and Elgin has ceased to be a creamery center. The few persons interested in the operation of the Elgin board have been more interested in prices than in production, and sales have not been based on actual commercial conditions governing butter or butterfat. For this reason the request to close was made, as the United States food administration thinks it advisable for prices to be more dependent upon actual market conditions.



Appliances Sold on Time Payments

\$9.<sup>00</sup> Cash

\$8.<sup>75</sup> a Month

The

Eden



This household servant is almost impervious to wear and tear, will wash clothes all day long and never tire, wash them cleaner and with less damage to the fabric of the goods than with the old method of "The battle of the wash board." The action is entirely automatic, perfectly safe and very simple to operate. A trial on your own clothes in your own home will convince you.

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TOWER'S FISH BRAND REFLEX SLICKER

Practical as a plow, and just as necessary. Make every rainy day count.

Waterproofs Absolute are Marked thus—



TOWER'S FISH BRAND

A. J. TOWER CO. BOSTON

ATTENTION!

Every Red Blooded American!

President Wilson's reply to His Holiness Pope Benedictus Peace note gives the clearest and most complete reason why the United States of America is at war with the Imperial German Government.

It is a momentous document and will go down in history as being "one great masterpiece" equal to, if not greater, than the Declaration of Independence.

Every home should have a copy framed and kept where you may look upon it with the respect and reverence it deserves.

A Most Patriotic Christmas Gift

We have reproduced this "Reply" and illuminated it in a most beautiful manner, using the highest skill known to the Printer's and Engraver's Art.

The size is 13x17 inches. Single copies mailed to any address in the United States or Canada, 60c. Two or more copies at 50c each. Stamps accepted.

SEATTLE ENGRAVING CO.

Dept. B SEATTLE, U. S. A.

THE ORIGINAL CHEMICAL

Indoor Closet

30,000 SOLD—FIFTH YEAR

More Comfortable, Healthful, Convenient

Eliminates the out-house, open vault and cess-pool, which are breeding places for germs. Have a warm, sanitary, odorless toilet right in your house. No going out in cold weather. A boon to invalids. Endorsed by State Boards of Health.

ABSOLUTELY ODORLESS

Put It Anywhere In The House

The germs are killed by a chemical process in water in the container. Empty once a month. No more trouble to empty than ashes. Closet absolutely guaranteed. Guarantee on file in the office of this publication. Ask for catalog and price ROWE SANITARY MFG. CO. 314 ST., DETROIT, MICH.

Ask about the Row-San Water Stand—Hot and Cold. Running Water Without Plumbing

Household Department

THE ROAD TO FRANCE


(This stirring martial poem, by Daniel M. Henderson, a Marylander, was awarded first honors in the prize war poem competition conducted by the National Arts Club of New York City. Several thousand compositions were entered in the contest.)

Thank God our liberating lance  
Goes flaming on the way to France!  
To France—the trail the Gurkhas found!  
To France—old England's rallying ground!  
To France—the path the Russians strode!  
To France—the Anzac's glory road!  
To France—where our Lost Legion ran  
To fight and die for God and man!  
To France—with every race and breed  
That hates Oppression's brutal creed!

Ah, France, how could our hearts forget  
The path by which came Lafayette?  
How could the haze of doubt hang low  
Upon the road of Rochambeau?  
How was it that we missed the way  
Brave Joffre leads us along today?  
At last, thank God! At last, we see  
There is no tribal Liberty!  
No beacon lighting just our shores,  
No Freedom guarding but our doors.  
The flame she kindled for our sires  
Burns now in Europe's battle-fires.  
The soul that led our fathers west  
Turns back to free the world's oppressed.

Allies, you have not called in vain;  
We share your conflict and your pain.  
"Old Glory," through new stains and rents,  
Partakes of Freedom's sacraments.  
Into that hell his will creates  
We drive the foe—his lusts, his hates.  
Last come, we will be the last to stay,  
Till Right has had her crowning day.  
Replenish, comrades, from our veins  
The blood the sword of despot drains,  
And make our eager sacrifice  
The freely rendered price  
You pay to lift humanity—  
You pay to make our brothers free.  
See, with what proud hearts we advance  
To France!

WHAT THE AMERICAN RED CROSS IS DOING IN FRANCE

 IN RESPONSE to a request by Henry P. Davison, chairman of the Red Cross war council, for a complete report on the work being carried on by the American Red Cross in France the following cable has just been received from the Paris headquarters of the American Red Cross:

"We have just completed a gift of 5,000,000 francs to needy sick and wounded French soldiers and needy families of soldiers.

"We have established 20 dispensaries in the American army zone to care for the resident civilians and to improve health conditions in that section before the coming of our troops.

"We are providing a dental ambulance at a port in France for the use of our soldiers and sailors, and have organized a nurses' service for American army use.

Hospital Distributing Service

"Our hospital distributing service sends supplies to 3423 French military hospitals and is laying in a large stock for future needs; our surgical dressing service supplies 2000 French hospitals and is preparing immense supplies for our own army.

"We are operating at the front line, in cooperation with the French Red Cross, 10 canteens and are preparing to establish 20 more.

"We are operating six canteens for use of French soldiers at important railway centers where we serve about 30,000 soldiers a day, and are planning many more.

"In Paris canteens, operated by us with the French, we are serving enormous numbers of soldiers as they come and go.

Twelve Rest Stations

"We soon expect to have ready 12 rest stations for our own troops at important railway centers, also recuperation camps at suitable places for many of our soldiers.

"We are providing an artificial limb factory near Paris and special plants for the manufacture of splints and nitrous oxide gas.

"We have contracted for a movable hospital in four units accommodating 1000 men.

"A recreation in connection with hospitals and diet kitchens.

"A casualty service for gathering information in regard to wounded and missing, and a medical research bureau.

"Our work with the civil population covers mainly children refugees and tuberculosis.

Children's Refuge and Hospital

"We have opened a children's refuge and hospital at a point in the war zone where several hundred children have been gathered to keep them away from danger of gas and shell fire.

"At another point among the wrecked villages we have established a medical center and a traveling dispensary to accommodate 1200 children.

"At one point we have undertaken extensive medical work for the repatriate children, about 500 of whom are daily returned from points within the German lines.

"We have also opened a hospital and convalescent home for these children, and are also operating an ambulance service for the returning repatriates who are now coming in at a rate of 1000 a day.

Infant Welfare Stations

"We are about to establish infant welfare stations in connection with each dispensary in the nation-wide system planned by the Rockefeller Foundation.

"We have taken over and are carrying on and developing an extensive

Will You Give Your Thanksgiving Dinner to Our Soldier Boys?

Not the whole dinner, but "the fixings" just the extras that make it a feast.

Every member of the California Cultivator force has pledged himself or herself to give the cost of the extras to such a fund.

Will you join us?

If no representative of the Red Cross, Y. M. C. A. or K. of C. is near you, send to California Cultivator, Los Angeles, and we will send your contribution to one of these organizations.

Read of the work of the Red Cross in this department and note on editorial page "A True Thanksgiving."

tuberculosis work formerly in charge of Mrs. Edith Wharton and other Americans.

"We are completing for the French an unfinished tuberculosis sanitarium near Paris and are adding to the barracks erected by the city of Paris. This means adding 1000 beds to those now available for tuberculosis patients.

"We are organizing a comprehensive health center in one of the Departments of France.

"We are making arrangements on a large scale to help refugee families through the winter with clothing, beds, and shelter, and for this work the entire devastated district of France has been divided into six districts, with a resident Red Cross delegate in each, and warehouses have been established at four points, to which are shipped food, clothing, bedding, beds, household utensils, and agricultural implements.



Repairing Villages

"We are carrying on repair work in four villages in the devastated region to enable returned families to stay throughout the winter.


"We are cooperating with French agencies in various kinds of relief work in the principal agricultural centers in the devastated region and are supplying portable houses for the use of the families which have returned to this region.

"We are providing barracks to assist in the work of training disabled soldiers, and we expect to establish for them experimental agricultural stations.



The Cultivator Patterns





8596 8574



8397 8396



8582 8572



7905

No. 8596—Children's One Piece Dress. Cut in sizes 4, 6, 8, 10 and 12 years. There is a shallow shoulder yoke to which the front and back of the dress is gathered.

No. 8574—Collapsible Hat Bag. Cut in one size only. There are only two pieces to this bag, and it is very easy to make. Loops may be added to the sides so that the bag can be hung up on a hook.

No. 8397—Ladies' Blouse. Cut in sizes 36, 38, 40, 42 and 44 inches bust measure. The blouse illustrated in No. 8397 is given in two lengths—with or without the band.

No. 8396—Misses' and Small Women's Dress. Cut in sizes 16, 18 and 20 years. This is a one piece coat dress. The pockets are extended up as far as the belt.

No. 8582—Ladies' Bungalow Apron. Cut in sizes 36, 40 and 44 inches bust measure. The apron buttons at the center back and a narrow band may be used to hold in the fullness. The huge pockets are a great convenience.

No. 8572—Children's Long Waisted Dress. Cut in sizes 6, 8, 10, 12 and 14 years. The dress is to be slipped on over the head. The tiny skirt may be side-plaited or gathered.

No. 7905—Ladies' Three Gored Skirt. Cut in sizes 24, 26, 28, 30 and 32 inches waist measure. This design is in three gores that gracefully hang from a slightly raised waistline.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send 10 cents in coin or (1 or 2 c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department

California Cultivator

Los Angeles



## Look, Men, Here is Real Value in Popular Priced Underwear

Everybody read about those big features chock-full of extra value over there in the illustration. You never saw anything like it at anywhere near the price. This underwear is just the right price for everybody and the underwear everyone should wear.

Greatest Winter Underwear  
**HANES**  
ELASTIC KNIT UNDERWEAR  
Sold at Popular Prices

is made of the finest long-fibre cotton in the Southland, silky-smooth and fleecy warm. Naturally elastic and comfortable, but made a whole lot more so. You'll sure be happy to slip in this unusually fine underwear and laugh at the cold.

And the fit? Say, man, tailor-made underwear couldn't feel any better than Hanes. Made as strong as cast-iron and as comfortable as a feather bed. Pre-shrinking makes it hold the shape and size. It's the biggest real value in the world for popular priced garments and union suits.

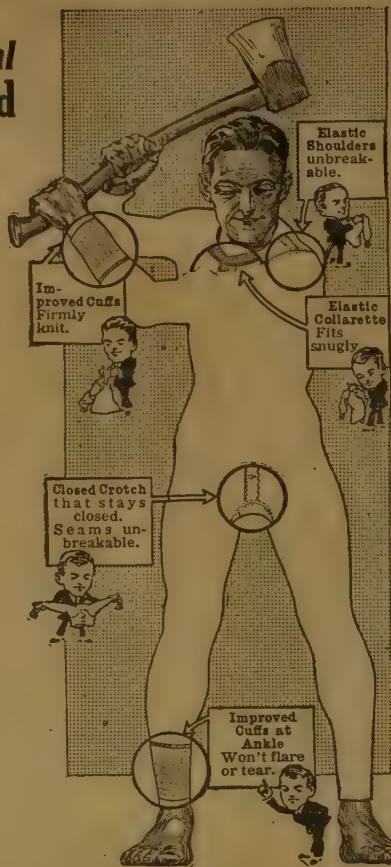
### A New Bang-up Boys' Union Suit

We've got the boys' union suit that you and every parent have wanted. A high-quality, long-wearing, economical union suit. You'll like it because you can see the extra value. Your boys will like it because it's warm, comfortable and cozy. Its value can't be duplicated.

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Winston-Salem, N. C.

Warning to the Trade—Any garment offered as Hanes is a substitute unless it bears the "Hanes" label.

This Label on Every Garment  
**HANES**  
Buy None Without It



"We are organizing extensive work for relief of Belgians, both children and grown people, and in this connection we are establishing warehouses near the Belgian front in order that we may be ready to assist the Belgians who may be liberated by a change in the fighting line.

#### Aiding Queen of Belgium

"We are aiding the Queen of Belgium in her work for the children and are assisting in the support of hospitals and other work for relief of Belgian soldiers.

"In addition we are bringing a certain number of children from occupied Belgium into France, where they may be cared for.

"To enable us to carry on our work we have established large central warehouses in Paris and distribution warehouses at important points from the sea to the Swiss border. In these warehouses will be stored hospital supplies, food, soldiers' comforts, tobacco, blankets and household goods, kitchen utensils, clothing, beds, and other articles for relief.

#### Supplies Arriving Daily

"Two hundred tons of supplies are arriving in Paris daily and 125 tons are being reshipped to various branch warehouses.

"Our total warehouse capacity is 100,000 tons and the warehouse personnel at present, numbers 125 men, many of whom are volunteers—American men of education and business training not eligible for military service.

"Our transportation department, with a personnel of about 400, handles our supplies and furnishes automobiles for use in our work. It has an organized force at every port in France and is able to handle about 350 tons of supplies daily.

"We use 400 motor car vehicles, 250 of which are trucks of various sizes.

"In addition we are preparing to operate a motor-bus line through Switzerland from Germany to the French border to aid in transportation of repatriates and exchanged prisoners.

"We operate seven garages and make all repairs on our own cars.

"Our transportation work is directed by men experienced in transportation work in America."

#### HOW TO SELECT FOODS

**W**HAT food shall I give my family, how much shall I put on the table at one meal, how can I serve attractive and appetizing meals at present prices, what new foods can I make use of, what is the line between economy and parsimony? All these and many other questions are before us continually. To answer them our department of agriculture through the office of home economics is sending out many helpful suggestions, as is our new food administration which has done such wonderful work already for us and gives promise that it is only just getting started.

How to feed a family of five economically on nourishing and satisfying foods is the subject of a series of articles sent out by the office of home economics, which we shall give in part through this and successive issues of the Cultivator in this department. We only wish we had more room to give more. The first of the series follows:

Adults and children must get several different substances from the food they eat or they will miss something which is essential to bodily efficiency and health. The housewife who plans her meals or attempts to save money on food without some

knowledge of these substances and of the five simple groups of foods which supply them is very liable to omit from her meals some food essential for the growth of children or to supply the family with the energy they

#### BREAKFAST

Oatmeal Oranges Boiled Eggs  
Graham Bread Coffee

#### LUNCH

Clam Chowder  
Baked Farina and Cheese  
Cauliflower Salad  
Apple Sauce  
Coffee

#### DINNER

Tomato Soup  
Boiled Halibut Parsley Sauce  
Baked Potato Green Peas  
Lettuce Salad  
Blanc Mange  
Tea

need for their daily tasks. Attempted economy which entirely omits certain foods may well prove a very poor investment because of its ultimate effect on the well-being of the household. Price, individual preference for certain foods, and even the fact that hunger is satisfied after a meal, are not safe guides. Tomatoes at ten cents apiece in winter are no more nutritious than they are at five cents a quart in summer. A child might crave much more sugar than would be good for him. A bulky diet of potatoes or bananas might make a person feel he had eaten enough, but would not furnish him with the elements that his body needs.

To plan out meals in the interest of family efficiency and economy at the same time the housewife fortunately does not need to do elaborate sums in calories or to have any intimate understanding of such terms as protein and carbohydrates.

The substances which the specialists find are needed in the daily diet to maintain the body may be grouped under seven heads: mineral substances, protein, starches, sugars, fats, cellulose, and certain little known but very important growth stimulating substances.

#### A Day's Food Requirements

That these essential substances are not difficult for the average housewife to provide is shown by the following combinations, which the specialists believe indicate the daily food requirements of normal individuals:

##### For a Man

A man who does fairly muscular work would be likely to get the food which his body needs if supplied daily with such a combination of foods as the following:

One and one-quarter pounds of bread (having about the same food value as one pound of such cereal preparations as wheat or rye flour, oat meal, corn meal, rice, etc.)

Two ounces, or one-quarter cup, of butter, oil, meat drippings, or other fats. Two ounces, or one-quarter cup, of sugar; or one-third cup of honey, syrup, or an equivalent amount of other sweet.

One and one-quarter pounds of food from the following: Fresh fruits and fresh or root vegetables.

Twelve ounces of food from a class which may be called "meats and meat substitutes;" that is, moderately fat meats, poultry, fish, eggs, cheese, dried legumes (beans, soy beans, lentils, cowpeas, and peanuts). Milk also belongs among these foods, but because of the large amount of water it contains, half a glass, or four ounces of it would be required to equal an ounce of any one of the others.



# PERFECTION OIL HEATER

When writing advertisers, mention The Cultivator.



A man who works hard out of doors all day probably would need more food than this, and one who sits all day at his desk would need less. The amounts given are suitable for a man who, like a salesman in a store, talks about more or less and does more or less of such work as lifting.

Next week, one day's food requirements for family of five and sample meals.

MOLLIE OF THE MANCHESTER MILLS

Written for California Cultivator  
By Mary Olmsted Lotspeich, Los Angeles

THE opening chapters of the life and love story of Mollie were begun in that far away city of mills in England, but the later ones are being lived right here in California. When she came here, her hair was as golden as the sunshine, her eyes as blue as the waters over which she sailed, her smile as sweet as the love which called her, and her cheeks as rose-colored as her dreams.

Have I been too lavish in my praise of her charms? Please take notice that I made no mention of her nose or the freckles around it! "Silence is golden" when it comes to pug noses and freckles!

Although a mill girl for years, with long hours and hard work, she had her full share of good times. Concerts and picture shows at night, singing in the chapel choir on Sundays, with delightful walks down the shaded country lanes between services, her life was full and happy. The long walk from home to mill was shared each day by her jolly sister and a neighborly boy, and here begins the love story!

The course of true love ran no more smoothly for them, however, than for any lovers, for "there were others." When Jack voiced the devotion which his actions had shown so plainly it met with no response. Seventeen-year-old Mollie was not ready to give up her freedom for years to come, and he "said him nay." Then came a "tiff" as she called it and the daily walks had two silent strollers.

Occasionally Jack would say to the friendly sister, "Susie, tell Mollie so and so" as though she was a thousand miles away!

The years and the walks and the work went on till the persistent wooing of faithful Jack won the day and Mollie was his promised wife—on one condition; he must come to America and start a home for her!

His love was equal to that test even, and "he came, saw, and conquered"—and sent for her.

If you happen to see Mrs. Jack sometime, in her happy rose-coveredungalow home with Jack Jr., playing among the flowers, ask her to tell you, as she did me, of her eight-thousand mile journey over land and sea coming wittily in the splendid Lusitania five years ago to husband, home and happiness, in beautiful sunny California.

HEROIC WOMEN OF FRANCE

By Dr. Alonzo Taylor

MY WORDS are not powerful enough to do even scanty justice to the most heroic figure in the modern world, and of ages past—the woman of France.

Of the healthy men who are not engaged in the military service in France, practically all are engaged either in transportation or in the manufacture of munitions, leaving the ag-

riculture absolutely to the women. Not only this, but they have stepped into the place of work animals; you can go into any section of France today and see women of magnificent, noble womanhood hitched to the plow and cultivating the soil. All of the agriculture rests upon their shoulders. The home, always an extremely efficient home, maintains a few old men, the wounded and the tubercular. Uncomplaining, with high devotion, with an attitude that amounts almost to religious exaltation, the woman of France bears the burden.

Now, conditions being as they are, does it lie within the heart of the American people to preserve and hold to every convenience of our life at the expense of adding an additional burden to the womanhood of France? This is the exact question that is involved in our substitution of other cereals in place of wheat.

The woman of France must be enabled to hold up the morale of the French soldier until next spring. The morale of the house decides the morale of the soldier in the fighting line. We can do this by giving them the greatest possible freedom in their food supply, and of this wheat is the chief factor.

CANADIAN WAR-CAKE

No recipe has been more popular than the one for Canadian War-cake: Two cups of brown sugar, two cups of hot water, four tablespoons of lard, one teaspoon of salt, one teaspoon of ground cinnamon, one teaspoon of ground cloves, one cup of raisins.

Boil all these ingredients for five minutes after they begin bubbling. When cold add three cups flour, and two teaspoons of soda dissolved in one teaspoon of hot water. Bake in two loaves in slow oven an hour and a quarter.

HOUSEHOLD QUERIES

Using Old Bread—Cooking Beans

Like many other readers of this excellent paper I am coming to its pages for help. So many of its suggestions and recipes have been of such worth to me, and I know some one can give me the desired help now. My problem is how to use in different ways the ends and pieces of bread that will accumulate in my bread box. I wonder if our editor will not call for recipes along that line, also how to prepare beans (the dry ones) in different ways, especially how to bake the pink variety.—Mrs. E. S., Friant.

Let us hear from our subscribers. The Cultivator will give a three months extension of subscription for all suggestions published.

THREE LEGS OF A STOOL

Andrew Carnegie was once asked which he considered to be the most important factor in industry — labor, capital or brains? The canny Scot replied, with a merry twinkle in his eye, "Which is the most important leg on a three legged stool?"—Christian Register.

WORK AS WELL AS PRAY

Pray for what you want, but don't wear out the knees of yo' britches at it. Ef you don't get a quick answer rise up an go to work befo' you git too weak ter rise.—Atlanta Constitution.

FATAL MISTAKE


"How did you lose your last job?" "I was fired for making a mistake." "That seems unfair. We are all liable to make mistakes." "Yes, but I told the boss that he couldn't get along without me."

Now that the government wants the people to eat more fish it will be harder than ever to keep father from "taking a day off." We only hope that he won't neglect putting the wheat in to do so.

# Styleplus Clothes

\$17 and \$21

for men careful of their looks and purses




We developed the known-price idea in clothes. We concentrate our volume, lower our costs, give exceptional all-wool fabrics, style and tailoring at moderate price. The popularity of Styleplus Clothes throughout the nation has proved the soundness of our method. Even though Uncle Sam has already required 200,000,000 lbs. of wool for the soldiers, we are able to supply the American public with guaranteed all-wool stylish clothes at known moderate prices. Styleplus Clothes \$17 (black label) excel at that price. Styleplus Clothes \$21 (green label) excel at that price. Style plus all-wool fabrics+perfect fit+expert workmanship+guaranteed wear. Write us (Dept AB) for free copy of "The Styleplus Book."

HENRY SONNEBORN & CO., INC. Founded 1849 Baltimore, Md.

Styleplus Clothes \$17

The same price the nation over



Styleplus Clothes \$21

The same price the nation over

# 1 plus 1

High-grade grease plus powdered mica makes Mica Axle Grease go twice as far as ordinary grease, and results in far better lubrication.

STANDARD OIL COMPANY (California)

# MICA AXLE GREASE



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NO BATTERIES--NO SWITCHBOARD

High speed gasoline motor, generator and automatic governor, all complete. Uses standard lamps and fixtures. Can be used for one or more houses. WRITE FOR ILLUSTRATED CATALOGUE TO

**KARL A. HEDBERG**

104-106 Clay St. San Francisco, Cal.

# The Garden Beautiful IN CALIFORNIA

by Ernest Brauntton


Is a thorough treatise on soil preparation and cultivation and general care of flowers, plants, ornamental trees and shrubbery. Its 14 chapters with half tone and line illustrations and binding in silk make it a work that every home should possess.

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AT YOUR DEALERS  
or we will send it to you for  
Standard Size ..... \$16.00  
Junior Size ..... \$13.50

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Founded in 1889

## TEAGUE QUALITY CITRUS TREES

LEMON, ORANGE  
POMELO AND LIME

Properly grown and cared for to produce good crops of quality fruit; immediate delivery: write for prices.

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## FERTILIZER

We can make prompt deliveries of

Steam Bone Meal  
Fish Scrap  
Whale Tankage  
and Packing House Tankage

Contract Early Before  
Prices Advance

**Rogers Brown & Co.**  
1307 Baker-Bettler Bldg., Los Angeles, Cal.

## Los Angeles Market

Los Angeles, Nov. 14, 1917.

## BUTTER

Produce Exc. Quotations.  
Price to trade 4c higher.  
California extra creamery ..... 42  
Dairy Exch. prices past week.  
Nov. 7 8 9 10 12 13  
'17 ... 47 42 42 42 42 42  
Rets. week ending November 13, 281,900 pounds.

## CHEESE

Brokers prices:  
California fresh, lb. .... 26  
Eastern Daisies ..... 29  
Oregon Longhorn ..... 29  
Tillamook Trip ..... 28  
Domestic Swiss ..... 34

## EGGS

Exchange quotations. Prices include cases and fillers valued at 35c. Prices to retailers 4 cents above Exchange.  
Fresh extras ..... 57  
Case count ..... 53  
Pullet ..... 51  
Dairy Exch. prices past wk.  
Nov. 7 8 9 10 12 13  
'17 ... 58 58 58 58 58 57  
Rets. wk. ending Nov. 13, 511 cases.

## POULTRY

We quote to producers:  
Broilers ..... 33  
Fryers ..... 27@28  
Hens—Leghorns ..... 21@26  
Roasters, 3 lbs. and up ..... 27@28  
Ducks, lb. .... 17@21  
Squab, doz. .... 4.00@5.00  
Rooster, old ..... 15  
Turkeys ..... 26@28

## LIVE STOCK

We quote cwt. f. o. b. L. A.  
Corrected Wednesday morning November 14, by the Cudahy Company.

Cattle—  
Beef steers, av. 1000 to 1100 lbs. 8.50@9.00  
Heifers, good ..... 6.00@6.50  
Cows, good ..... 5.50@6.00  
Canners ..... 4.50@5.00

HOGS—  
Av. 125 lbs. .... 14.50  
Av. 150 lbs. .... 15.50  
Av. 175-200 lbs. .... 16.00  
Rough, docked 20 lbs.; piggy sows, 40 lbs., stags, 40 per cent.  
Prime wethers ..... 9.50@10.00  
Ewes ..... 9.00@9.50  
Lambs ..... 14.00@14.50  
Yearlings ..... 10.50@11.00

## POTATOES

Wholesale selling price:  
Northern Burbank, cwt. .... 2.80@3.00  
Nevadas ..... 3.20@3.25  
Russets ..... 2.80@2.85  
Sweet, cwt. .... 2.75@3.00

## ONIONS

Wholesale selling price:  
Brown, cwt., 2.50; white ..... 2.50  
Garlic ..... 8

## VEGETABLES

Wholesale prices:  
Artichokes, doz. .... 1.25  
Beans—Wax ..... 10@11  
Limas, lb. .... 10@11  
Ky. Wonder ..... 10@11  
Beets, sk. .... 1.00  
Cabbage, lb. .... 1.15  
Carrots, doz. .... 1.00  
Cauliflower, doz. .... 1.00  
Celery, cr. .... 3.10  
Cucumbers, lug. .... 1.25@1.35  
Egg Plant, lb. .... 6@7  
Horseradish, rt. lb. .... 15  
Lettuce, doz. .... 40@45  
Leeks ..... 80  
Mint ..... 40  
Onions, green, doz. .... 25  
Okra, lb. .... 13@14  
Peas, lb., Telephone ..... 10@11  
Peppers, Chili, lb., 6@7; Bell ..... 8@9  
Parsnips, doz. .... 40  
Parsley, doz. .... 20  
Pumpkins, lb. .... 2  
Radishes, doz. .... 20  
Rhubarb—Strawberry ..... 1.25  
Romaine, doz. .... 50  
Spinach, doz. .... 25  
Squash, Summer, cr. .... 1.20  
Crockneck ..... 70@75  
Hubbard, lb. .... 2  
Tomatoes, cr. .... 1.25  
Turnips, doz. .... 35

## FRUITS

Wholesale prices:  
Apples—Skinners Seedling ..... 1.50@1.75  
Bellflowers ..... 1.35@1.50  
Greenings ..... 1.75  
Jonathan ..... 1.75@2.15  
King David ..... 1.75@2.00  
Spitzenburg ..... 2.40@2.50  
Y. Newton ..... 1.40  
Avocados, doz. .... 6.00@9.00  
Bananas, lb. .... 5@5 1/2  
Cranberries, bbl. .... 13.50@14.00  
Figs, bx. .... 1.35@1.50  
Grapes—Black ..... 1.10  
Cornichon ..... 1.60@1.85  
Tokays ..... 1.50@1.65  
Guavas, lb. .... 6  
Peaches, lug. .... 1.25@1.35  
Pears, Bartlett, lug, 2.25; bx. .... 3.00  
Persimmons, lb. .... 7@10  
Plums, lug. .... 1.25@2.00  
Pomegranates, lug. .... 1.50

## CITRUS

Lemons, 4.75@6.25; juice ..... 2.25  
Grapefruit ..... 3.75  
Limes, basket ..... 1.00  
Valencias ..... 4.00

## DRIED FRUITS

These are not prices to producers but prices made by wholesalers to retailers.  
(Twenty-five-lb boxes, faced, 50s, 1/4c less.) Apples, evaporated, 50s, 16; extra choice 16 1/2; apricots, choice, 16; extra choice, 17 1/2; fancy, 18; peaches, choice, 12; fancy, 12 1/2; citron, 30 lb.; lemon peel, 25; orange peel, 25; prunes, 20-30s, 17 1/2; 30-40s, 14; 40-50s, 13; 50-60s, 12 1/2; 60-70s, 12; 70-80s, 11 1/2; 90-100s, 10 1/2.  
Figs—Bulk, 25 lb. bx., blk., \$2.75; wh. 2.75.

## HONEY

Prices of wholesaler to retailer:

Extr. White, lb. .... 14@15  
W. W. lb. .... 15@16  
Comb, case, W. .... 3.75  
W. W. case ..... 4.80

## NUTS

Almonds—Not growers' prices but prices of wholesaler to retailer.  
I. X. L. .... 22 1/2  
N. P. U. .... 21 1/2  
Peanuts, raw ..... 12  
Pine Nuts ..... 20  
Pecans ..... 19  
Walnuts—Cal. Walnut Growers' Association named prices Oct. 1:  
No. 1 Soft Shell, lb. .... 20  
No. 2 Soft Shell, lb. .... 16  
Budded, Diamond Brand ..... 24  
Budded, Standard Brand, (same size as No. 1 Soft Shell) ..... 21  
Prices delivered in East 1 1/2c higher.

## RICE

Wholesale quotations:  
Cal. .... 7.50  
Broken ..... 5.60@6.00

## BEANS

These are prices made by wholesaler to retailer.  
Lady Washington ..... 14.00  
Limas ..... 14.00  
Pinks ..... 10.25  
Manchurian Reds ..... 11.00  
Rahv Mex. .... 9.00  
Garbanzos ..... 9.00@10.00  
Small White ..... 14.00  
Blackeyes ..... 10.50  
Tepary ..... 8.00  
Lentils ..... 18.00

## HAY

Quotations by Nichols-Loomis Company. Prices to growers f. o. b. L. A. carlots:  
Tame Oat ..... 24.00@26.00  
Volunteer Oat ..... 17.00@19.00  
Wheat ..... 19.00@22.00  
Barley ..... 21.00@24.00  
Alfalfa ..... 21.00@24.00  
The Alfalfa Growers Association of Southern California quotes:  
Alfalfa, \$26 per ton f. o. b., where the \$1.50 freight rate applies, and \$25 f. o. b. where the \$2.50 freight rate applies.

## GRAIN AND FEEDSTUFFS

Wholesale cwt. f. o. b. L. A.  
Alfalfa Meal ..... 1.95  
Alfalfa Molasses ..... 2.00  
Barley, Rolled ..... 2.85  
Barley, Recleaned, Whole ..... 2.90  
Barley, Hulled ..... 3.45  
Beet Pulp ..... 1.80  
Bran, Heavy ..... 2.15  
Cottonseed Meal ..... 2.50  
Cottonseed Meal ..... 3.30  
Corn, Yellow ..... 4.45  
Corn, White ..... 4.55  
Corn, Cracked ..... 4.50  
Corn, Feed Meal ..... 4.55  
Corn, Egyptian ..... 3.40  
Middlings ..... 3.05  
Milo ..... 3.15  
Oat Chop ..... 1.90  
Oats, White ..... 2.85  
Oats, Rolled White ..... 2.90  
Oats, Hulled ..... 4.75  
Oats, Rolled Chicken Groats ..... 4.85  
Oilcake Meal ..... 3.65  
Wheat, No. 1 ..... 4.00@4.05  
Wheat, Cracked, No. 1 ..... 4.40  
Red Millet ..... 4.65@4.75  
Rye ..... 4.00  
Blood Meal ..... 5.00@5.10  
Bone, Green ..... 2.75@2.85  
Bone, Dry ..... 2.95@3.05  
Charcoal, 50-lb. sk. .... 2.80@2.90  
Clam Shell ..... 70@80  
Grit, Granite ..... 75@85  
Oyster Shell ..... 1.25@1.35  
Sunflower Seed ..... 4.90@5.00  
Soya Bean Meal ..... 3.40@3.50  
Scratch Feed ..... 3.80@3.90  
Gritless ..... 3.90@4.00  
Rice Bran, ton ..... 40.00  
Middlings, ton ..... 45.00  
Rice Polish, ton ..... 49.00

## San Francisco Markets

San Francisco, Nov. 13, 1917.

## BUTTER

Dairy Exchange quotations, lb.:  
Fresh extras ..... 40 1/2  
Prime firsts ..... 40  
Dairy Exc. quotations past week and year ago:  
Nov. 6 7 8 9 10 12  
'17 ... 43 42 1/2 42 1/2 42 1/2 40 1/2  
'16 ... 32 1/2 32 1/2 33 33  
Rets. wk. ending Nov. 12, 564,900 lbs.

## CHEESE

Dairy Exchange quotations:  
Cal. Flats, 18@23. Y. Am. .... 22@25  
Cheddar ..... 23  
Ore. Young Am. .... 25  
Jack Cheese, full cream ..... 23@24  
Half skim ..... 17@18

## EGGS

Extra ..... 57 1/2  
Firsts ..... 57  
Selected, Pullets ..... 52  
Firsts ..... 50  
Dairy Exc. quotations past week and year ago:  
Nov. 6 7 8 9 10 12  
'17 ... 58 58 1/2 59 59 1/2 58 1/2 57 1/2  
'16 ... 49 1/2 50 49 1/2 49 1/2  
Rets. wk. ending Nov. 12, 6599 cases.

## POULTRY

We quote from producers, lb.:  
Hens, large, 25@26; Leghorns ..... 22@24  
Small colored ..... 22@24  
Broilers ..... 28@40  
Roosters ..... 24@25  
Squabs, doz. .... 2.50@4.00  
Ducks ..... 1.10@20  
Geese ..... 18@19  
Belgian Hares, live, 14@17; dr. .... 17@20  
Turkeys, lb., live, 24@31; dr. .... 30@34

## LIVE STOCK

Prices gross weight:  
Cattle: The following prices are for grass fed stock. Hay fed brings 1/2 to 3/4 c 10.

## Guaranteed Alfalfa Seed

There is probably less than one-third as much alfalfa seed on the Pacific Coast as there was last year at this time.

It seems as though alfalfa seed would be very scarce before next spring.

We field selected quite a large stock of the genuine old Common or Chilean alfalfa seed of highest quality, which we are selling under the GREEN GOLD BRAND.



The genuine old Common or Chilean alfalfa is by far the longest lived of any variety and produces as heavily as any. Its wide crowns do not let wild grasses get started readily.

More than half of our large stock of alfalfa seed is already sold. We advise our old customers and prospective customers to order now while the best seed is obtainable and while the price is yet low.

## Bomberger Seed Company

Box 986, Modesto, Cal.  
Trade Mark and Firm Name on Every Sack.

## "THE BOSS" TREE PROTECTOR

Made of Yucca Palm.  
Is cheap, durable and quickly put on the tree. It prevents rabbits from destroying your trees. A sure protection against frosts, sunburn, grass hoppers, or dry winds. Can be easily removed and will last for years. Send for samples.

Prices Per 100  
10 in. long, 7 in. wide... \$10.00  
12 in. long, 7 in. wide... 11.00  
14 in. long, 7 in. wide... 12.00  
16 in. long, 7 in. wide... 13.50  
18 in. long, 7 in. wide... 13.00  
24 in. long, 7 in. wide... 18.00  
30 in. long, 7 in. wide... 21.00

YUCCA MANUFACTURING CO.  
1380 Willow St., Los Angeles, Cal.

## DAVENPORT'S



Made in CALIFORNIA .. Disc Harrows  
beat them all. Come and inspect them and be convinced.

L. M. Davenport Co. 110-112 N. Los Angeles St., Los Angeles, Cal.

## Insist on Having Jevne's Coffee

No matter whether you deal at the corner grocery or the big up-town store, all grocers will tell you—JEVNE'S COFFEE is best—it has stood the test of time.



Make the reading of advertisements in the California Cultivator a habit. They will broaden your knowledge of the manufacturing improvements.



Steers, lb. 9 1/4 @ 9 1/2; undesirable, 6 @ 8; cows and heifers, 6 1/2 @ 7 1/2; undesirable, 4 @ 6; calves, 7 1/2 @ 9 1/4.  
Hogs—Hard grain fed, weighing 100 to 150 lbs., 14 1/4; 150 to 300 lbs., 15 1/2 @ 15 3/4; 300 to 400 lbs., 15 @ 15 1/4.  
Sheep—Wethers, 12 @ 12 1/2; ewes, 9 1/2 @ 11.

POTATOES

Wholesale selling prices at wharf:  
Salinas Burbank, cwt. ....3.00@3.15  
River .....1.75@2.25  
Sweets, lb. ....2 1/2 @ 3

ONIONS

Wholesale selling price on wharf:  
Australian Brown, cwt. ....1.50@2.35  
Garlic, lb., new .....6 @ 7

VEGETABLES

Wholesale selling price:  
Beets, sk. ....1.50@1.60  
Beans, string, lb. ....8 @ 10  
Fy. Garden, 6 @ 9; Lima .....6 @ 7  
Brussel Sprouts, lb. ....4 @ 5  
Cauliflower, doz. ....40 @ 1.00  
Carrots, sk. ....1.00 @ 1.25  
Cucumbers, large lug .....50 @ 1.00  
Cucumbers, lug .....75 @ 1.25  
Hothouse .....1.15 @ 1.25  
Ettuce, cr. ....75 @ 1.25  
Egg Plant, lug .....1.00 @ 1.50  
Onions, bx. ....85 @ 90  
Pickling, cwt. ....2.40 @ 2.50  
Okra .....65 @ 85  
Peas, lb. ....6 @ 8  
Farsnips .....1.50 @ 1.60  
Peppers, Bell, lug, 75 @ 1.35; Chill. 75 @ 85  
Pumpkins, sk. ....75 @ 85  
Rhubarb, bx. ....1.00  
Squash—Marrowfat, sk. ....75 @ 85  
Cream, lug .....90 @ 1.00  
Hubbard, sk. ....90 @ 1.10  
Summer, lug .....1.50 @ 2.00  
Italian .....75 @ 1.00  
Tomatoes, lug .....50 @ 1.00  
Turnips, sk. ....1.00 @ 1.25

FRESH FRUITS

Berries—Strawberries, 6.00@8.00 ch. to the trade; raspberries, 7.00@8.00; huckleberries, lb., 14 @ 15.  
Peaches—Oregon, Salways, bx: Fancy, 1.00@1.10; other grades, 50 @ 85.  
Plums and Prunes—German and Grand Duke, cr., 1.00 @ 1.25.  
Figs—Black, double layer bx, 1.15 @ 1.35; single layer, 60 @ 75.  
Pears—Lake County Bartletts, wrapped, bx, 2.00 @ 2.50; Winter Nellis, lug, 1.50 @ 2.00; bx., wrapped, 1.50 @ 1.75; winter pears, 75 @ 1.25.  
Grapes—Malaga, cr., 65 @ 80; lug, 90 @ 1.00; Thompson seedless, cr., 1.25 @ 1.50; big lug, 2.00 @ 2.25; Muscat, lug, 1.00 @ 1.50; cr., 75 @ 1.00; black, lug, 75 @ 1.00; Tokay, 65 @ 1.00; Cornichon, cr., 50 @ 75; lug, 65 @ 85; Isabella, cr., 1.25 @ 1.50; Verdel, lug, 75 @ 85.  
Apples—Bellflower, 1.00 @ 1.35; Spitzenburg, 1.00 @ 1.85; Red Pearnain, 70 @ 1.00; W. W. Pearnain, 1.10 @ 1.50; Jonathan, 1.00 @ 1.50; Baldwin, 1.00 @ 1.50.  
Berries—Strawberries, 8.00 @ 10.00 ch. to the trade, raspberries, 7.00 @ 9.00; huckleberries, lb., 14 @ 15.  
Peaches—Oregon, Salways, bx: Fy. 85 @ 1.00; other grades, 50 @ 85.  
Figs—Black, double layer bx., 85 @ 1.10; single, 60 @ 75.  
Pears—Lake County Bartletts, wrapped, bx., 2.00 @ 2.50; Winter Nellis, lug, 1.50 @ 2.00; bx., wrapped, 1.50 @ 1.75; winter pears, 75 @ 1.25; Easter Beurre, bx., 1.00 @ 1.25.  
Grapes—Malaga, cr., 65 @ 80; lug, 90 @ 1.00; Muscat, lug, 1.00 @ 1.50; cr., 75 @ 1.00; black, lug, 75 @ 1.00; Tokay, 75 @ 1.00; Cornichon, cr., 50 @ 75; lug, 75 @ 1.00; Verdel, lug, 75 @ 85.  
Melons—Casabas, cr., standard, 65 @ 75; Honey Dew, 75 @ 1.25; Persian, cr., 3 to 6, 1.75 @ 2.20.  
Citrus Fruits—Bx.: Lemons, fy., 6.00 @ 7.00; ch., 5.50 @ 6.00; lower grades, 4.00 @ 5.00; lemons, 2.00 @ 3.50; grapefruit, fy., 3.50 @ 4.50; ch., 3.00 @ 3.50; lower grades, 1.50; Tulare seedless, 4.00 @ 5.00; Mexican limes, 2.25 @ 2.50. Oranges—Bx.: New Valencia, fy., 3.75 @ 4.00; ch., 3.00 @ 3.25; lower grades, 1.25 @ 2.00; Mandarin oranges, cr., 2.25 @ 2.50.  
Tropical Fruits—Bananas, Hawaiian, 5 lb.; pineapples, 3.50 @ 4.00 doz.  
Pomegranates—One-half orange bx., 1.75 @ 2.00.  
Persimmons—Bx.: 75 @ 1.25.  
Cranberries—Bx. of 33 1-3 lbs., 4.25 @ 4.50.  
Avocado—Doz., 5.00 @ 7.00; small, 3.00 @ 3.50.  
Quinces—Bx.: 75 @ 1.00.  
Olives—Ton, 140.00 @ 180.00.

DRIED FRUITS

Not producers' prices but prices of wholesaler to retailer.  
Peaches—Unpeeled, lb. standard, 9 1/4; choice, 9 1/2; extra choice, 10; fancy, 11.  
Figs—In 50-pound boxes, per pound.  
White Adriatic, standard, 8 1/2; choice, 9 1/2; extra choice, 10 1/2; fancy, 11 1/2; Calmyrna, fancy, 15 1/2; extra fancy, 16 1/2.  
Apricots—Bulk basis: Standard, 14; ch., 15; extra ch., 15 1/2; fy., 16 1/2; extra fy., 17 1/2; fy. Moorpark, 17 1/2; extra fy., 18 1/2; prunes, 60s to 90s, 6 1/2; basis: 50s to 60s, 1/2 premium; 40s to 50s, 1 1/2 premium.  
Prunes—60s to 90s, 6 1/2 basis; 50s to 60s, 1/2 premium; 40s to 50s, 1 1/2 premium.  
Apples—In 50-pound boxes, lb.: Fancy 15 1/2; extra choice, 14 1/2; choice, 14.  
Pears—Bulk basis, lb.: Fancy, 11 1/2; extra ch., 9 1/2; ch., 8 1/2; standard, 6 1/2.  
Raisins—Cases: Sun Maid, seeded, 16-oz. cartons, \$4.20 for 48s and \$3.15 for 36s; fy., \$4.20 for 48s and \$3.15 for 36s; do, 12-oz. 45 to cs. \$5.25; ch. 16-oz. cartons, \$3.00 for 36s; do, 12-oz. cartons, 45 to cs. \$3.10. In bulk: Sun Maid, \$1.75; fy., \$1.90; ch., \$1.75.  
Sulphur-bleached Thompsons, extra fy., \$5.37 1/2; fy., \$5.12 1/2; ch., \$4.87 1/2; soda-bleached, \$4.75.  
Loose: One-crown, \$4.15; 2-crown, \$3.40; 3-crown, \$3.65; 4-crown, \$3.20.  
NUTS  
Almonds—Cal. Almond Growers' Exch. Gross prices: Nonpareils, 21 1/2; I. X. L., 19 1/2; Ne Plus, 18 1/2; Drakes, 16; hard shell, 11 1/2.  
Pine Nuts .....21 @ 22  
HONEY  
Comb, W. W., lb .....15 @ 18  
Extr. W. W. Alfalfa .....14 @ 15  
W. W. Sage .....16

Lt. A. Alfalfa, 14; do Sage .....15  
Amber Sage .....11 1/2 @ 13 1/2  
Beeswax, lb. ....33 @ 40

BEANS

Jobbers' prices, cwt., new crop, re-cleaned.  
Limas .....13.00 @ 13.25  
Bayous .....8.75 @ 9.00  
Small Whites .....12.00 @ 12.25  
Mexican Reds .....9.00 @ 9.50  
Large Whites .....11.75 @ 12.00  
Pinks .....8.25 @ 8.50  
Blackeyes .....8.75 @ 9.00  
Red Kidney .....13.00  
Cranberry .....12.00 @ 12.25

HOPS

Per lb.: California crop of 1917, 30 @ 35; on contracts, spot, 1916 crop, 18 @ 22; old, 8 @ 15.

RICE

California rice, new crop, cleaned, 100 pound head rice, 6.70; brewers', 5.25; screenings, 5.60.  
Rough rice, 100 lbs., 3.30 @ 3.50 to growers at shipping points.

HAY

Under date of November 10, Scott, Magner & Miller report:  
Receipts past week, 1960 tons, last week 1334. Most of the receipts have been on government requisitions for which the government has furnished cars. Therefore, the general receipts for the public at large have been extremely small. Recent figures compiled of the amounts of hay on hand tributary to the San Francisco market on the first day of November showed about 125,000 tons available as against 119,000 same date last season. Alfalfa is strong; straw, without interest.

We quote today wholesale prices in carload lots as appear from dealers' transfers upon the hay market. For prices to consumers charges of cartage, commission and handling must be added according to conditions.

Fancy Wheat Hay, (light 5 wire bale) .....\$28.00 @ 29.00  
No. 1 Wheat or Wheat and Oat Hay .....24.00 @ 26.00  
No. 2 Wheat or Wheat and Oat Hay .....21.00 @ 23.00  
Choice Tame Oat Hay .....25.00 @ 27.00  
Other Tame Oat Hay .....22.00 @ 24.00  
Wild Oat Hay .....21.00 @ 24.00  
Barley Hay .....21.00 @ 24.00  
Alfalfa .....21.00 @ 25.00  
Stock Hay .....18.00 @ 20.00  
No. 1 Barley Straw .....60 @ 90

GRAIN

Grain Exchange prices, ctl.  
Wheat—Government prices: Common white hard, base price is \$3.50 per cental, or \$2.10 per bushel of 60 pounds delivered in terminal warehouses in bulk; soft wheat, base price 2 cents per bushel less, or \$2.08 per bushel; white club (including Sonora), \$2.06 per bushel. If wheat, after cleaning, weighs 60 pounds or more to bushel, base price stands; if 58 to 60 pounds to bushel, 3 cents per bushel reduction; if 56 to 58 pounds, 6 cents per bushel less; if less than 56 pounds, grain becomes sample grade and sells on its merits up to within 1 cent per bushel of 56-lb. wheat. Sacked wheat 4 cents per bushel more, less tare for weight of sacks.

Corn, California Yellow .....3.50 @ 3.75  
Australian .....3.75  
White Egyptian .....3.00 @ 3.10  
Barley, Feed, cwt. ....2.45 @ 2.47 1/2  
Oats, Red Seed, 2.90 @ 3.15; Feed, 2.55 @ 2.65  
New Black .....3.25 @ 3.50  
White .....2.82 1/2 @ 2.85

FEEDSTUFF

Wholesale prices per ton:  
Bran .....41.00 @ 42.00  
Cornmeal .....85.00 @ 87.00  
Cracked Corn .....85.00 @ 87.00  
Middlings .....50.00 @ 55.00  
Alfalfa Meal .....29.00 @ 31.00  
Cocoanut Meal .....40.00 @ 41.00  
Rolled Barley .....50.00 @ 51.00  
Shorts .....43.00 @ 44.00

SEEDS

Prices in round lots, lb.:  
Millet, re-cleaned .....4 1/2 @ 5  
Alfalfa .....20 @ 21  
Flax .....6 @ 6 1/2  
Rape .....2 1/2 @ 3

Citrus Fruit Market

Los Angeles, Nov. 14, 1917.  
Oranges have sagged slightly. Better grade fruit holding its own. There are still nearly a thousand cars of Valencias to ship. There will be practically no shipment of Thanksgiving navels. The lemon market is holding firm.

Shipments  
Shipments from Southern California since November 1, 1917; oranges 823, lemons 119, total 942. Last season to same date oranges 227, lemons, 242, total 469. From Central California, since November 1, 1917: oranges 2, lemons 5, last year to same date oranges 32, lemons 41, total 73. Northern California no shipments this year, total to this date last year, oranges 7.

AT THE AUCTIONS

November 7  
New York: 16 cars. Val. \$1.90-\$7.00.  
Boston: 6 cars. Val. \$2.15-\$4.05.  
Philadelphia: 4 Val. 1 Lem. Val. \$2.60-\$3.90; Lem. \$3.70-\$6.40.  
St. Louis: 4 cars. Val. \$2.35-\$4.70, Lem. \$4.00-\$5.00.  
November 9  
New York: 17 cars. Val. \$1.60-\$7.65.  
St. Louis: 2 Val. 1 Lem. Val. \$3.30-\$4.00, Lem. \$4.20-\$4.70.  
Philadelphia: 5 cars. Val. \$2.40-\$5.80.  
November 12  
New York: 21 Val. 2 Lem. Val. \$1.50-\$7.60.  
Pittsburg: 8 cars. Val. \$2.95-\$4.10, Lem. \$6.25-\$7.15.  
St. Louis: 3 Val. 1 Lem. Val. \$3.25-\$4.15, Lem. \$4.20-\$4.95.  
Boston: 7 Val. 2 Lem. Val. \$2.80-\$5.10, Lem. \$4.60-\$7.00.  
November 13  
New York: 19 Val. 2 Lem. Val. \$1.60-\$7.20.

Philadelphia: 6 cars. Val. \$1.90-\$3.70.  
Boston: 6 Val. 1 Lem. Val. \$2.50-\$4.95, Lem. \$4.30-\$5.65.

MARKET NOTES

Recent sale of Porto Rico oranges in New York average \$2.35 per box.  
Any apples that were not harvested at the time of an early November wind at North Yakima, Washington were blown from trees and lowered in grade.  
Australian butter recently received at San Francisco and reshipped to many Pacific Coast points. There were 192,100 pounds in the shipment.  
The dry bean market is still unsettled, no trading other than immediate needs demand.  
The shipment of wheat received from Australia at San Francisco recently aggregated 114,000 centals. It will be marketed under control of The Grain Corporation.  
Flour was recently advanced 20 cents per barrel.  
The effort to hammer down the price of eggs in Los Angeles through investigations of the grand jury has weakened the market slightly but no material decline is yet noted.  
Scarcity of cars is one reason given for the extremely high prices of hay. Rather a greater quantity of hay is in holdings on the farms and interior warehouses than last year same date. Practically every offering of higher grade hay is picked up by war department agents.

NOVEMBER CROP REPORT

Corn  
California: Production this year, 2,240,000 bushels; last year (December estimate), 2,048,000 bushels.  
United States: This year, 3,190,000,000 bushels; last year (December estimate), 2,583,241,000 bushels.

Wheat  
California: This year, 6,534,000 bushels; last year (December estimate), 5,600,000 bushels.  
United States: This year, 659,797,000 bushels; last year (December estimate), 639,886,000 bushels.

Oats  
California: This year, 6,650,000 bushels; last year (December estimate), 6,500,000 bushels.  
United States: This year, 1,580,714,000 bushels; last year (December estimate), 1,251,992,000 bushels.

Barley  
California: This year, 35,206,000 bushels; last year (December estimate), 33,320,000 bushels.  
United States: This year, 201,659,000 bushels; last year (December estimate), 180,927,000 bushels.

Rice  
California: October 1 forecast, 5,125,000 bushels; production last year (December estimate), 3,263,000 bushels.  
United States: October 1 forecast, 33,256,000 bushels; production last year (December estimate), 40,702,000 bushels.

Potatoes  
California: This year, 15,100,000 bushels; last year (December estimate), 10,575,000 bushels.  
United States: This year, 440,000,000 bushels; last year (December estimate), 285,437,000 bushels.

Sweet Potatoes  
California: This year, 1,000,000 bushels; last year (December estimate), 960,000 bushels.  
United States: This year, 84,700,000 bushels; last year (December estimate), 70,955,000 bushels.

All Hay  
California: This year, 4,627,000 tons; last year (December estimate), 4,615,000 tons.  
United States: This year, 91,715,000 tons; last year (December estimate), 109,786,000 tons.

Apples (Agricultural Crop)  
California: This year, 1,890,000 barrels

of 3 bushels; last year (December estimate), 1,918,000 barrels.

United States: This year, 59,200,000 barrels of 3 bushels; last year (December estimate), 67,415,000 barrels.

Peaches  
California: This year, 10,192,000 bushels; last year (December estimate), 8,808,000 bushels.  
United States: This year, 42,606,000 bushels; production last year (December estimate), 36,939,000 bushels.

Cotton  
California: September 25 forecast, 50,000 bales; production last year (Census), 43,620 bales.  
United States: September 25 forecast, 12,047,000 bales; production last year (Census), 11,449,930 bales.

Sugar Beets  
California: November 1 forecast, 1,660,000 tons; last year (December estimate), 1,463,000 tons.  
United States: November 1 forecast, 7,620,000 tons; last year (December estimate), 5,920,000 tons.

Beans  
California: This year, 7,500,000 bushels; last year (December estimate), 4,175,000 bushels.  
United States: This year, 16,000,000 bushels; last year (December estimate), 8,846,000 bushels.

Oranges  
California: November 1 condition 50, compared with the ten-year average of 90.  
United States: November 1 condition compared with the ten-year average of 85.9.

Lemons  
California: November 1 condition 61, compared with the ten-year average of 90.

Prunes  
California: Production this year, 92 per cent of a full crop, compared with the six-year average of 77.

Almonds  
California: Production this year, 80 per cent of a full crop, compared with the six-year average of 73.

Olives  
California: November 1 condition 60, compared with the six-year average of 83.

Walnuts  
California: Production this year, 85 per cent of a full crop, compared with the six-year average of 82.

Hops  
California: This year, 15,700,000 pounds; last year (December estimate), 22,200,000 pounds.

United States: This year, 27,616,000 pounds; last year (December estimate), 50,537,000 pounds.

Prices  
The first price given below is the average on November 1 this year, and the second the average on November 1 last year.

California: Wheat, 204 and 133 cents per bushel. Corn, 200 and 114. Oats, 92 and 66. Potatoes, 149 and 113. Hay, \$17.50 and \$12.40 per ton. Cotton .... and .... cents per pound. Eggs, 50 and 46 cents per dozen.

California: Wheat, 204 and 133 cents per bushel. Corn, 146.0 and 85.0 cents. Oats, 61.7 and 49.0 cents. Potatoes, 128.0 and 135.7 cents. Hay, \$15.20 and \$9.99 per ton. Cotton, 27.3 and 13.0 cents per pound. Eggs, 39.4 and 32.2 cents per dozen.

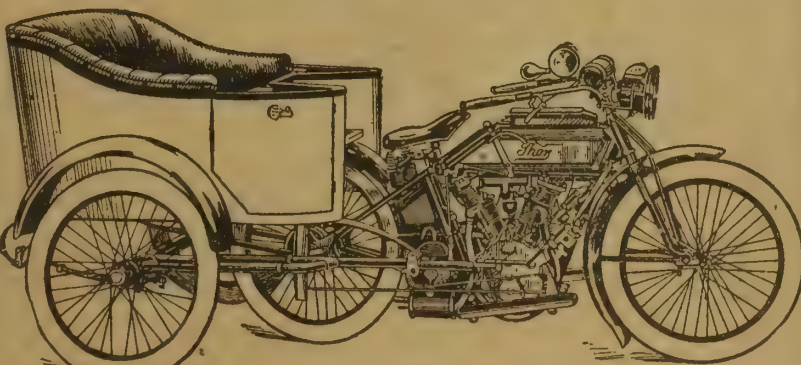
WEATHER CONDITION

San Francisco, Cal., Nov. 10, 1917.					
	Rainfall		Temp.		MD
	Wk.	Season	Norm	Max.	
Eureka	.84	2.99	5.20	72	42
Red Bluff	.24	1.34	3.19	68	44
Sacramento	.16	.87	1.84	72	44
San Francisco	.29	.31	2.05	66	50
San Jose	.46	.49	1.56	74	44
Fresno	.33	.34	1.14	74	48
San Luis Obispo	.46	.56	2.12	70	48
Los Angeles	.34	.34	1.07	72	50
San Diego	.06	.23	.74	68	50

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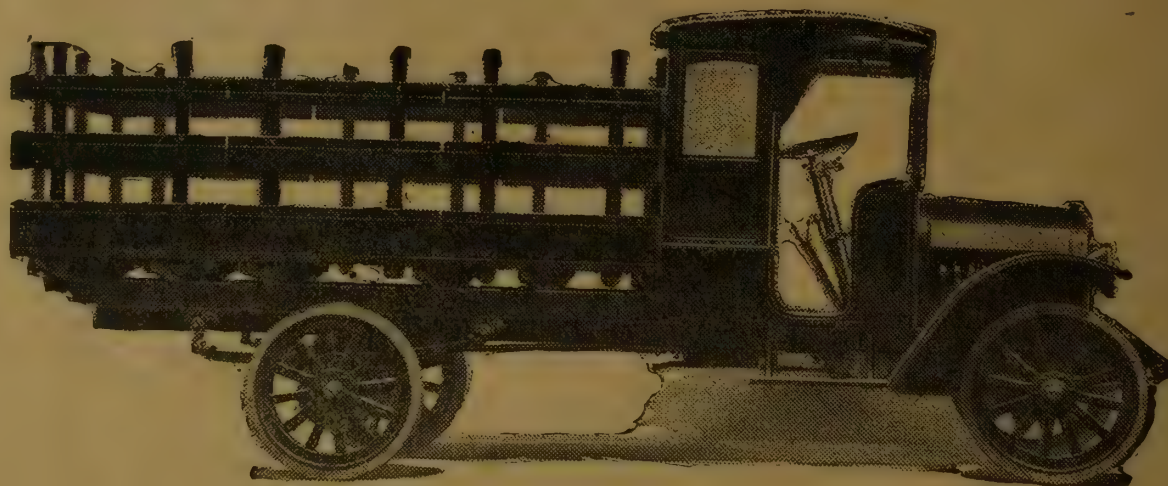
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Detroit Michigan





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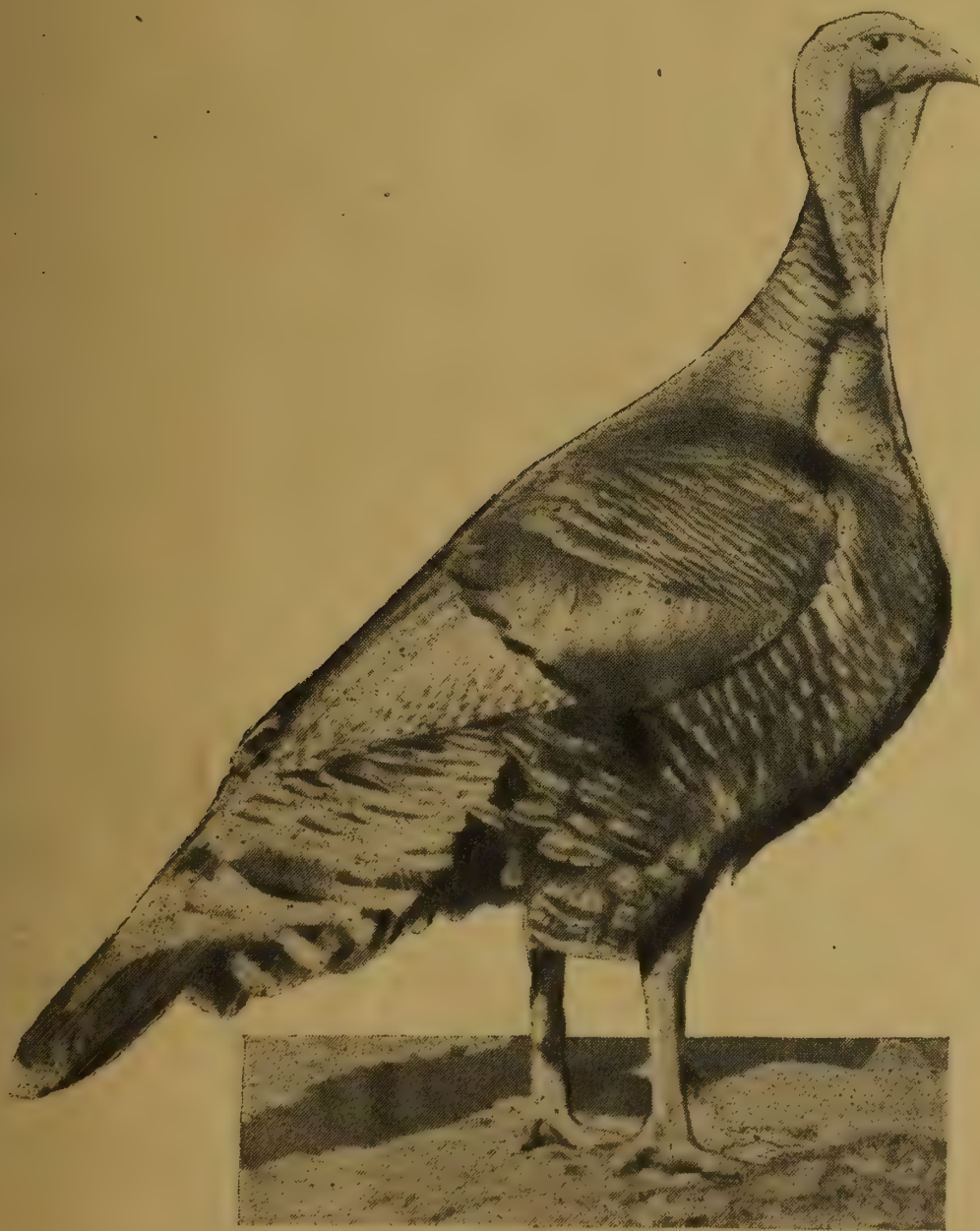
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*and DAIRY JOURNAL* *with* **CULTIVATOR**

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

November 24, 1917

SAN FRANCISCO





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12 " .....	9.50 " "	20 " .....	15.00 " "
14 " .....	10.50 " "	24 " .....	17.50 " "
16 " .....	11.50 " "	30 " .....	20.00 " "

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DOES THE WORK OF  
FOUR NOZZLES  
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TWO LINES OF HOSE  
TWO MEN  
TWO DAYS

**SAVES LABOR** ONE MAN WITH A NUSYST GUN DOES THE WORK OF TWO MEN USING REGULAR NOZZLES.

**SAVES TIME** ONE MAN DOES FOUR MEN'S WORK. ALL THE SPRAYING IS DONE FROM THE GROUND HENCE NO LOST TIME, NO LOST LABOR, NO INCONVENIENCE FROM WORKING RODS AROUND AMONGST THE BRANCHES.

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# California Cultivator

Vol. XLIX No. 21

LOS ANGELES: November 24, 1917

One Dollar Yearly

## The Bandit of the Brush

Wm. M. Bristol Tells of the Depredations of Coyotes and How He Made the Varmints Pay Their Own Way

He is long and lank and lean,  
And there's slyness in the mien  
Of the scamp;  
His garb of gray and yellow  
Suits the gay and hungry fellow—  
Royal tramp."

THESE rhythmic lines constitute the opening stanza of a California writer's description of the coyote, whom he pictures as "The King of the Tramps." I think, however, that altitudes of people who have tried to raise poultry in California without protecting fences will agree with me that "Bandit of the Brush" is a better moniker.

My actual acquaintance with the coyote began nearly 30 years ago when I settled upon a tract of virgin land on the picturesque East Highlands mesa in San Bernardino County at the foot of a peak now known as Mount Harrison. My bachelor-hall stood just where the sagebrush and the chaparral met and, as I very soon learned, I had settled in coyote land.

Like every tenderfoot in the California southland I had poultry-raising notions. I had come to the southwest to live the outdoor life, and I was determined to try all the experiments I could to have all the experiences that I could with it. I knew that poultry would thrive here and I knew that Egyptian corn with which to feed them would grow even without irrigation. Apparently I would have an income as soon as I could grow a crop and raise stock to eat it, and, it being then the first of January, I purchased a dozen hens and began clearing my land for the corn.

I have often meditated upon the fact that any certain piece of land which any certain man calls his home is also considered home by a myriad of other creatures, and the man pre-eminently only because of his superior intelligence and might. In clearing my land I was simply removing the brush from a portion of that primeval domain where the fauna of the region ranged from time immemorial, from which the larger animals had now disappeared. The predatory species that remained were represented chiefly by the coyote, the fox, the wildcat, and my clearing (which is not a pun) was simply a springhouse for their trails.

The mention of trails prompts me to say that wild animals like trails as well as a modern motorist likes paved highways. If any beast of the brush comes upon a trail leading even approximately in the direction he is traveling he will take it in preference to going through unbroken brush. Knowledge of this fact was helpful to me in the relentless campaign that I waged for two years upon those prior citizens that disputed my rights as a hunter. Knowing that they liked trails I approved the existing ones and then made new ones. Every canyon and gulch leading to or from my lofty domain—which a friend dubbed Wayupch—which I provided with an attractive trail. Along each trail I set sturdy traps like unto the dead trees to which the bandits of the brush were

### PRESIDENT'S THANKSGIVING PROCLAMATION

"It has long been the honored custom of our people to turn in the fruitful autumn of the year in praise and thanksgiving to Almighty God for His many blessings and mercies to us as a nation. That custom we can follow now even in the midst of the tragedy of a world shaken by war and immeasurable disaster in the midst of sorrow and great peril, because even amidst the darkness that has gathered about us we can see the great blessings God has bestowed upon us, blessings that are better than mere peace of mind and prosperity of enterprise.

"We have been given the opportunity to serve mankind as we once served ourselves in the great day of our Declaration of Independence by taking up arms against a tyranny that threatened to master and debase men everywhere, and joining with other free peoples in demanding for all the nations of the world what we then demanded and obtained for ourselves. In this day of the revelation of our duty not only to defend our own rights as a nation, but to defend also the right of free men throughout the world, there has been vouchsafed us in full and inspiring measure the resolution and spirit of united action. We have been brought to one mind and purpose. A new vigor of common counsel and common action has been revealed in us. We should especially thank God that in such circumstances, in the midst of the greatest enterprise the spirits of men have entered upon, we have, if we but observe a reasonable and practicable economy, abundance with which to supply the needs of those associated with us as well as our own. A new light shines about us. The great duties of the day awaken a new and greater national spirit in us. We shall never again be divided or wonder what stuff we are made of.

"And while we render thanks for these things let us pray Almighty God that in all humbleness of spirit we may look always to Him for guidance; that we may be kept constant in the spirit and purpose of service; that by His grace our minds may be directed and our hands strengthened, and that in His good time liberty and security and peace and the comradeship of a common justice may be vouchsafed through all the nations of the earth."

accustomed, and to each post I attached a double spring steel trap. To the wild animal folklore of the region I added all the logic I could develop from current experience, with the result that in two years I captured nearly 75 of the three varieties mentioned, coyotes, foxes and wildcats.

I have mentioned the marauders, not only in the order of their abundance but also in the order of their cunning. It certainly was not the California fox that gave the fox family the reputation it has for shrewdness, for, as compared with the coyote, he is an infant in arms. On making the first round of my traps I found in one the hind leg of a fox, and three weeks later I found the remainder of him in the same trap. I had caught 19 foxes before a single coyote fell a victim. I was beginning to think I was not shrewd enough for the gay howler



The Bandit of the Brush

of the hills, but the spell was broken at last and, the foxes being out of the way, I made havoc in his ranks, catching nearly fifty in the two years in question.

For the benefit of those who may wish to go after the raiders I will state the method, the details being simple but imperative. The trails with the posts beside them, being provided, the trap is set, buried as nearly as possible directly in front of the post and about eight inches from it. It is important to set the trap with

the springs pointing to and from the post. The bait, preferably beef, should be securely wired to the post about two feet from the ground, and brush should be arranged behind and at the sides of the post so that the animal will be almost compelled to approach the bait from the trap side. If the trap is set as described and the animal approaches from the front, the jaws of the trap will strike his foot on the sides and will hold him. If the trap is set paralleling the post instead of pointing toward it the forward jaw will sometimes knock the animal's foot into the air before the other jaw can catch it. I never had ocular proof of this, but believe, from my experience that it is correct. It is also important to cover the trap lightly with grass or leaves and to extend this covering for some distance along the trail. Foxes and wildcats will walk into anything, but the art of catching the coyote hinges upon throwing him off his guard. This is best done by cutting some of the bait into bits the size of a walnut and dropping them at intervals along the trail in either direction from the trap. He comes upon these bits before he has seen anything suspicious, and, stopping to pick them up successively, his appetite is whetted until, reaching the main bait at the post he throws caution to the winds—and the trick is done. I do not consider it necessary to avoid touching either the trap or the bait with the hands.

### Tanning Skins

It goes without saying that if one wishes to preserve the furs of these animals they should be caught in the fall or winter when their coats are new and handsome. There are various methods of tanning the hide. The process is not difficult, although some care and patience is required. The method I used—the only one with which I am familiar—is to apply a

mixture of alum, saltpetre and salt, equal parts, to the inside of the fresh hide, spreading it perhaps an eighth of an inch deep. The hide is then folded so that these treated surfaces face and come in contact with each other. It is then rolled up tightly in paper and laid away for a week, after which it is taken out and drawn back and forth over the edge of a board until it is dry and soft. If this part of the task outlasts the patience, and there is no old Indian woman available to complete it, the hide must be again rolled up in paper until another attack of industry comes upon the tanner.

### WAR SAVINGS

The war savings plan provided for in the last bond act of September 24, 1917, has been formulated and announced by the treasury department and goes into operation on Monday, December 3.

The plan puts it easily in reach of every American citizen to save money and at the same time aid the government by supplying it with the sinews of war.

Stamps, which are the government's certificates of indebtedness, are to be sold in two denominations — thrift stamps, which cost 25 cents each, and war savings stamps, which cost from \$4.12 to \$4.23 each according to the month in which they are purchased.

With the first thrift stamp the purchaser is given a thrift card with spaces for 16 stamps. When 16 thrift stamps have been purchased and affixed the thrift card can be exchanged for a war savings stamp by paying the difference between the \$4.00 the thrift stamps represent and the current value of a war savings stamp, which in December, 1917, and January, 1918, will be \$4.12, and thereafter one cent for each succeeding month during the year 1918.

With the first war savings stamp obtained by purchase or exchange the owner is given a war savings certificate containing spaces for 20 war savings stamps. If the 20 spaces are filled during December, 1917, or January, 1918, the cost to the purchaser will be \$4.12 for each stamp, or \$82.40 for the full certificate, and on the 1st day of January, 1923, the government will redeem the certificate at \$100, giving the holder a net profit of \$17.60 for the use of his money.

Although these investments do not mature until January 1, 1923, provision is made whereby upon 10 days' written notice after January 1, 1918, such certificates will be redeemed by postmasters at their cost to the purchasers plus one cent a month on each war savings stamp on the certificate.

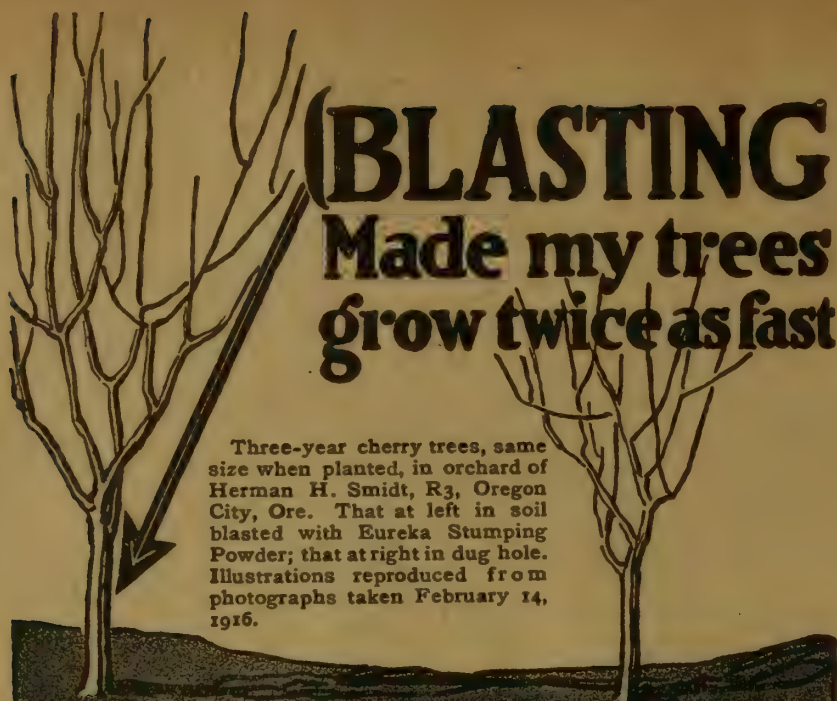
The thrift stamps do not bear interest, but the war savings stamps bear four per cent, compounded quarterly. The certificates will be dated January 2, 1918, and mature January 1, 1923.

Under the plan an amount as small as 25 cents can be invested in a government security, and as soon as \$4.00 has been thus invested an interest bearing certificate of the United States government can be secured.

The stamps and certificates can be obtained from post offices, banks, or trust companies, at most railroad stations, stores, factories, and many other public places.

Having the entire wealth of the United States back of them, and being redeemable as above stated, there is no danger of any depreciation in value of the certificates.





## (BLASTING) Made my trees grow twice as fast

Three-year cherry trees, same size when planted, in orchard of Herman H. Smidt, R3, Oregon City, Ore. That at left in soil blasted with Eureka Stumping Powder; that at right in dug hole. Illustrations reproduced from photographs taken February 14, 1916.

"The trees that I planted in blasted ground show a growth of 75 to 100 per cent. over the trees that were planted in ground not blasted," says Mr. Smidt. "They also appear healthier and more satisfactory in every way. I have just bought 1,100 more prune trees and would not think of planting them without preparing the ground with

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Hundreds of fruit growers have found, like Mr. Smidt, that the Giant Farm Powders—Eureka Stumping or Giant Stumping—are the proper explosives to use in tree planting. They pulverize the soil for several feet in every direction, instead of caking and packing or throwing it high in the air.

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## Orange Standardization

By G. H. Hecke



IN THE passage of the fresh fruit standardization law the legislature of 1917 performed a service for the citrus growers of California that, judging from a series of meetings just completed, is greatly appreciated and one that will be of inestimable value to the industry through the prevention of the sale of immature oranges. No oranges, under this law, can be offered for sale or shipment unless they contain eight parts of soluble solids to one part of acid or unless they are substantially colored before being picked from the trees.

The enforcement of this law was placed in the hands of the county horticultural commissioners who are designated as inspectors of fresh fruits. The state horticultural commissioner and his chief deputy are named ex-officio inspectors in chief of fresh fruits, and as such their duties are

of ripeness fit for shipment. Deputy State Horticultural Commissioner George P. Weldon, conducted the meetings as the standardization work of the state horticultural commission has been placed in his charge.

Based upon the definition of substantial which is given in the standard dictionary as follows: "In a substantial manner; as really, actually, solidly, in substance, essentially, materially," and considering the desire of the citrus growers to stop forever the sale of green oranges, substantially colored was defined as "practically fully colored." That is, an orange is considered to be substantially colored when the entire surface is yellow and there is a total absence of green except the navel or the stem end, which frequently show more or less green color long after the rest of the surface is yellow and the orange thoroughly mature. In order that everyone may be



Citrus Orchards of Tulare County  
View from the foothills looking toward Lindsay.

outlined as follows: "Where there is a dispute or difference between the inspectors of fresh fruits of two or more counties, or where the interpretation standards between two or more counties differ materially, have the power and authority to settle the dispute between the inspectors of fresh fruit of such counties and to fix reasonable standards between such counties where they materially differ."

In order that uniformity in the enforcement of this law might be secured and that it might not become necessary for the ex-officio inspectors in chief of fresh fruit to be called upon to settle differences after the packing season has begun, a series of meetings were planned for Tulare, Fresno, Sacramento and Butte Counties.

These particular counties were chosen because in them conditions are such that all growers cannot comply with the eight to one standard, that is to say, in certain sections fruit is fully colored and fit for shipment before it meets the eight to one test. Such sections, therefore, must rely upon substantial coloring to designate a degree

ter understand what is meant by the definition of substantial coloring, the exact color, as nearly as is possible, a substantially colored orange will be reproduced by color photography, and pictures will be furnished to all county horticultural commissioners and inspectors, packers, growers, and others who may request them.

A desire on the part of the citrus growers and packers to cooperate in the enforcement of the law as it pertains to substantial coloring was expressed in meetings held at Porterville and Lindsay on November 7 and Oroville on November 8.

The state commissioner of horticulture wishes to express his appreciation of the fair-minded way in which the citrus growers have treated this very important matter. In place of themselves on record as favoring strict enforcement of the law as it relates to substantially colored oranges they have done much toward strengthening the position of the inspectors of fresh fruits, who will do all in their power to make the law serve the purpose that was intended by its framers.

## Nitrate of Soda

Congress has authorized the department of agriculture to secure fertilizers for crop production in the United States and has appropriated \$10,000,000 which the department, under direction of the president, may expend. The most definite step yet taken has been formulation of a plan for the purchase of a great quantity of Chilean nitrate. Notwithstanding prices of Chilean nitrate have increased very greatly within the past few years this purchase has been made in order that it may be turned over to

producers of the entire country at the least possible cost. The demand in this country for Chilean nitrate will be smaller than heretofore and the munitions manufacturers require enough nitrate in hand for all their needs for at least another 12 months and contracts made for all their needs for years to come so that there will be no competitive bidding in the nitrate market.

Of course \$52 to \$58, which prevailed a few years ago, are prices of the past and it is probable prices will run around \$100.

## High Priced Olive Oil

It has been reported that exportation of olive oil has been forbidden by Spain. This, with demand for this oil from American consumers being greater than ever assures exceptionally high prices for all the present season's output. Of vital interest to the olive grower is the fact that in

Italy thousands of olive trees are being cut down to supply needed fuel. Another factor which is of possibly more interest is that many thousands of gallons of olive oil which have been shipped from Italy will never arrive at their destination, for they are at the bottom of the Atlantic. All the

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### PREVENT Moderate Freezing

Sunburn, rabbits, squirrels, barking by sand storms and cultivation.

Easy to put on and cheaper than gunny sacks.

### COLLAPSIBLE PLANTING POTS

Why not raise your early Tomatoes, cabbage, chili and egg plants for home use or for market. Do you know that you can start

Cucumbers, cantaloupes, melons of all kinds in these pots in flats until they have three and four leaves then plant pot and all, have melons two or three weeks earlier for market. Just the thing for DATE propagating. Write for samples and prices of both Pots and Protectors. State which you are interested in.

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## Olive Trees For Sale

10,000 each of Mission and Manzanillo, caliper from one to two inches. Trees selected from the best stock in California and are guaranteed true to name.

**Los Angeles Olive Growers' Association**

522 Higgins Bldg.

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OLIVES AND GRAPE VINES  
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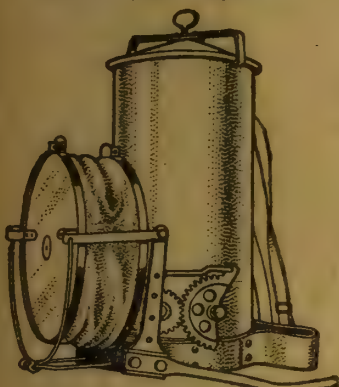
Twenty-nine years of continuous and consistent service to the Western fruit growers.

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conditions have doubtless caused the refusal of some of the larger houses to receive orders for the coming season's output at any price.

Olive growers are appealing to the state university for help in experimental and investigational work; also for the university extension type of work which will give information to olive producers. This state has invested many thousands of dollars in investigating best methods of producing wines. The olive industry is not yet so important, but certainly is worthy of encouragement.

### Vicious Contract

**U**NDER the head, "A Vicious Raisin Contract" Wylie M. Giffen of the Associated refers to a contract offered by a private concern to growers outside of the association. The contract covers a term of years, as many as the grower will sign for. It stipulates that the price for the season's delivery shall be 2½ cents per pound less than the carton price of the packer making the purchase. Mr. Giffen says:

"From the packer's standpoint this contract is a cinch, but from the growers' point of view it is perfectly senseless. When the packer loans you money and lets you fix the rate of interest; when your merchant sells you goods and lets you name the price, then, and not before, should you sign a contract allowing an independent packer to set the price on your raisins."

"Following the terms of this proposed contract the packer could make his opening price four cents per pound, deduct 2½ cents per pound, leaving the grower for his year's toil 1½ cents per pound, and this would be no violation of the contract. Out of this \$57.50 per ton on the ten or fifteen thousand tons of raisins that it is their ambition to buy, they would make a net yearly profit of from \$150,000 to \$200,000; and if their greed demanded more they could make it a million dollars per year by the simple process of making the opening price extremely low, selling a few thousand tons of raisins, then advancing the price as much as possible, and sell the balance of their purchases against the latter price; but the silver-tongued salesman, representing this honorable concern, assures the growers that the opening prices will be based upon the opening prices of the Associated Raisin Company, but that is not written in the agreement—it is only conversation—and would not even bind the present management of the concern, much less some one who might be in charge a year or two hence."

"The only alluring thing about their contract, and the one which, undoubtedly, attracts the growers' attention, is the fact that within two days after the completion of the delivery they will pay 'all the cash;' but again let us remind you that 'all the cash' in the good old days when this independent packer reigned supreme in the Thompson Seedless business was less than the guaranteed minimum price of the Associated Raisin Company. Surely \$50 or \$60 per ton above this guaranteed minimum is not to be sneered at, even if it comes one year later."

"The writer has watched the raisin business with more than passing interest for 30 years; he has seen it go from a high cash price to a commission basis, when many of the growers got red ink the same as some of us do on green fruit today, and as a result good bearing vineyards could be bought for \$50 per acre; he has seen the struggle of the old cooperative packing concern to restore the business to its former glory; he has watched the struggle of the old association as it endeavored with varying degrees of success to again establish the business on a firm footing; he will remember the contracts that netted the growers less than nothing; the pools, because of whose failure he sold raisins for two cents per pound that had cost him three cents per pound to grow; he has sold thousands of tons of raisins to the various packing concerns, and signed contracts that were as lopsided as a two-wheeled buggy, but through all of the vicissitudes of these 30 years he has never seen a contract so vicious, so damnable as the one now being offered to the growers of Thompson Seedless raisins."

## Note What It Does

IN ORCHARDS IN VINEYARDS



## This 15-Feature Tractor Will Almost Run Your Place

**15 FEATURES** — invaluable in orchards and vineyards — make this the needed tractor.

No other tractor of the track-laying type sells at so low a price. And no other has such advantages as the patented front drive.

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The Bean TrackPULL Tractor turns clear around inside a 10-foot circle (5-foot radius), and it has full power even on so short a turn. It plows and harrows close up in the corners, and right up to the trunks and vines. It goes under tree-branches only four feet off the ground; and works between 7-foot rows in vineyards. On account of the patent principle and simple transmission, the fuel consumed is far less than other types doing the same amount of work. When you hit soft spots or holes, you simply swing the track over and pull out as you do with teams.

When not in the field this trac-

tor's 10 h. p. pulley runs your stationary machines.

### A Great Patent

The Bean TrackPULL is different from all other tractors in that it pulls instead of pushes itself along; and you steer with this track that pulls. That is why the Bean can be "gee-ed" and "haw-ed" like a team. This feature is patented so no other tractor can provide this big advantage. Sooner or later you'll decide, without doubt, that you want a tractor to do these things.

### Know First—Then Decide

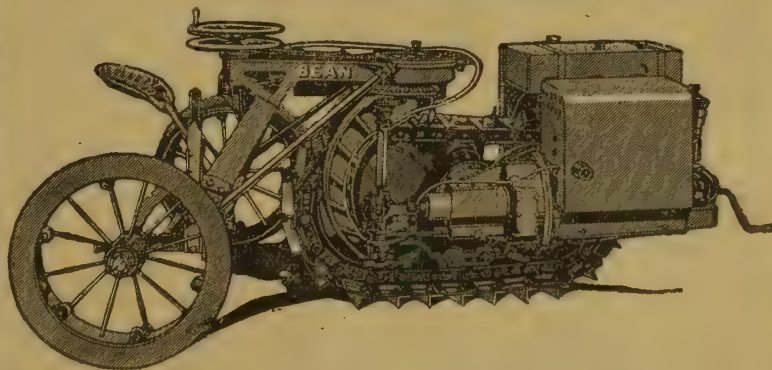
So don't buy a tractor until you know all the facts about this remarkable agricultural aid.

The Bean TrackPULL Tractor pays for itself in what it saves for its users. It weighs less (3100 lbs.) and costs less to operate than wheel-type machines of equal power. And yet it has greater traction. The pressure per square inch on the soil is less than a man's foot.

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to get in your dormant or winter spraying. If done properly—this will prevent the accumulation of certain insect and fungus enemies; will clean your trees and soften the bark; and will keep the trees in better health, vigor and fruitfulness. For this purpose there is nothing so effective as

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Order now—don't wait until your trees are laden with deadly insects.

Never hesitate to write our Service Department—in charge of Paul R. Jones, Expert Entomologist. His advice is dependable—and it's yours free.

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# Pistache Experiments

Written for California Cultivator By Claud D. Trebble

**S**OME eleven years ago we were furnished stocks of the pistache in several varieties with the assurance that bud wood of the Pistache Vera would be furnished soon. The stocks, some 600 of them, thrived and made fine trees. The loss in transplanting was about 20 per cent. Varieties of stocks were P. Atlantica, P. mutica, P. terebinthus, P. Lenticus, P. Chinensis and Veristina hybrids. The P. terebinthus was planted on our very best soil and given best care and has proven very slow growing and of dwarfish habit. The transplanting loss of this variety was very heavy. P. Chinensis has proven a rapid grower till grafted or budded, then the grafts outgrow the stock several times and will probably break off on account of weight.

The P. Lenticus, mutica and Veristina are fair stocks but very difficult to make the buds and grafts stick after they grow as they seem to lack affinity for the P. Vera. The male species of the Mutica and Veristina are valuable on account of blooming with the Large Red Aleppo and Trabonella varieties of the P. Vera.

The P. Atlantica is by far the best stock from every point. It is a rapid spreading grower, very light loss in transplanting, takes the buds so readily that buds inserted in the trunk of trees several years old will often grow from one to three feet in length without cutting back the tree. Grafts are easily grown and with ordinary methods an experienced grafter can make 75 per cent stand. Grafts rarely ever blow out.

Five years ago we were furnished with buds and grafts of the Kog or Walnut, Large Red Aleppo, Trabonella and the so-called Carpellate varieties of the pistache. The Kog or Walnut variety came to us with the reputation of being one of the finest varieties of this nut and proved to be a male variety, the pistache being a dioecious tree, the male and female flowers occurring on separate trees. The Carpellate variety proved to be a very small variety, no larger than the nuts of the varieties used for stocks, and is worthless, although the kernel is a rich green and of fine flavor. The Large Red Aleppo is the largest of the varieties we have and is a splendid variety but does not crack open so readily as the Trabonella, although the nuts of individual trees crack more than on others of both these varieties. Best trees average about 75 per cent cracked nuts. For the confectioner and pastryman the Trabonella seems to be the best as it has a deep rich green kernel and a very rich flavor.

On many trees of this variety 99 per cent of the nuts are cracked, and the kernel is much larger than the shell. We are informed that it is necessary the shells should crack so the kernels will absorb the process of salting necessary for eating out of the hand. This variety comes to heavy bearing before the Large Red Aleppo and ripens at least two weeks earlier.

Pistache nuts are easily gathered and should be shaken on sheets and the husks can be rubbed off either after drying or fresh. It would seem that it would be easy to husk these nuts by some mechanical means. After husking the nuts dry readily on trays in partial shade or in the sun. The husks seem to have considerable oil in them and when they may be had in considerable quantities an oil or gum mastic may be economically made from these.

Infertile nuts hang in the clusters of good nuts till gathered but are readily told from the good nuts by the husk being dried on them and cannot be rubbed off.

Our experience may be summed up in the following: Use the Atlantica for stocks, bud in the nursery row at two or three years old or plant in orchard form and graft or bud at three or four years old. Use buds of the best Large Red Aleppo and Trabonella varieties from trees proving the largest per cent of open uts, and use the Kog and Mutica males and plant a male tree every seven trees square, or in other words plant the first row beginning with the first tree a male and plant six female. In the next six rows plant solid to female trees, then begin

as in first row. The trees bloom later than the walnut and almond as the first flowers appear about the first of May and the nuts are ready to gather from September 15 to October 1. We have much faith in this new nut and believe it will add much to the wealth of California.

## 50th State Fruit Growers

**A** CONVENTION of great importance is in session this week in Sacramento. The fruit growers of the state are gathered to discuss old problems, always unsettled; also labor and other problems which are entailed by war conditions.

In his annual address Commissioner Hecke said:

"Beginning with its early history as a horticultural state, California, through her devotion to progressive ideas, has developed a system of efficient plant protection. From the pioneer days on her people have been eager to search out methods calculated to promote their various rural interests. As we look back over the records of the 49 conventions and realize the wide range of activities and note the constant and steady increase of duties of those in charge, commencing with the first convention held December 6, 1881, in this same state capitol where we are now holding the 50th convention, we experience a warm feeling of appreciation of the efforts of our pioneer predecessors.

"The first meeting, more than a generation ago, was called to order by Matthew Cooke, the first chief executive horticultural officer and the pioneer entomologist of the state, for the purpose of assembling the fruit growers and representatives of the various industries associated with horticulture. They had for their object a bet-

ter understanding of what would be expected and required of their respective interests in the making and enforcement of beneficial laws for the protection of horticulture.

"The principle for which Matthew Cooke and his disciples contended is contained in the quotation, 'So use your own as not to injure others.' Their interpretation of this was to the effect that there should be no neglect of any known economical methods for preventing the spread of injurious insects and plant diseases from personal property to that of others. . . .

"In addition to the regular duties of the state commission of horticulture, every member of the commission has felt it his and her duty to assist the state and nation at this critical period of national need. In cooperation with the University of California and the state council of defense we have taken an active part in the food producing and food preservation campaign; we have urged more planting and better cultivation, advised the best methods of pest control and started our vigorous campaign against rodents and weeds, to the end that our people may be enabled to better provide for themselves and all those engaged with us in this fight for the world's democracy."

Many a patriotic farmer is wondering how under the sun he can "speed up production" as he must in order to comply with our country's demands and the obvious, crying needs of Europe with its hunger stricken millions. This demonstration is going to show such a man that the tractor is the solution. In the present national crisis the tractor is a necessity for the required rapid mobilization of the agricultural and industrial resources of the United States.

A liberty bond in your bank vault means security for you and your country.

Put the scrub bull into bologna. In your herd he's an ally of the kaiser.

## TEAGUE QUALITY CITRUS TREES

AWARDED THE GOLD MEDAL AT FOUR INTERNATIONAL EXPOSITIONS.

For Productive values, fine quality of fruit and vigorous growth Teague's bud-selected, (pedigreed) properly trained and carefully handled orange and lemon, pomelo and lime trees are the trees to plant. An experience covering a third of a century warrants the assertion that Teague Quality Citrus Trees possess these qualifications in a superlative degree. All the standard commercial sorts, and garden and ornamental varieties; the largest assortment of citrus trees in America. . . . We invite correspondence from intending planters. . . . Consultations on citrus planting by appointment. 1918 Price list just out; send for a copy.

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FOUNDED IN 1889 AT IT 29 YEARS





# What is a Garden?

Written for California Cultivator. By Ernest Branton.



GARDEN in city, suburbs or country cannot be left wholly as a piece of wild and untamed nature. Such a course would be as inconsistent as to dig a rough cave for the occupation of the family. A garden is a piece of land subdued by man to his own uses and purposes and to pretend that he is not doing so is to prove him a snob, for all such pretense is mere affectation. On the other hand he should not overwhelm all the beauties and attractions of nature by his arrogancy in wishing to dominate the landscape with his own crude handiwork. The beautiful in nature should be preserved to the fullest.

Some garden builders are quite intolerant of natural effects and if trees and shrubs are found on the land they are pruned till all semblance of natural beauty is gone, if indeed the poor things are allowed to remain at all. But why dilate on the weakness, shortcomings or vandalism of man. There is a brighter and happier aspect and attitude; that of doing the best we may with what is at hand. Leave all the natural beauty possible. Prune trees and shrubs only for their own good, not to bring to your preconceived notions of what should constitute bush and tree. Do not change topography, unless almost or quite unavoidable. If you have a little hill, make it appear by skillful planting, if a ravine or canyon make it deeper and more glen-like by leaving the bottom inviolate and planting the sides clear to the top.

The garden builder should aim at beauty yet should make the garden useful. It must be subdued to the purposes of human kind, and keep in mind all the time the object in view, of making the useful beautiful and the beautiful useful. But beauty will not be attained unless the builder aims at beauty; it will not come by chance. Aim to display all to the best advantage, but do not keep in mind beauty of individuals as such, but only as one of many that will be beautiful collectively. And if they are to remain beautiful or grow in beauty they must be so provided for in soil and conditions that beauty shall be perpetuated. In short, a garden should be so designed and planted as to give pleasure to both owner and visitor, not as a museum of plants, but as a place where joy and comfort go hand in hand to a part of the land that is set apart for your very own.

## Curious Plants

When a child I used to marvel at several things in plant life that seemed oddly out of place. One was that peanuts grew underground. The impression of nuts growing on trees, as nearly all do, or of the hazel bush with its burs full of nuts could hardly allow nuts under the soil. Nor was I any more satisfied when told they were not closely related to any other nuts, but were true pods with beans or peas inside, for no beans or peas are known that do not grow on bush or vine.

Before being able to easily tell the difference between wool and cotton I had seen tens of thousands of sheep and gained the impression that cotton also must be shorn from some hairy animal not far from cat or dog in appearance. Therefore I was astounded at the sight of a cotton plant at maturity, covered with balls of white cotton that I was assured was real cotton. After handling the substance my mind at once turned to the downy softness of cotton flannel. One more puzzle there was—the sweet potato. I was very familiar with the common potato, as I was with morning glory vines and flowers, but saw no sweet potato plants until quite a large boy. Then I was quite astonished to find that sweet potatoes were the roots of morning glory plants. All the three things mentioned have never become quite adjusted yet. I am wondering if we do not owe it to our children to acquaint them with these facts and grow plants of each of these things in our own garden that the little ones may see and learn. All the plants in question are natives of the Americas.

## St. John's Bread

In these days of high cost of stock

food more consideration should be given Ceratonia siliqua, the carob or St. John's Bread, a tree of splendid appearance and wide use as an ornamental and of still greater value as a bearer of food for live stock. It is an evergreen with handsome foliage, of good habit, requiring little or no pruning to keep in good form and will thrive in any soil with a minimum supply of water, but will not endure very heavy frosts, being occasionally damaged in Southern California. In some countries horses, cattle, sheep, and hogs are fed almost exclusively on the pods of these trees, and mutton and pork from animals so fed are said to be of superior flavor.

## The Composition of Plants

Is it not strange that the greatest per cent of ash is found in leaves and the smallest per cent in the wood of

trees? Yet such is the case; leaves contain from 10 to 25 per cent of incombustible or non-combustible material while dry straw contains from four to eight per cent. Of combustible material or dry matter of plants about one-half is carbon. The other elements are oxygen, hydrogen, nitrogen, sulphur, and a little phosphorus, and these make up every plant that grows. The incombustible ash also always contains six elements, potassium, magnesium, calcium, iron, phosphorus, and sulphur. In general ash also contains several other elements, often in minute quantities.

## Water Most Essential

All know that mankind perishes for lack of water and not for lack of food when cut off from all supplies of food and drink. The same conditions prevail with plant life, and the same per cent of water will be found in each, except that plants vary in this respect far more than animal life. Many succulent vegetables contain more than 90 per cent of water, and the driest living timber, when felled, has been

found to contain 40 or more per cent of water. Water then, being most essential to life of all elements should be most freely and constantly supplied to both animal and vegetable life, for even old hay contains at least 15 per cent of water. It is the one life-giving element; the others are life-sustaining when combined with water.

## Native Horse Chestnut

It is a curious fact that a majority of our people do not know our native horse chestnut, though when in bloom it is a beautiful tree, with extremely showy spikes or thyrses of flowers that strongly resemble a well-grown white hyacinth. The tree is deciduous and in many places but a large shrub, but in good soil it will grow to 50 feet in height and two feet in trunk diameter. The wood is light, soft, and porous and has been found useful for many purposes. In early days of local settlement the ox yokes were made from these trees.

American apples are being exported to Australia.



This is an actual photograph taken from life of the new Selma Cling Peach.

# THE SELMA CLING PEACH

The new mid season yellow Cling Peach—ripens just after Tuscan—keeps labor employed—ask the manager of your cannery about the advantages of having a peach ripen at that time—fruit of excellent flavor—fine grained—yellow to the pit, which is small.

Not an experiment—has been thoroughly tested and observed by us for several years—stock is limited. Write for prices and full information—satisfy yourself and get the early profits from an orchard of this profitable California variety.

# Gower Nectarine

Earliest of the Nectarines—ripens with early Crawford peach. No fruit of this class has met with such favor as has this new early Nectarine. Ships like a clingstone peach, although a freestone. Free, strong grower—bears very heavily. A limited number of trees for customers ordering early.

More Nectarines should be planted. The demand for the fruit is rapidly increasing. Grows wherever the peach grows. Investigate profits by consulting the Nectarine growers, and if you are not already informed, you will be much pleased to learn of the profits that are being made. Mr. Frank Viator writes, "I have on my ranch 300 Nectarine trees twelve years old—this year my crop off these trees sold for \$2,250.00."

**Fancher Creek Nurseries**  
204 Holland Building Fresno, California.



This is Mr. Edwin Gower with a full bucket of luscious Nectarines which he has just picked from one of his own trees.

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Coupon**

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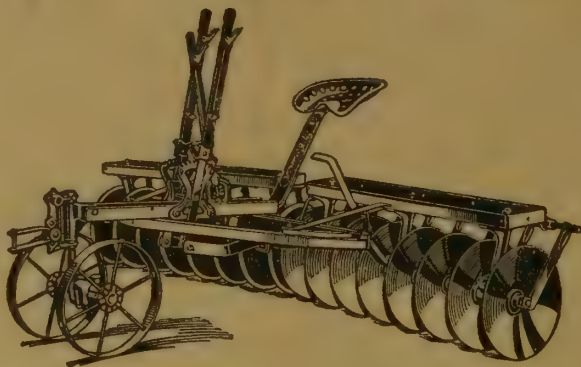
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## ALMOST WEAR PROOF DISK HARROW BEARINGS



The loose, gritty, sandy soil of these Western States is hard on implement bearings, especially on ordinary disk harrow bearings which work close to the ground in a cloud of gritty dust that fairly eats them up. In Deering and McCormick bumper disk harrows, the bearings are built to last and give good service even under these extreme conditions. If sand and grit does get into these bearings, most of it will drop through before reaching the boxing itself.

The grit and dirt that does reach the boxing, instead of cutting it all to pieces and wearing it out fast, has no effect except to polish the oiled surfaces of the hard white iron spools and boxes and to make easier running bearings of them. If these bearings are oiled regularly through the hard oil cups in the weight boxes, there is no wear out to them; after months of use they show a surface as smooth and hard as glass.

Everything else about Deering and McCormick bumper disk harrows is built with as much care and thought as is given to the bearings. You can get information that will save you money, time and trouble by dropping a line to the nearest branch address below.

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## Questions and Answers

ANSWERS BY EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

### Wild Buckwheat—Alfalfa

A correspondent writes: Does your plant expert know anything as to the feeding value of wild buckwheat (*erigonum fasciculatum*), and wild alfalfa (*lotus glaber*), especially as to cattle and hogs?—Subscriber.

This inquiry was submitted to Prof. F. W. Woll who answers. "It is not clear from the inquiry, whether the subscriber has in mind the feeding value of the wild buckwheat plant or of the seed from the same. The latter is an important component of gram screenings and possesses a considerable feeding value when fed ground. It may also be fed whole to sheep. We have no definite information with regard to the feeding value of the wild buckwheat plant, on the other hand it is known that stock eat it readily, especially sheep. It is a common weed in grain fields and pastures in northern states.

"As to wild alfalfa, I must confess ignorance. There are about 40 varieties of the genus *lotus* growing in this country, but the only one of any importance for stock feeding is the so-called bird'sfoot trefoil or bird'sfoot clover (*lotus corniculatus*). This is an old-world plant which has become naturalized in this country, especially in the southern states. It is generally sown for pastures on dry land and is considered particularly valuable in such places because its deep roots enable it to withstand drouths. The herbage has a salty taste and is a welcome component of hay as cattle and sheep are very fond of it. It is not likely, however, that this is the *lotus* variety referred to by the subscriber, and I am unable to state just what is meant by wild alfalfa or what value it may have for cattle or hog feeding. Seed from common alfalfa, *medicago sativa*, may easily get scattered in waste places and grow without effort on the part of man. Such wild alfalfa would not differ greatly in chemical composition or feeding value from an equal weight of common alfalfa. The main difference would come in the luxuriance of the plant and in the amount of feed materials these would furnish from a given area."

### Mottle Leaf—Nitrate

I have heard much about the mottle leaf of orange trees, with various explanations as to its cause, ranging from lack of water to excessive fertilization. The mulch basin system has been advocated as a means of conserving both moisture and humus in the soil on which the trees draw for their nourishment. In the mulch basin system small dykes are thrown up around each tree and the basins thus formed are mulched with hay, straw, and manure. By this means moisture is retained after irrigation because evaporation is reduced very greatly, which is the purpose of any mulch for that matter. The mulches are effective in curing mottle leaf, according to Briggs, Jensen, and Lane of the United States department of agriculture, who have experimented to find out.

So much for lack of moisture. It has also been advanced that nitrate of soda, or Chile saltpetre, has something to do with producing mottle leaf when used continuously. I should like to hear of any commercial orange groves which any subscribers to the Cultivator may know of, which have shown mottle leaf due to the use of nitrate of soda. It is my belief that

where you prevent a crust from forming on the surface of the soil, either by frequent irrigation or by the mulch basins system, thus keeping water in the soil from evaporating, in which soluble nitrogen, potash, and phosphate may circulate to feed the roots, the moderate use of nitrate of soda will be of great value and will not produce mottle leaf. — W. Lambert Myers.

Will any subscribers of the Cultivator who have made observations report their findings.

### Pie Melons for Poultry

Are citrons, or pie melons, harmful to laying hens? Our hens seem very fond of them and we would like to feed them in abundance as they are the only feed available in the shape of greens until the rains come.—Subscriber, Winton.

Pie melons, according to Professor Jaffa, are the least valuable of all green feeds. They are 94.5 per cent water, about the same as lettuce, but they contain less than half as much ash and a little more than half as much crude protein, while the amount of crude fibre greatly exceeds that of lettuce. They contain more water than kale, about a quarter as much protein and half as much ash. They contain one-fifth more water and only about one-ninth as much protein as the common weed, malva. However, they are better than no green feed at all and can do the hens no possible harm. Let them have them in the runs to nibble at as much as they please.—J. A. K.

### Johnson Grass

Am sending root and top of grass found on my place. It spreads and is hard to plow through. — Subscriber, Chatsworth.

This is a good healthy root and rhizome of Johnson grass, one of our worst pests. It should be kept cut so as never to go to seed, for it reproduces not only by root stocks but by seed. If the seed stocks are cut off persistently it weakens the root so it spreads less rapidly and ultimately might be almost eradicated by this continual top cutting. In addition however, shallow plowing during the hot summer days aids in reducing the pest. One should give it continuous attention.

### Weevil

Am sending some little bugs that are eating holes in my beans. Some beans were affected when we gathered them from the poles. Will they destroy seed beans? — Subscriber, San Jacinto.

These are the common bean or pea weevil. The seed as soon as gathered should be treated with carbon bisulphide fumes, which is done by placing the beans in a box or bin or tight room. Then on top of the beans place a saucer or shallow dish and pour in carbon bisulphide at the rate of three pints for every thousand cubic feet. Close room or box immediately, making it air tight, and leave in these fumes for 24 hours. The gas which rises from the carbon bisulphide is explosive so no fire must be brought near. The beans should then be placed in an insect proof room or container.

### PRUNE BERRY VINES

Home gardeners who want lots of loganberries, blackberries, raspberries and currants next year should see to it that with the arrival of winter, the dormant season for plants, they put in a few hours' work with the pruning shears in order to have their plants in such condition that they will bear more and better fruit next season and in such shape that the berries can be picked with lessened danger of scratching.

At the same time strawberry plants

## This Saw Cuts 25 Cords of Wood in One Day

It is absolutely guaranteed—hundreds in daily use.

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Wade's  
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With it you can make money out of your wood simply through the immense saving in time and labor. One man can handle it on a log and two can move it from log to log. Will cut a 40 inch log in five minutes. Write us today.

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SINCE 1863

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Make the New and Clean the Old—irrigation or drain, grade roads, build dykes—in any kind of soil, sand, rocks or gumbo, wet or dry, on side hill or level ground with

**Martin Ditcher & Grader**

Reversible, Adjustable, No Wheels or Cogs

All steel. Made in 2, 4 and 6 horse and tractor sizes. Economical from first cost on. Over fifteen thousand satisfied customers. No farm or ranch outfit complete without a "MARTIN." Use one a day and you'll agree.

Write for catalog and list of users near you. No charge, no obligation; postal will do.

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Our Ground Limestone Will Increase Your Soil Production. Write for Booklet.

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640 Title Insurance Bldg.  
LOS ANGELES, CAL.

"Fertilizer Dept."

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**Make Money**  
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Skunk, coon, fox, etc., are bringing high prices. Write for price list and our 36-page free book, TRAPPING FOR PROFIT. Tells how to trap, and how to handle furs to bring the most money.

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When writing advertisers, mention the Cultivator.

should be improved by removing the older plants and giving room to the younger and more thrifty ones or by replacing with new plants old ones which have outlived their usefulness or proved to be poor in yield. Neglect of proper pruning and renewal means that bush fruits soon run into a tangled thicket, while strawberries produce only small, seedy, misshapen fruits. A small amount of care will reward the backyard farmer with many weeks of fruit.

"Small Fruit Culture in California" may be obtained free by writing College of Agriculture, Berkeley. It gives advice as to how to choose favorable soil and how to plant, cultivate and prune small fruits. Photographs are given to show the best methods of training the plants so that air and light will be admitted to all parts and the fruit be easy to pick.

Book Review

**"SUCCESSFUL CANNING AND PRESERVING"**

"Successful Canning and Preserving," a practical hand book for schools, clubs, and home use by Ola Powell of the United States department of agriculture, assistant in home demonstration work. Published by J. B. Lippincott Company, Philadelphia. Price \$2.00 net.

This book is one of Lippincott's home manuals and is the most complete publications we have seen on canning and preserving. It is dedicated "To you who are striving to 'make your best better'." The canning and preserving of food products is an important factor in household economy, since the conservation of food-stuffs, from time of production and natural time of consumption to a later time, makes for a more varied and adequate diet, and that secured at a lower economic cost. Practical success in canning, drying, preserving and brining turns upon the proper application of the principles of science involved. The great necessity for scrupulous care in every step of the whole process is imperative. A worker who follows scientific principles and is watchful of sanitary conditions will have results that are uniform and satisfying. It is easy to talk of science in the abstract as applied to such problems, but unless one can show just how this science demands that the processes be conducted in order to secure success, such applied "science" is mere pretense. There are 372 pages full of scientific and practical suggestions and illustrations giving specifically every step in canning operations. There are 20 chapters touching upon History; Bacteriology; Preparation and Equipment; Canning in Tin, Canning in Glass; Processing-Hot Water Bath; Processing at High Temperature; Fruit Juices; Fruits for Canning; Vegetables for Canning; Preserves, Marmalades, Jams and Conserves; Jelly Making; Pickling; Drying Fruits; Vegetables and Herbs; Preservation of Meats; Use of Fruits and Vegetables in the Diet; Canning Club Organizations; Business Side of Canning; Teaching Canning; and Appendix. The book is supplied with an excellent index which enables one to turn instantly to any topic desired.

**POTATO STORING DON'TS**

Don't store potatoes while they are moist.  
Don't store without first sorting into table grade and culls for feed.  
Don't expose potatoes to injury by frost after digging.  
Don't let the wind dry out the potatoes. A bitter taste will result.  
Don't store in a light room. Light lowers the quality.  
Don't cover potatoes with damp earth when storing in a hot cellar. They will start to sprout if you do.  
Don't forget to watch the thermometer. The ideal temperature is from 35 to 40 degrees Fahrenheit.  
Don't forget to sort out the decayed potatoes before the trouble spreads.

There's no law against eating turkey before and after Thanksgiving, as well as on the national holiday. The more poultry Americans eat at home the more red meat we can spare the boys in France and our Allies.

A food pledge card in the window is the sign of a patriotic home.

**"Wonderfully Satisfactory"**

**STEARNS-KNIGHT**  
American Automobile Co.  
Tacoma

"results secured in the hundreds of Stearns-Knight sold by us have been wonderfully satisfactory."

**CHEVROLET**  
W. S. Dulmage Motor Co.  
Seattle

"we are finding Zerolene a very efficient lubricant."

**CADILLAC**  
Western Auto Sales Co.  
Reno

"we consider Zerolene particularly adapted for use in high-speed "V" type motors."

**MAXWELL**  
Lord Motor Car Co.  
Los Angeles

"have used Zerolene in Maxwell cars for over three years with excellent results."

For tractors, Zerolene Heavy-Duty is especially recommended.



**Endorsed by Leading Car Distributors**

—because the records of their service departments show that Zerolene, correctly refined from California asphalt-base crude, gives perfect lubrication—less wear, more power, least carbon deposit.

Dealers everywhere and at our service stations.

**STANDARD OIL COMPANY**  
(California)

**ZEROLENE**  
*The Standard Oil for Motor Cars*

**The Farmer's Concrete Mixer**  
**SHELDON Batch Mixer** Price \$11.50 Up



The Sheldon was designed especially for the farm. Highly praised by users. Farmers everywhere call it the ideal mixer. Used today all over the United States. A big success. Small enough to be easily moved—big enough to keep men busy. Low in price. Build your own silo, tanks, troughs, floors, foundations, buildings, etc., out of concrete with a Sheldon Batch Mixer.

**Read What These Sheldon Owners Say**

I and my hired man laid a feeding floor for my hogs, 24x24, in one day; also put floor in my cow barn. My neighbor liked it so well I am not able to keep it at home.—ANDREW CHRISTENSEN, Hancock, Minn., R. 1.

We have used the mixer during past year for putting in cement foundations for a complete set of farm buildings, including silo, and like it very much.—DANA WAIGET, Jamestown, N. D.

Last year I bought a cement mixer from you with which I am well satisfied. It did not take long for it to pay for itself and I surely can recommend it to anyone needing a big mixer at a small price.—W. L. PARR, Martinton, Ill.

I am more than busy with my Sheldon Concrete Mixer. Have more work than I can do. I get \$10 a day when I work out.—JESSIE L. WITTER, Wellsville, N. Y.

The machine works fine. Have already got the job of mixing concrete for the bridges in this town-ship.—JOHN ROSE, Spartansburg, Pennsylvania.

Last spring we purchased of you a set of castings to make a concrete mixer. It was constructed per the plans furnished and it surely worked great.—D. M. BURBANK, Freeport, Ill.

**FREE PLANS**

Make your own concrete mixer. You can do it at a cost so low you can not afford to mix concrete by the shovel method. Along with our iron parts we send Free Plans and permit for making your own machine. A good way to get a practical mixer at a small expense. Or, we will sell you the complete machine, ready built.

**Make Big Money at Concreting**

If you buy a Sheldon Mixer for your own use, you can make many times its cost in a season by renting it to your neighbors. Or, if you want to go out with the mixer on contracts, you can easily earn \$5 to \$20 a day. Our customers are doing it right now. The jobs go to the man with a Sheldon Mixer every time.

**Write For Our New FREE Catalog**

Shows our full line of mixers which are sold direct to you on strong guarantee. Thirty days trial privilege. No other like it. Patented. Two styles, hand and power. Mixes 2 1/2 cubic feet a minute. One man can operate it, but it will keep 2, 3, 4, 5 or 6 men busy. Continuous chain drive. Tipping dump. Easily and quickly moved. All parts guaranteed. Does work equal to \$400 mixers. Be sure to get the catalog. Write today.

**SHELDON MANUFACTURING COMPANY, Box 897, Nehawka, Neb.**


**We Ship Direct from San Francisco**

We have just warehoused a carload of Sheldon Mixers in San Francisco to save you freight and time—can deliver your Mixer in three days if necessary.

**No Long Wait—Lowest Freight**

The Sheldon will pay for itself on first small job. Takes the backbone out of concrete. Makes possible those many small improvements that add so much to the value of your land.

**DOAK ENGINES**  
Simple, Reliable, Efficient  
Operate on Stove Distillate,  
No. 1 Distillate or Gasoline  
Made in sizes  
from 5 to 240 H. P.  
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503-A Market St. - San Francisco, California



**A GOOD engine that gives GOOD service ALWAYS—the**  
**Commercial**

Quality made and guaranteed. Costs a little more than some and worth a great deal more. Illustrated Catalog Free.

**COMMERCIAL ENGINE CO.**  
2416-32 Porter St., Los Angeles  
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**The California Cultivator**

A Journal of Horticulture, Agriculture and Live Stock

Rural Californian, Established 1877  
 Combined with California Cultivator 1914.  
 Livestock and Dairy Journal, Established  
 1901, Combined with California  
 Cultivator 1916

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**Saturday, Nov. 24, 1917****OUR ADVERTISERS RELIABLE**

We guarantee our subscribers against  
 loss through dishonesty of any adver-  
 tiser in the Cultivator. We do not at-  
 tempt, however, to adjust trifling differ-  
 ences between subscribers and honest,  
 responsible advertisers, nor will we pay  
 the debts of honest bankrupts. Notice  
 of complaint must be sent us within 30  
 days from date of the transaction, and  
 the subscriber must have mentioned the  
 Cultivator when writing the advertiser.

**THIS WEEK'S COVER**

Notwithstanding cold storage  
 houses are filled with frozen poultry,  
 placed there a year or more ago, good  
 fresh stock is commanding long  
 prices. However, it is now rumored  
 that the food administration will take  
 a hand and insist on early delivery of  
 this long stored frozen stock to the  
 consumer. If this is done it is to be  
 presumed that prices will be some-  
 what weak for the Thanksgiving  
 trade and possibly stronger for Christ-  
 mas season trade. The beautiful bird  
 on cover of this issue will certainly be  
 an inspiration to breeders to produce  
 more of the finest of this American  
 bird. This bird, Gold Nugget, weighs  
 47 pounds and has been many times a  
 prize winner. He is from stock owned  
 by J. W. Blackman.

**OVER THE TOP**

The Y. M. C. A. drive for \$35-  
 000,000 to carry home comforts so far  
 as possible into the cantonments and  
 trenches is succeeding, is the assur-  
 ance given as we go to press. The  
 campaign is not yet finished, but far  
 more than the \$35,000,000 has been  
 subscribed, and the more hopeful are  
 predicting that it will pass the \$45-  
 000,000 mark or possibly will reach  
 \$50,000,000.

The greater portion of this fund  
 will be spent in the cantonments in  
 America or in the camps in France,  
 but much of Europe and probably  
 much of Asia will feel the influence of  
 this organization as a result of this  
 great drive. The disbursement of this  
 fund will be entirely under the con-  
 trol of the national war work counsel  
 made up of 200 leading citizens and  
 will be devoted to the comfort of the  
 boys in the field, or, as is expressed  
 by the Y. M. C. A., will support physi-  
 cal, educational, social and religious  
 activities amongst the men.

**PLANT ORCHARDS**

It has been suggested that  
 planting of orchards or crops which  
 do not bring in immediate returns be  
 discontinued. We believe any such  
 advice is most unwise. There were  
 thousands of acres of beans planted  
 last year in lands which had been fit-  
 ted and planted to orchards as yet  
 only one or two years old, which  
 would never have been planted to  
 beans had they not had this thorough  
 preparation for orchard use. In plant-  
 ing orchard trees as usual the pro-  
 ducers of California will be fitted to  
 produce greater acreage of intercrops  
 and get at the same time the double  
 returns from orchard care and cash  
 received from the intercrops.

Fortunately such advice has not  
 been very seriously taken, for we are  
 informed that nearly every orchard  
 tree which can be secured has been  
 contracted for for this season's plant-  
 ing.

Plant more trees, and when the  
 time comes, plant intercrops. Don't  
 do your bit; do your best.

**TAXES ARE DUE**

They will soon become delin-  
 quent. In some counties they will be-  
 come delinquent on next Monday; in  
 others on the first Monday in Decem-  
 ber. Don't get caught with the 15 per  
 cent penalty.

Between Liberty Loan, Red Cross,  
 Y. M. C. A., the Belgians, the Armen-  
 ians, and a thousand and one other  
 calls we all would be perfectly will-  
 ing to forego the pleasure of paying  
 taxes this year, but as they remain  
 among the certainties of life every  
 year it will be well to attend to them  
 before the 15 per cent penalty is  
 added.

**INCOME TAX**

There will be many perplexing  
 problems to be settled by the farmer  
 when he comes to fill out the blanks  
 which the government will furnish to  
 all whose incomes exceed \$1000. Pre-  
 sumably nearly every farmer in Cali-  
 fornia will be concerned in this re-  
 port, and, as we have indicated under  
 "War Taxes" the question is to be  
 taken up more fully in a later issue.  
 Every producer should be warned to  
 be so shaping his books that he can  
 make this report complete.

We have had interviews with the in-  
 ternal revenue collectors in the Los  
 Angeles office and find them most  
 ready and willing to give information  
 on all points on which rulings have  
 been made. The local offices have not  
 yet received blanks, but it will be well  
 for every farmer to write to the near-  
 est revenue collector's office and ask  
 for these blanks and have them in  
 hand as soon as possible so as to learn  
 the government's requirements. We  
 take it the blanks will be in hand with-  
 in a very few days and will be im-  
 mediately forwarded to every one re-  
 questing them.

While waiting for the blanks and  
 for more definite information, which  
 the Cultivator will give later, we ask  
 our subscribers to send in questions  
 or problems, and they will be submit-  
 ted to our attorney or to the revenue  
 collectors, and every service possible  
 for us to give will be rendered.

Such questions as: "What is in-  
 come? What are expenses? What  
 losses may be deducted? What losses  
 may not be deducted?" are now hav-  
 ing answers shaped for later publica-  
 tion. Penalties for not making re-  
 ports are severe. The report cannot  
 be made until after December 31, 1917  
 and must be made prior to March 1,  
 1918. The report must cover the en-  
 tire period from January 1, 1917 to  
 December 31, 1918. The income tax  
 is to be paid prior to June 15, 1918.

**WAR TAXES**

As to the income tax, more in some  
 December issue, but as a hint to aid in  
 shaping up accounts prior to that time  
 let us refer this week to depreciation.  
 The farmer has never worried very  
 much about his "overhead." It may  
 now prove a serious obstacle in mak-  
 ing proper report which will be neces-  
 sary with everyone whose income ex-  
 ceeds \$1000 if unmarried or \$2000 if  
 married. At least there is one fea-  
 ture of overhead which many farmers  
 do not keep account of and that is de-  
 preciation of implements, buildings,  
 livestock, etc. Such depreciation will  
 be considered if properly reported in  
 filling income tax blanks. No manu-  
 facturing or mercantile business suf-  
 fers from depreciation to such an ex-  
 tent as does the farmer's. This is be-  
 cause of his failure to properly house  
 or properly care for his implements.  
 At best the life of a tractor and many  
 of his implements and all his horses  
 are but short.

The following information was given  
 to us by the revenue office recently  
 in answer to this question: "How  
 much depreciation will the revenue  
 service permit on a tractor?" In ex-  
 planation we referred to some farm-  
 ers who say that at the end of the first  
 year a tractor has depreciated 50 per  
 cent, thereafter 10 per cent a year,  
 and the reply was given to us that this  
 large depreciation for the first year  
 would not be permitted. If the life of  
 a tractor was six or seven years, then  
 an equal depreciation must be deduct-  
 ed for each year. Another question  
 was asked as to whether in the case  
 of the track laying type of tractor,  
 where new track has to be attached,  
 should this be considered as expense  
 of up keep or as permanent improve-  
 ment? On this point no definite in-  
 formation was given other than the  
 "guess" that it would be considered  
 as expense. However, on these points,  
 more later.

**Stamp Taxes**

Bonds, debentures, certificates of  
 indebtedness dated after December 1,  
 1917, five cents for each \$100.

Indemnity bonds, 50 cents each  
 bond. Where a premium is charged  
 for the execution of such bond, one  
 per cent.

Capital stock, five per cent on each  
 \$100. If the stock is without face  
 value, five cents per share.

Transfers of stock, agreements to  
 sell, memoranda of sales, or transfers  
 of legal title to shares or certificate of  
 stock, two cents on each \$100, or if  
 stock has no par value, two cents on  
 each share.

Promissory notes, two cents on each  
 \$100 or fractional part.

Deed, grant, assignment, or any con-  
 veyance of realty, to a value of \$100  
 to \$500, 50 cents, with 50 cents addi-  
 tional on each \$500 or fractional part.

Steamship tickets issued in United  
 States for passage to any port not in  
 United States, Canada or Mexico, if  
 costing \$30, \$1.00, \$30 to \$60, \$3.00.  
 More than \$60, \$5.00.

Proxies and power of attorney for  
 voting at business meetings, except-  
 ing religious, educational, charitable,  
 fraternal or literary societies or pub-  
 lic cemeteries, ten cents each.

Playing cards, seven cents per pack.  
 Parcel post packages where postage  
 amounts to 25 cents or more, one cent  
 each 25 cents or fractional part.

Any product or merchandise sold on  
 board of trade or exchange for future  
 delivery two cents each \$100 or frac-  
 tional part.

**Penalty**

Failure to affix proper stamps with  
 intent to evade the law subject the of-  
 fender to fine not exceeding \$1000 or  
 imprisonment for six months, or both.

**This Week's War News**

The English are approaching Jeru-  
 salem, and it is rumored the Turks  
 will soon be driven from that portion  
 of the Holy Land.

It is rumored that Mr. Romanof of  
 Tobolsk would establish the empire of  
 Siberia, but empire founding, even in  
 Asia, is not progressing very rapidly.

Suffering and starvation are extend-  
 ing in Armenia, and the civilized  
 world is being appealed to for aid in  
 supplying food to that wretched peo-  
 ple.

Lord Northcliffe has paid a high  
 tribute to American efficiency and to  
 the vigor with which our war prepa-  
 rations are being prosecuted. He ap-  
 peals to Europe to profit by America's  
 example.

A reign of terror is on in both Pe-  
 trograd and Moscow. Many of the  
 finest buildings in both cities have  
 been wrecked, and there is looting  
 and murder on all streets. Kerensky  
 has a following, but it is not strong  
 enough to restore order.

An American torpedo boat destroy-  
 er, the Chauncey, has been sunk and  
 21 American lives sacrificed, said to be  
 the result of a collision, details not yet  
 made public. Daniel B. Crane of Los  
 Angeles, and Earl Parker Bower of Or-  
 ange County were members of the  
 crew.

Premier Lloyd-George of England  
 has won in his fight for an Allied War  
 Counsel, notwithstanding the opposi-  
 tion of former premier Asquith. Amer-  
 ica is demanding, and nearly all the  
 Allies are agreeing, that there must  
 be unity and coordination in directing  
 the war.

The principal war event of the past  
 week is the Y. M. C. A. drive which  
 has provided more than \$35,000,000,  
 exact amount not yet determined,  
 which will increase the fighting power  
 of American boys by improving the  
 morale and giving a bit of home life  
 to them in their camps.

There has been little comfort in the  
 news from the front during the past  
 week. Haig is still pounding on the  
 West front, and Tuesday's reports  
 state that the Teutons are retiring at  
 least a mile. Some of the American  
 boys have been killed in the trenches  
 by heavy Teuton bombardment. Our  
 boys have honored their flag and given  
 as good as sent.

The situation in northern Italy is  
 serious. Von Hindenburg has been  
 transferred and the drive which has  
 been continued day and night is  
 fierce. The Piave has been crossed  
 at two points, and the retirement of  
 civilians and the removal of property  
 from Venice has been continued. Re-  
 inforcements of infantry, and espe-  
 cially of heavy ordnance from France,  
 are arriving daily, and there is still  
 hope of maintaining the line north of  
 Venice.

Destruction of food and war mun-  
 itions, dynamiting or firing vessels in  
 harbors, destruction of all kinds of  
 property, have been continued or at-  
 tempted in the United States. Some  
 spies have been killed, more have  
 been imprisoned, and the decree that  
 all subjects of the kaiser must regis-  
 ter is being more rigorously enforced.  
 The president has issued a proclama-  
 tion restricting free movement of all  
 enemy aliens. Unnaturalized male  
 Germans over 14 years of age must  
 register at once and then must report  
 periodically to federal officials. They  
 may not travel without permit; they  
 must not approach within 100 yards  
 any wharf, warehouse, grain elevator  
 or other establishment specified in the  
 proclamation. They may not travel  
 under any circumstances on the  
 Great Lakes or any river or waterway.

**CULTIVATOR CHISEL TEETH**

It is my business to decide if there  
 shall be war. There is only one law and  
 that is my law.—The German Emperor.

Food pledge cards and thrift stamp  
 cards are additional evidence that the  
 men behind the men behind the guns are  
 not standing still on the job.

The suggestion has been made that  
 drafted aliens, instead of being exempted,  
 be given the choice of military serv-  
 ice or return to their native land within  
 90 days.

Six hundred German spies taken in the  
 Great Lakes region are now free boarders  
 in our federal prisons—this since April  
 2. We may be slow, but there's nothing  
 so very slow about U. S.



# Agricultural News Notes of the Pacific Coast

## Northern California

Rice threshing in the Butte County fields is practically over.

Chico, Butte County, purchased this year about 1400 tons of prunes.

Several barns and farm buildings have been burned in Yolo County.

Organization of a farm center has been effected at Chico, Butte County.

The Northern California Counties Association is appealing for 5000 members.

"Does it pay to feed grain" is being discussed by dairymen of Humboldt county.

Butte County ground squirrels are digging themselves in because the poison squad is out.

The sugar factory at Hamilton City, Glenn County, is turning out about 6000 bags of sugar daily.

The auto headlight law is no joke, and warning is given that every headlight must conform to the law.

Owing to California's great production, it will probably be the bean price center of the United States.

It is announced that the university extension will put men in the field to encourage greater poultry production.

Chico is sending 2600 boxes of prunes for use of the Sammies in France. The shipment is valued at 10,075.

Bean growers of Yolo County are complaining that the efforts of the food administration and the large buyers have depressed prices.

Tehama County has applied for 90 loans and been granted by the national association ten. Others will be granted as rapidly as possible.

The first shipment of new crop of beans from the Orient was unloaded early this week in San Francisco. There were about 5000 sacks.

Permits have to be secured by farmers who have stored their grain in warehouses to withdraw same even for use on owner's farms for seed.

The Sebastopol Apple Association which has managed the successful Gravenstein Apple Shows for several years, has closed its affairs and retired from the apple show business.

Cattlemen in session at San Francisco have decided to make appeal to Washington in favor of exemption of herders and others essential to the success of the livestock industry.

Many citrus growers of Butte County who refused to attend the standardization meeting later passed resolutions urging use of "substantially" instead of "fully" colored.

The state reclamation board has ruled that land owners in Butte County rice fields shall regulate the flow of waste water so that not to exceed 500 second-feet shall run into Sutter basin.

The Alameda County Poultry Association opens its doors to its great poultry, pigeon and pet stock exhibit at Oakland, Thursday, November 29. It will continue to and including Sunday, December 2.

Bean growers of the lower Sacramento Valley are appealing to the food administration for definite assurance as to future course in the bean market. There is assurance that the price of beans will be controlled, but no further statement being made, it leaves growers and dealers at loss as to how to proceed.

## Central California

Tulare County is shipping alfalfa at \$20 per ton.

The Oakdale almond crop is double that of any former year. It will net the section over \$100,000.

Entries for the seventh annual Stanislaus Poultry Show closed November 28. The show opens December 5.

Visalia feeders are fattening 30,000 head of sheep for the Western Meat Company. Beet pulp is the principal feed.

The threshing of the rice crop in Claus, Stanislaus County, shows the crop to be running about 45 sacks to the acre.

The food administration has limited confectioners and other large users of sugar to 50 per cent of usual purchases.

Madera County hunters are trapping coyotes and they find a sprinkling of raisins around traps an excellent bait.

Stanislaus and other communities of San Joaquin County are planning for a greater number of bean threshers before another harvest season.

Vineyardists of Central California received over ten and a half million dollars from the California Associated Raisin Company for their 1916 crop.

Deputy State Commissioner Weldon and County Commissioner Mills of Butte County are discussing standardizing oranges and the orange pack with citrus growers of Butte County.

Eldorado County irrigators are holding meetings and discussing plans for a proposed irrigation district. The present problem is to determine the boundaries of the district.

## Southern California

Lima bean growers have now been paid six cents per pound, with other payments yet to come.

Early completion of the great reservoir near San Dimas, Los Angeles County, is promised.

One turkey grower of Los Angeles County reports an offer of 40 cents live weight for turkeys.

Five hundred grammar grade and high school pupils of Orange County are still working in walnut orchards.

Brawley and other lettuce growing sections of Imperial County are beginning the making of crates for the next crop.

The department of agriculture has estimated that California will produce this year 1,552,000 sacks of 80 pounds each of limas.

Southern California's sugar beet campaign is practically over with the greatest production ever, though some of the factories report slightly less output than the 1916 campaign.

Cantaloupe growers of the Imperial Valley are discussing contracts for disposal of next season's output. Shippers are chary because of possibility of government taxing all profits ten per cent.

Southern California is still shipping thousands of tons of tomatoes but the output will be short of that anticipated. The season began with the first full car shipment from Imperial Valley, June 4. The full car shipment will continue until stopped by frost.

The 18th annual meeting of the San Dimas Orange Growers Association brought out the fact that the past year has been the greatest in the history of the association. The returns to the growers were over \$600,000 and over \$70,000 was paid out for labor.

## The Coast and General

There are 136 tractors on the 45 sugar plantations of the Hawaiian Islands.

The Yakima Valley's potato crop this year will be only 85 per cent of normal.

Yakima's million dollar sugar factory is in operation for the first time this year.

Sugar shortage in France is causing investigation which will lead to greatly increased production in 1918.

Poultry and pet stock people of Thurston County, Washington, are holding their annual show this week.

Irrigationists of the state of Washington meet December 10-11 at North Yakima to discuss irrigation problems.

Cotton speculators have been warned by the food administration that profiteering, either in cotton or seed, must stop.

Excessive profit from food handling is to be prevented through the federal licensing system in effect since November 1.

The crops on the Minidoka irrigation project in Idaho aggregated five millions of dollars this year as against a little over two millions last year.

The food administration has ruled that confectioners shall be limited to 50 per cent of their former sugar demands. California grocers are now refusing to sell more than 20 pounds to a customer.

There are in the United States 5424 farmers cooperative organizations, according to report of the United States department of agriculture. There are 213 cooperative cotton marketing organizations doing an aggregate business of nearly \$30,000,000.

## "Liberty Bond" Trees

We will accept Liberty Bonds as full or part payment for trees.

In buying a bond you have helped Uncle Sam. By exchanging Liberty Bonds for Silva-Bergtholdt trees you increase the return of your original investment. Silva-Bergtholdt trees in your orchard add to its productiveness and insure your future profits.

**Good nursery stock is mighty scarce.**

The visible supply is 50% of normal and the demand heavier than usual—that's why you will find it profitable to buy now.

*Submit us a list of your wants for special prices. Do this now while our assortment is complete.*

Our foot-hill trees are free from the root diseases common to other localities. Propagated from selected parentage—roots fibrous and well-branched—trees hardy and of toughened fibre—features that spell success in tree planting.

Write out your list. Mail it right now.

Send for your copy of our book—"California Fruits," written by a practical fruitgrower of many years' experience. Tells what to grow, where to grow it and how to grow it. And—it's free.

*J. E. Bergtholdt*  
Secretary and Manager.

**SILVA-BERGTHOLDT CO.**  
NEWCASTLE - CALIFORNIA



Foot-hill grown trees are immune to crown-gall and root-knot

Roots such as are grown only on our foothill soil and location THEY ARE TREE INSURANCE



# Unusual Holstein Offering!

Our consignment to the Quality Sale, Sacramento, December 5, 1917, consists of the following ten highly bred animals, all of show ring type and quality.



Miss Pontiac Nudine of Springvale

Miss Pontiac Nudine of Springvale 175955, who has a 30 pound record made at five years. Heavy in calf to King Segis Alcartra Prilly, a 30 pound son of the \$50,000 Bull, and Grand Champion Bull at California State Fair, 1917. Also a yearling daughter of this cow by a 30 pound sire and bred to King Segis Alcartra Prilly.

Miss Korndyke Mercedes 121428, Grand Champion cow—California State Fair, 1917. Heavy in calf to King Segis Alcartra Abbekerk, a 30 pound son of the \$50,000 Bull.

Oakvale Jennie Korndyke 173499. A five year old cow with a 27 pound record, who has a 30 pound full sister. Heavy in calf to King Segis Alcartra Prilly.

Two daughters of the \$50,000 King Segis Pontiac Alcartra. One from a 31.35 pound dam—~~one~~ whose first seven dams averaged over 31 pounds butter in seven days. Both bred.

A daughter of King Walker 5th and out of a 30 pound cow. Safe in calf to King Segis Alcartra Prilly.

A daughter of the great sire It and from a 27 pound three year old daughter of King of the Pontiacs. Bred to King Segis Alcartra Prilly.

A daughter of King Mead of Riverside and from a 23.63 pound dam, whose dam is a 30 pound cow. Bred to King Segis Alcartra Prilly.

A great young bull born January 11, 1917. A high class show bull whose dam is a 31.70 pound five year old, and capable of increasing present record. His sire Spring Farm King, who is a 34 pound son of King of the Pontiacs and a full brother to the first 44 pound cow K. P. Pontiac Lass. The records of the first three dams and the sire's full sister of this bull average 34.41 pounds butter in seven days.

## BRIDGFORD COMPANY

KNIGHTSEN, Contra Costa County CALIFORNIA

## Prize Winning HAMPSHIRE

The farmer who wants a hog that puts on 200 lbs. of firm meat at six and a half months of age buys the Hampshire.



F. A. Langdon  
Manager

Llano Vista Ranch, Perris, Cal.

Boars, gilts, bred and open, for sale from the P. I. E. Champion Hampshire stock, just as nearly perfect as they make them.

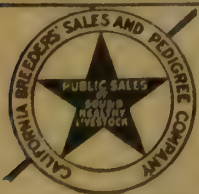
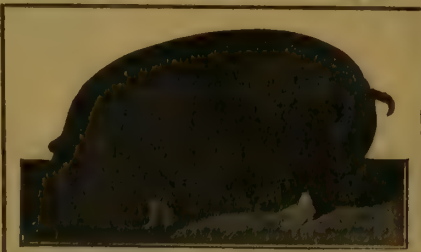
F. V. Gordon  
Owner

## Poland Chinas, Medium Type

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain; 12 firsts, Junior Champion and Reserve Grand Champion Boar, Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

**M. Bassett**

Hanford, Kings County, Cal.



## SERVICE TO THE BUYER TO THE SELLER

Economy of time, effort, and money is only one of the many services our organization is delivering to both sellers and buyers of registered livestock in public auctions. If you want to consign cattle for public sale, or disperse your herd to best advantage, write us about it.

**California Breeders' Sales and Pedigree Co.**  
C. L. HUGHES, Sales Mgr. SACRAMENTO, CAL.

The advertisers in the California Cultivator are known to be reliable and we recommend them to our many subscribers.

## Who's Who

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photographs and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Written for California Cultivator



RS Eliza Shepard, manager of the Jack London Ranch at Glen Ellen, has been identified with the breeding of registered Shorthorn cattle, Shire horses and Duroc-Jersey hogs for about three years. Her most valuable investment was Roselawn Choice, the great herd sire bred by Roselawn Stock Farm, he by Gibson's Goods, a bull brought to the Coast by the late Tom Gibson. With this bull at the head of the London herd Mrs.

don, and the untimely deaths of both horse and owner was a remarkable coincidence since they died but a few days apart.

Mrs. Shepard's enthusiasm for the livestock business, her active interest in organization work, keen selling ability, and thorough sportsmanship are the reasons why she occupies her high place among the successful breeders of California.

Mrs. Shepard finds time to look after charitable matters, has sent a son



Mrs. Eliza Shepard

Shepard, the manager, was enabled to fill out a show herd which has won consistently wherever exhibited. She has won championships and grand championship ribbons several times with her Shorthorn herd.

So far the London ranch has not shown Durocs at the fairs as the demand for breeding stock has kept the herd to a limited size. But the London Shire horses have been big show winners since the P. P. I. E. In 1916 Neuadd Hillside, the great stallion, was grand champion at Sacramento. This sire was a favorite with Mr. Lon-

to fight under the stars and stripes, has an inexhaustible fund of wit and humor, and holds a high place in the esteem of her fellow breeders. Together with Mrs. Charmion London, widow of the late Jack London, she is doing more than her share toward increasing the production of food and meat animals.

The picture appearing herewith was snapped on the London ranch. The Shorthorn heifer is London's Laverder Lady and she won first in her class at the 1917 California state fair, and is the especial pet of her mistress.

## Dairy Farming Under War Conditions

By F. W. Well.



CONDITIONS following in the wake of the war have affected the business of dairy farming, as they have other vocations, in several ways:

They have caused a marked increase in prices for feed and supplies; a scarcity of labor resulting in high wages, and, to a relatively smaller extent, they have increased the prices paid for dairy products. The purpose of this article is to discuss briefly how the dairy farmer may meet the new conditions created by the war so as to receive the returns from his labor and the profit on his investment to which he is fairly entitled. The economics of dairying under present day conditions will not be discussed, beyond calling attention to two facts: First, that milk is today, as it has been in the past, the cheapest source of animal food available; its use in the household both by children and adults may, therefore, be encouraged to advantage. Second, that any increase in the price of milk that may have occurred lately, has not been in proportion to the increase of the cost of producing the milk.

The dairy farmer cannot readily change these conditions, and he has to face them and make the best of them. He has it in his power, however, to cheapen very materially the production cost of the milk, both by adopting a system of feeding that will cause his cows to yield the largest flow of milk of which they are capable,

and by improving his herd through disposal of poor producers and the use of a good dairy-bred bull, so that the production of the herd may be gradually increased.

According to best information available, the average production of butter fat by the dairy cows in the state does not reach 150 pounds of butter fat per year, corresponding to a milk yield of about 4200 pounds (500 gallons). Practical experience has shown that it is possible in many cases to raise this yield by 50 per cent, or even 100 per cent, by adopting a more liberal and suitable system of feeding the cows, and that the dairy may thus be changed from a losing proposition to one giving good returns for the cost of feed and labor and other running expenses. If the annual production of California cows is only 150 pounds of butter fat per head, large numbers of cows do not reach even this figure, and the only reason why the owner of such cows can be satisfied with the results of this labor is that he markets the feed grown on the ranch through the dairy and receives fair market prices for these, but 150-pound cows can give no returns to the dairy farmer for the labor and expense involved in producing the milk. Practical dairy experience has established beyond question, however, that marked improvement in production may be brought about by either or both of the

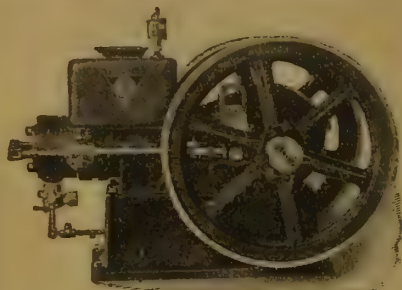






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Let the "Alpha" Do Your Work



Cut Feed  
Saw Wood  
Pump Water  
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Churn or Wash-  
ing Machine  
Operating Power  
Sprayer

**A**N ALPHA ENGINE is almost indispensable on the farm these days when labor is so hard to get. It's so reliable, too. Always on the job. Never quits. Never gets laid up. You can always depend on an "Alpha."

Thousands of engine owners swear by the Alpha because they have found that it is reliable at all times and under all conditions. It is sturdily built. It is simple in construction. It is powerful. It runs on either gasoline or distillate and develops its full rated horse power on a minimum of either. If you want an engine that you will be thoroughly satisfied with, put your money into an ALPHA.

Made in Eleven Sizes, 1 1/2 to 28 H. P. Get our Catalog.

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61 Beale St.

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**Lady Beatrice**  
Senior and Grand Champion cow at the 1917 California State Fair and a big winner in the English show yards. Record 8538 pounds.

## INNISFAIL MILKING SHORTHORNS

Our herd consists of animals from the leading herds of England and the United States. All milk records from females are official. Average records 8000 pounds and over. Young bulls for sale suitable either for dairy or beef herds.

**Alexander & Kellogg**

Farm on Grisy Island SUISUN, CALIFORNIA

## I Will Buy 30 Registered Holstein-Friesian Cows

They must be not too far along in years, must be sound, tuberculin tested, now milking or soon to freshen, and I shall need reasonable evidence that they are heavy milkers. A. R. O. records will be no handicap, but for my purpose they are not necessary. I do not expect to find these cows in one herd, so write me how many you have for sale, a general description of their breeding and type, and the cash price you ask.

Address Box C, Care California Cultivator, Los Angeles, Cal.

## HOLSTEIN-FRIESIAN CATTLE

Registered young bulls from best families.

### REGISTERED BERKSHIRE PIGS

Masterpiece, Longfellow, Robin Belle, Rookwood, Duchess and Rival's Champion's Best Strains. Fine individuals of both sexes—we pay registration fee. Careful attention given to mail orders.

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WHITTIER, CALIFORNIA

### SANDYACRE FARM, Home of Marsh's Big Type Poland-China Hogs

"MODEL MAJOR" winner of three firsts and two Grand Championships is at the head of my herd of prize winning sows. My sows are the easy feeding, big litter kind that have quality. Now booking orders for June delivery of spring pigs. Satisfaction guaranteed or money refunded. H. L. MARSH, Modesto, Cal.

### Driver Agents Wanted

Drive and demonstrate the Bush Car. Pay full out of your commission on sales. My agents are making money. Shipments are prompt. Bush Cars guaranteed or money back. 1918 models ready.

Write at once for my 48 page catalog and all particulars. Address J. H. Bush, Pres. Dept. 11 L.N. Chicago.

115-in Wheelbase Delco Ignition—Elect. Sig. & Ltg. BUSH MOTOR COMPANY, Bush Terminal, Chicago

The largest raisin output ever is giving a problem to the Associated.



Gertie's Son's Victor No. 123159  
Dam, Victor's Lady Kate, (R.O.M.) of 537 pounds Butter in 303 Days as a four-year-old.

135 Registered Jerseys in my herd, including 18 Register of Merit Cows. Blue Ribbon winners at 1916 Kings, Kern and Tulare County Fairs.

**Invest in Jerseys and Start Right**

Visitors Welcome Correspondence Solicited  
**A. A. Jenkins**  
Tulare Cal.

## Finely Bred Holstein Bulls

from dams of the best blood lines. They are well developed, of splendid individuality and type. Our place is within one mile of the city so they are easy to see.

**H. B. Cowan**

Modesto, California

### Berkshire Hogs—Milking Shorthorns

Breeding Stock For Sale

**G. A. Murphy - Perkins, Cal.**

ther plan is to test it first by turning in an animal of inferior value. If it refuses to eat, it is probable that the plants are not safe. Hungry stock are, of course, much more liable to be fatally poisoned than those given some feed previous to turning into the field.

"The fact that losses have occurred

does not justify the condemnation of the sorghums as a stock food. Further losses may be avoided by a little care. No sorghum fodder should be destroyed, even if proved to contain prussic acid, since further growth and drying may render the vegetation harmless, and it can at least be rendered harmless by being made into hay or silage."

## Two More 1000 Pound Cows in Morris Herd

While the spectacular recent event in the herd of registered Holsteins owned by A. W. Morris & Sons Corporation, Woodland, is of course the world's official yearly butter record

record at past 11 years of age, this young cow seems to have future possibilities. She is a remarkably fine individual, is sister to both the sire and dam of Aaggie Acme of Riverside 2nd.



Aaggie Acme of Riverside 2nd

established by Aaggie Acme of Riverside 2nd, two other members of the herd have distinguished themselves in yearly tests.

Aralia De Kol 3d, daughter of the former world's record cow, Aralia De Kol, has fulfilled the promise she held out as a junior two year old when she established a new California record in her class by producing 772.93 pounds butter in one year. Her latest record, just completed, is 24,548.8 pounds milk and 1101 pounds butter in one year. When it is remembered that her great dam made her world's

and makes the third 1000 pound daughter of her sire, Juliana King of Riverside.

The other half ton butter producer is Hartog Creamelle De Kol, who after making 26.86 pounds butter and 621.1 pounds of milk in seven days, went over the long distance and has just completed a year's record of 26,457.1 pounds milk and 1046.87 pounds butter. She is sister to Pauline Creamelle Mercedes that made a seven day record of 614.3 pounds milk and 30.22 pounds butter in the Morris herd some months ago.

## Cattle Brand Law



P. Iverson, executive officer of the state cattle protection board, writes regarding enforcement of the act to create a cattle protection board

and give it power to protect breeders and growers of cattle from theft and to provide for the registration of cattle brands and the licensing of cattle slaughterers, inspection of hides for brands and marks, etc., in effect that this law, "while new to California, is old in quite a number of the other Western states, and I have become impressed with the fact that many cattlemen fail to realize or understand just what it means, and I think that you can render your community a valuable service by giving publicity in your paper to the provisions of this law.

Cattlemen and Slaughterers Attention

"It is of particular interest to cattlemen to know that the law provides that no cattle shall be branded with a brand not recorded with the cattle protection board. There seems to be a mistaken impression in some sections that recording is optional with the cattle owners, but section four of the act is very definite in its language. It is also believed by some that recording with the county recorder is sufficient, but this is erroneous.

"The last legislature passed a law which required that to perpetuate marks and brands it was necessary to re-record them in the several counties after advertising notices in the papers. This resulted in an apparent conflict of the statutes and the question was submitted to the attorney general who



Woodcroft Ybma Pletje

This cow will be offered at the Guaranty Sale in Sacramento by McAllister and Sons. She has a seven day record of 51.28 pounds, 30 day record, 124.02 pounds butter. She is safe in calf to it.



advises that all cattle brands must be recorded with this board or they cannot be given proper recognition (except pure bred cattle entitled to registration).

"It is particularly urgent for cattlemen, who wish to continue using their brand, to make early application with this board for recordation, as priority of application may have considerable bearing on the board in granting permits for the use of different brands and unless so recorded their use is illegal.

"The fee for registering a brand is \$2.00. Slaughtering fees are as follows: less than ten head per month \$1.00; over ten and less than 50 head per month \$10; and over 50 head per month \$25 per year. All fees are payable annually in advance.

"Cattlemen desiring forms for recording cattle brands, or forms for application for slaughterhouse license and copies of the law, can address Cattle Protection Board, Sacramento."



Lady Leola Hengerveld  
28.08 pounds butter in seven days. Contributed by R. F. Guerin, Visalia, to Sacramento Guaranty Sale.



Jennie Terzool Hicks 4th  
600.3 pounds milk, 32.7 pounds butter seven days. Contributed by Palo Alto Stock Farm, to Guaranty Sale at Sacramento.

#### AT THE PACIFIC INTERNATIONAL

Prof. Gordon H. True and herdsmen of the university farm at Davis

are at the Pacific International with a bunch of prize winners—perhaps. In any case some remarkably fine animals have been taken up to show the Northwesterners some of the work of the University of California.

Stockyard figures gathered by the food administration show that 73.3 per cent of the calves slaughtered at nine large packing points in this country during the first nine months of this year were males.



Miss Pontiac Nudine of Springvale

30.03 pounds butter in seven days. Contributed by Bridgford Company, Knightsen.

#### THE HOLSTEIN EVENT OF THE YEAR

No livestock event has aroused so much interest throughout the Pacific Coast as the announcement of the Holstein Breeders' Guaranty Sale to be held at State Fair Grounds, Sacramento, California, on Wednesday, December 5. Indications are that a record crowd will be in attendance to take part in this sale which promises to make Holstein history. The attractive catalog of the sale, which is now being distributed, reveals a wonderfully well bred lot of cattle, that appear fully to justify the claims made at they are the highest average lot of Holsteins ever offered in one sale ring in America.

Recently completed records have brought into still greater prominence any of the offerings, it being noted among them that the new world's official record butter cow for 305 and 365 days, the world's record for two years, Aaggie of Riverside 2nd, has five sisters in the sale, all of which are out of dams with excellent records up to over 31 pounds butter in seven days. Then there is a splendid daughter of Infired Hotelling, one of whose daughters recently completed a record of over pounds butter in seven days. Daughters of Segis Pontiac De Kol also received the benefits of three past records just completed by three of their sisters. One of them, Aralia De Kol Pontiac Mead has broken the California junior two year old record for yearly butter production by a wide margin, her record being 18,398 pounds milk and 934.25 pounds butter. Two other daughters of the same sire, Aralia Mead Pontiac De Kol, a senior two year old, and Cobossie Prudyke Burke, a junior two year old, made records of 698.30 and 664.75 pounds butter in one year.

The highest seven day record cow in the sale, Jennie Terzool Hicks 4th, 32.71 pounds butter in seven days, is not only the highest seven day record cow ever offered for sale in California, but she is also the highest yearly record cow ever offered in the state. By sale date she will have been on yearly test just about months, and will have to her credit about 1075 pounds butter. She and her son and daughter promise to be one of the star attractions.

Woodcroft Ybma Pietje, 31.28 pounds butter in seven days, not only has a great record but is one of the most promising and pleasing cows a discriminating buyer could wish for. She also has two daughters in the sale, one sired by King and of Riverside and the other by a son of Pontiac Korndyke. Both of these heifers are beautiful individuals, and the dam and two daughters ought to go home together.

Korndyke Sadie Vale Star-Rena, the national daughter of King Korndyke of Vale, is the sort of heifer that all breeders want. Her seven nearest dams average 33.86 pounds butter in seven days, second highest average in the world, and the highest average for any heifer ever offered either at public or private sale.

The beautiful young daughter of the California state record two year old, K. Tola Joe, is bound to be much sought after by leading breeders as she carries the blood of some of the most wonderful producers of the breed and is herself a sweet individual.

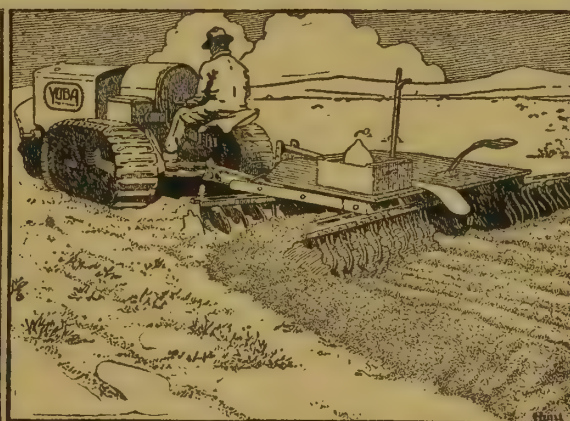
One might go on through the entire catalog and find much of outstanding interest in the pedigree of each individual. Owing to the large number to be sold in one day, the sale will open promptly at 10 o'clock a. m., Wednesday, December 5, at State Fair Grounds, Sacramento.

## DISC PLOWS AND OTHER TRACTOR TOOLS

GROUND HOG plows—for Heavy Soils  
AUSTRALIAN KING plows—for Lighter Soils  
CUNNINGHAM LAND ROLLER AND PULVERIZER

All Sizes—We Can Save You Money—Write Us

SPALDING-ROBBINS DISC PLOW CO., Manufacturers  
625 Market Street San Francisco, Cal.



## no limitation of ground

Whatever the condition of the soil, the YUBA Ball Tread Tractor is the master.

Here's the tough adobe land requiring deep plowing to turn up for the air to penetrate and disintegrate. The strength of your best teams is worn out, and the soil is not plowed deep enough.

The powerful YUBA forces its way through it like a tug boat hauling a great ship to sea. It is built for this hard job and does its work successfully.

One man and a YUBA does the work of several men and a lot of horses—and does it better.

Have you soft, sandy soil, where the broad tread of the YUBA will not sink—where the time is valuable

and one man could cultivate forty acres a day?

Have you soil where horses sink deep and make slow progress—where the evenly balanced weight of the YUBA Ball Tread would not pack the ground—where the perfect mechanism, the accurate machining, and the high-grade materials used in the construction will save break-downs and stopping for repairs?

Yuba Manufacturing Company		Dept. B-8
433 California St., San Francisco, California		
Gentlemen: Kindly send me catalog and prices on the Yuba Ball Tread Tractor.		
I am interested in Model 12-20		Model 20-35
Name _____		
Town _____		State _____
P.O. Box _____		Size of farm _____
[ Check main crop raised ]		
_____ Fruit	_____ Rice	_____ Grain
_____ Grapes	_____ Hops	_____ Alfalfa

If interested in Pumps, send for the Pump Catalog.

Yuba Manufacturing Company

Factories at Marysville and Benicia, California

433 California Street, San Francisco



VITALITY  
SIZE  
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Gold Nugget, first yearling Tom.  
Los Angeles, 1916, defeating New York and  
Pittsburg winners.

## GOLD NUGGET STRAIN Giant Bronze Turkeys NONPAREIL RANCH

Won at America's greatest turkey show, WORLD'S FAIR, San Francisco, three prizes on four entries.

In 1917 They Again Proved Their Superiority

At Los Angeles, 1917, eleven entries, eleven prizes, and Gold Special Sweepstakes for best turkeys in the Show. California State Fair, September, 1917, first and third yearling Tom and Gold Special for best pair of turkeys in the Show.

At the great State Fair of Texas at Dallas in October, 1917, first and second yearling Tom, Gold Special Sweepstakes, first, second and third largest hen turkeys in the Show.

Large turkeys can be raised at practically the same cost as small ones.

Stock and Eggs for Sale

Address all Communications to

J. Will Blackman, 607 E. Third St.  
Los Angeles

## DON'T try to ignore FACTS

Your success with poultry depends on feeding in harmony with established scientific facts.

The scientific fact is that the lactic acid bacilli contained in buttermilk kills the CAUSE of bad bowels in poultry, it prevents and cures White Diarrhoea.

Get bulletin 162, recently issued by U. S. Dept. Agriculture, Berkeley, Cal.; a complete exposition of the wonderful value of lactic acid bacilli contained in buttermilk. Write them today for a free copy of this bulletin, it may mean much to you.

A-1 Buttermilk Mash, containing DRY BUTTERMILK costs but a few cents more than non-buttermilk mash; learn why it's worth a great deal more.

Get more and better eggs. Raise more and stronger young chicks.

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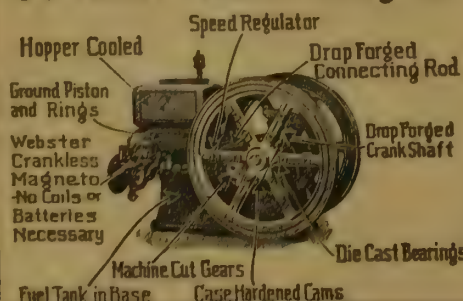
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LOS ANGELES

## The Weak Place in the Poultry Industry

Written for California Cultivator By Jean A. Koethen

**N**O CHAIN is stronger than its weakest link. Any system or scheme of things may go on for a while, perhaps for generations, in spite of some hidden, fatal weakness, but when a crisis comes everything depends on the strength of that weakest place and on the possibility of repairing it. The poultry industry is facing such a crisis today. While feed prices were reasonable the price received for eggs was not such a vital matter. Now with the cost of production far exceeding any income that can be hoped for from market eggs, poultrymen are becoming panicky and quitting. I have seen it stated recently that 8000 breeders have given up the business on the Pacific Coast, not because they wished to, but because it costs \$7.50 to feed a hen and only a blue ribbon hen can lay eggs enough to pay for her feed.

The situation is one which needs to be faced squarely and not smoothed over. Is the poultry industry built on such a flimsy foundation that it cannot stand the slightest gale? Whether it costs \$7.50 a year to feed a hen or \$4 or \$3.50, we all know that the cost of feed has trebled in three years while the price of eggs has increased not more than 50 per cent.

No sane poultryman would like to see the maximum price of eggs increased. We talk about dollar eggs, but who will pay a dollar a dozen for eggs? They are worth it in comparison with the prices of meat, nevertheless, only invalids and a few of the very rich would ever think of paying such a price. What the industry needs is not higher prices in the fall when all eggs are produced at a loss, but an evening up of the price throughout the year so that they shall average 50 cents a dozen instead of 30 for the year's output.

As things stand now the price of eggs is controlled absolutely by the speculators who buy eggs in the spring for from 20 to 25 cents a dozen and put them on the market in the fall for from 45 to 60 cents. The producer is in the hands of these speculators and lets them say what he shall receive without even protesting at the injustice of such a system. Instead of protesting he submits as long as he can, and then when he has lost all the money he can afford to lose, turns to some other business for a living.

What the poultry producer needs, and what he must have, if he is to remain a poultry producer, is an organization similar to those which have been in vogue for years in Denmark, Sweden, Canada and South Australia, a cooperative organization through which all the poultrymen of each state, federated into a national organization, shall collect, put in storage and market direct to the consumer the whole poultry output. The fact that such an organization has been a success in other countries is proof enough that it could succeed here if all producers went into it. As long as any branch of the business is left to outsiders, just so long will the producers be robbed of their just profits.

The Canadian egg circles are a familiar example of the way in which these organizations are conducted. In these circles eggs are collected several times a week from the producers, are marked with each producer's mark, candled, and rotten or imperfect eggs charged against the producer's account. A producer who continues to send in eggs of poor quality is first warned, then fined. Eggs are stored by the organization's own storage plant in spring and put on the market at a time and in a way to best conserve the interests of the producers. Everything is done by the organization, and the producers themselves are "it".

That the marketing end is the weak place in the poultry industry is beyond question. We have learned how to raise young stock with a minimum loss of life; how to make hens lay by proper feeding and care; how to breed to increase egg production,—that is, we are learning these things, and books and farm papers are so full of

advice that any one who cares to improve his flock or his methods has only to study and follow directions. When it comes to marketing, we are helpless children, turning our eggs over to the grocer, if we happen to be small producers, for whatever he is willing to give us in trade, and sending them to the commission man, if we count by cases instead of dozens, anxious only to have them off our hands and be rid of all responsibility. Don't we really deserve the punishment that has come upon us, and isn't it time we stiffened our backbone a little, and put our brains to work on this greatest problem of all? Maybe the Canadian way or the Danish way is not just what we need, but surely there is some way in which American poultrymen may organize to put down the speculator. We have had great hopes of Mr. Hoover, but he is a busy man and there may be no industry left by the time he comes to the rescue.

### BROODY HENS CUT EGG PROFITS

Now that the hatching season is near the poultry raiser will be interested not in persuading hens to sit but in breaking them up. Broody hens greatly reduce the egg yield and in this time of egg shortage it is important that each hen be kept busy. H. L. Kempster of the Missouri college of agriculture says that it is a mistake to let them sit simply because they want to. If they are allowed to follow their inclinations they will sit indefinitely. If they are broken up they will begin laying again in about ten days provided they are in good condition.

Such methods as dipping the broody hen in water are useless in breaking her up and they may impair future egg production. Mr. Kempster suggests that as soon as the hen shows signs of broodiness she be removed to a slat or wire bottom coop. She will be easier broken up at first than later. Broodiness is quite largely a state of mind. If the broody coop is put where the hen can see the rest of the flock she will grow restless. After four days let her return to the flock. By this time she will have changed her mind and will go back to laying. Be sure to feed her liberally while in the coop, for laying hens must have a surplus of fat. A hen in poor flesh rarely lays. A little attention to the broody hen will make a great difference in the looks of the balance sheet. In these days of high priced eggs it is important that the hen take as little vacation as possible.

The early molting hens are the ones that can be depended upon to fill the egg basket this winter. If a hen does not get through the molt before cold weather sets in, the chances are two to one that she will not get to laying until spring. From the fancier's standpoint, however, where eggs for hatching are made a specialty, it is not always desirable to have the hen lay heavily through the winter, and in this case the late molting hen is perhaps most desirable.

## DRY MASH

### The Best Feed on the Market

Has the highest protein at the lowest price \$2.80 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding turn their grain in the evening. Wash their Mash and let them eat all they will; put it on top of the Dry Mash; then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At Your Dealers or

The Globe Mills, Los Angeles



# Hooverize the Squirrel

**C**ALIFORNIA ground squirrels cost \$5,000,000 a year in damage done to growing crops according to the estimate made by observers of the University of California. In a bulletin recently issued, the following hints regarding control are given.

It is of little use to try to kill ground squirrels by strychnine-coated barley after September or by trychnine in fruit after October. From November to the end of February the best way to attack the ground squirrels is to fill their burrows with gas from carbon bisulphide, introduced by use of the "destroyer" invented by Dr. John D. Long, of the United States public health service, which pumps the vaporized carbon bisulphide into the burrow.

Poisoning works well, however, from March on until the end of September. From the time that such plants as the alfalfa begin to go to seed the squirrels fill their cheek-pouches and carry the seed into their burrows. From that time on strychnine is effective. Pour over 16 quarts of barley a mixture compounded of one ounce powdered alkaloid strychnine, one ounce baking soda, three-quarters pint of thin starch paste, made by dissolving a heaping tablespoon of dry gloss starch in a little cold water, to which is then added three-fourths of pint of boiling water; one-quarter pint heavy corn syrup, one tablespoon glycerine, and one-tenth ounce saccharine. Not more than a teaspoon of poisoned grain should be left in one place, and it should never be put where poultry can reach it. The squirrels will fill their cheek-pouches with the poisoned grain. These cheek-pouches are not lined with fur, as are those of the pocket gopher, but have thin walls which readily absorb the strychnine on the outside of poisoned grain. Squirrels are more readily poisoned through carrying poisoned grain in their cheek-pouches than through actually eating the grain, so the coated grain is better than grain soaked in a strychnine solution.

It is better to poison in the spring than in the fall, because the older squirrels have the curious habit of hibernating up, about the end of August and lying dormant in a torpid state, with respiration not perceptible, until toward the end of February. It is late in March and in early April that most young squirrels are born. A litter consists of from five to 11 young, so to poison a squirrel in March may do as much good as killing a dozen squirrels in April.

The gopher snakes, badgers, and various other natural enemies of the ground squirrel well deserve protection. They are the farmers' staunch friends. In the nest of one Golden Eagle, at Rincon, James B. Dixon found nine jack rabbits, and in the nest of another Golden Eagle at Lilac, 1 dead ground squirrels — and this without counting the squirrels already added to the two young eaglets in the nest.

One of the most discouraging features in controlling the ground squirrel, declares Mr. Dixon, is the doing nothing attitude of a few people in each locality who neglect squirrel control on their own land and allow their neighbors' farms to be restocked from their squirrel infested lands. Cooperation is essential. Mr. Dixon urges the adoption of local ordinances concerning squirrel control, and the purchase of barley and strychnine in quantities and its distribution through the farm adviser or some other local agency.

As to bounties for ground squirrels, Mr. Dixon regards that as a hopeless plan, vastly expensive and productive of endless fraud and always failing to accomplish the cleaning up of the costly and needless squirrel nuisance.

## KEEPING THE DISKS IN THE GROUND

If you will go to most any of the larger ranches in Colorado you can find from one to three disk plows tucked around in different corners, grown over by weeds and brush and out of commission just because the owners did not know how to run them. These ranches probably had some horseback farmer for straw boss and he had no doubt told them that that

plow would not work. The fact is the disks are the only plows that will turn hard dry land and cut deep. Any of them will plow if a man knows enough to hitch his team up right and then adjust the plow properly.

It is not easy always to tell how to do it because there are so many different kinds of soil, both wet and dry. They can be adjusted however to fit all conditions. The greatest fault I find with them is that they are too light in construction but this can be easily overcome by weighting them until they will stay down all the time. Then adjust the disks so they will run only the desired depth. Get the weight as near to the disk as possible. The fault most commonly found is the

disks take too much land where the ground is hard and keep pushing over until they get clear out. In this case let the furrow side down very low and raise the land side high and then regulate the depth with the back lever. If this does not work right bring in the land wheel closer to the furrow.

Still if it does not work then look over the team carefully and if you do not know how to hitch up right go and get someone who does. When a disk plow will not mark it is the driver's fault nine times out of ten and my advice is to get a new driver, but keep the plows, as they are all made to work. Half of the men who call themselves farmers do not know how to drive, but merely herd their teams and would be arrested in some countries for running loose stock on the streets. —Ira B. Cline in Field and Farm.

## A COMMUNITY CREED

The following community creed is published in this season's announcement of farmers' institutes:

- I believe in the integrity of the people.
- I believe in my home, my church, my school and my business.
- I believe in my community.
- I believe in the elevation of the moral standards of my community.
- I believe in the service of my fellow-men.
- I believe that to serve I must rise above selfishness and petty jealousies.
- I believe in cooperation for community betterment.
- I believe in the application of the Golden Rule to community affairs.

One way to increase poultry production is to banish the chicken mites from infested hen roosts.



# The Difference Shows

Let's suppose that four years ago you and your neighbor each planted an orchard—same time, same soil, same kind of trees—only one difference. You planted with Hercules Dynamite. He used a spade.

Today the difference shows. You are gathering your first crop of fine fruit. Your neighbor is still waiting for his.

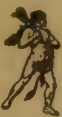
# HERCULES DYNAMITE

always proves a money-maker and a time-saver for the man who uses it.

When a tree is planted in a dynamited hole it starts life with a silver spoon in its mouth. All the chances of fortune are on its side.

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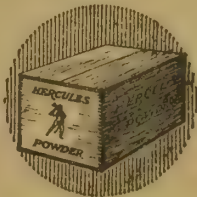
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**For Sale: Citrus Trees**—Choice stock, young and thrifty. Selected buds, Valencia and Washington Navel, Eureka and Rialto seedless lemon. Marsh seedless grapefruit; also young seedlings. W. W. Burns, 631 Security Bldg., F. 3110, Los Angeles.

**Pear Trees**—Offer several thousand Bartlett, 2 and 3 feet, heavy caliper at 9c each. French prunes. Trees of all kinds. No agents; we sell direct. Write for price list. Carlton Nursery Co., Carlton, Ore.

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**For Sale**—Valencia trees, extra fine yearlings, straight, thrifty, sour root, high buds, not fertilized, fine soil for balling. Will contract for spring planting. S. R. Coate, Anaheim, Cal.

**For Sale**—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. Randall Bros. Nursery Co., Whittier, Cal.

**For Exchange**—Nursery trees, lemon, orange, grapefruit and olive, for horses, wagon, implement, hay tools. 2214 Third Street, Ocean Park, Cal.

**Olive Trees**—Mission, Manzanillo, Ascolano. Propagated by me from trees of known bearing qualities. Guaranteed. L. T. Schwacofer, Hemet, Cal.

**Citrus Trees**—All kinds, any quantity. Butler's Morning Side Nursery, Landa Park, Cal.

**Citrus Nurseries**, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

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**Wanted**—A man who knows Men, Tractors, Soils, Beans and Citrus Trees. Scientifically and can get results under model conditions, to Superintend a fourteen hundred (1400) acre modern irrigated ranch in San Fernando Valley. The Sunshine Co., 607 South Hill street, Los Angeles, Cal.

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If you are going to need any seed for next season now is the time to render your order. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbutus, Cal.  
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**Mr. Alfalfa Grower**—If you want good seed at the lowest price, write me for samples and prices. Smooth Peruvian a specialty. O. C. Nordahl, Bard, Cal.

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**Roses** 50 cents per dozen. Write for catalogue. Kavan Nurseries, San Bernardino, Cal.

**New Crop Alfalfa Seed** now ready. Not the lowest in price, but high in quality. Leo Turner, Yuma, Arizona.

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**Our Geese and Turkeys Win Again**—Grand Champion Sweepstake Special, for best pair of birds in show. For size, vigor and quick maturity, our stock are best. East or West. Stock and eggs in season, also Colic pups. Correspondence solicited. John G. Mae, St. Helena, Cal.

**For Sale**—Mammoth Bronze turkeys, The Best in The West. Geo. A. Smith & Son, Corcoran, Cal.

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**Chester Whites, the Billiken Brand**—The big winners at the California State Fair; Billiken was Grand Champion boar; a son was Reserve Grand Champion boar; a daughter was Grand Champion sow. Do you want some of this strain? Twenty gilts bred to farrow during October and November. Fifty Billiken pigs, both sexes—March and April farrow. Every animal is cholera immune. Write for prices and booklet on Chester Whites. C. E. Cunningham, Mills, Sacramento County, California.

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1½ and 1¼ hor. centrifugals; 2½-in. two-stage hor. centrifugal pump, \$38; 2-in. rotary; 3 hor. cent., \$35; 5-in. two-stage B. J. hor. cent. pump, \$175; deep well double-acting No. 2 Ames, \$145. Large Bulldozer jacks, \$68. Small Bulldozer, \$42.50. Plunger pumps 5x6 air compressor, \$29. Pipe fittings; new complete gas plant for private home, \$75.

**RANCH MACHINERY**  
Walking and riding plows, harrows, cultivators, scrapers; brand new ¼-in. cable, 6c; water troughs, 4c; bone grinder; feed mill sprayer; mowers, rakes, belting; sundries. Down town office DEMMITT CO., UP-STAIRS, 120 N. Main. Yards, 816 Yale, Los Angeles.

**For Sale**—One 26 inch Cyl. Owens Bean Thresher, complete; derrick wagon for same; cookhouse; 3 beanbeds—8 nets. Above property in good condition can be seen at my place near Oxnard. Price \$1,000. Herman Nauman, R. 1, Oxnard, Cal.

**Gasoline Engines**, the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles.

**Disk Plows**—Rolled Cold. Auto trailers built to order. J. O. Parrish, 359 South Garey Pomona, Cal. Phone 3132.

### MISCELLANEOUS

**For Sale: Electric Lighting Plant**; consisting of 10 h. p. gas engine and 4 k. w. generator direct connected, also switchboard with switches, volt and amp meters. Capacity 160 twenty-five watt lamps. Also either the engine or electric power useful in many ways on ranch. Worth about \$1,000 new. Splendid condition. Must be sold, therefore first buyer with \$350.00 gets it. Wire deposit to Fillmore State Bank, Fillmore, Cal.

**Famous Hairy Peruvian Alfalfa Seed**—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.

**For Sale**—"Pony Rig," black and white mare, good driver, good saddle, nice buff harness, rubber tired buggy, with canopy top for sale cheap for cash. Address B. Care Cultivator.

**Slacked Lime**—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road, Pasadena.

**To Reduce the high cost of living**, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

**For Sale**—Some fine 10 frame bee hives nearly as good as new, at reasonable prices. Write James McKee, Riverside, Cal.

**Quality Trees**, Seed Potatoes, berry plants, seeds, milk goats. Cash Nurseries, Sebastopol, Cal.

### LIVE STOCK

**Butte City Shorthorns, Shropshires, Berkshires and Ponies**. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

**Registered Shires**—Blackhawk Stock Ranch. Importers and Breeders. Eaton & Ward, Burlingame, Cal.

### AUTOMOBILE STORAGE BATTERIES

**Titian Batteries for Service**, get our prices before buying or having an old battery repaired. Call or write, Olive Street Electrical Co., 910 South Olive St., Los Angeles, Cal.

### FARM LANDS FOR SALE

**For Sale**—Bees and homestead relinquishment, 200 colonies of 3-band Italian bees, in excellent condition, 100 ext new hives, all 2-story with all equipment and supplies necessary to operate, everything first class, and in one of the best locations in the country, average 2 pounds per colony for two successive seasons, no failures. These together with homestead relinquishment of 320 acre frostless land, 12 miles from station, cultivate about 50 acres, and it will produce deciduous fruits, beans, grain, etc. without irrigation, good domestic water fenced and necessary buildings. Bees for selling have other interests. This a SNAP that cannot be duplicated. Easily worth \$5000 but will sell for \$40 cash during November. Do not know this unless you mean business. Address Geo. J. Brown, Box 87, Tustin, Cal.

**For Sale**—Vineyard and Ranch in Los California. 450 acres; 90,000 grapevines full bearing. Zinfandel, Burgundy and Mission varieties. Rest of land used in farming. Winery with all necessary apparatus. Storage tanks for 75,000 gallons. Only winery on Pacific Coast of Mexico. High protective tariff. At present import duty on wines 90 cents U. S. per gallon. Will sell reasonable figure, part cash, balance in exchange for income property. Retiring from business. Address Andonaegui, Ensenada, Lower California.

**Lake County, California**—Climate unsullied. We have two 160 acre ranches both have an abundance of running water, fruit, grain, wood and pasture land. Orchards of walnut, prunes, peach, peaches, apples, berries, etc. Three room cottage, five room house, barns and buildings. Fenced and cross fence. Three miles to good small town, one mile to school. Price \$7,000.00 and \$7,500.00. No exchange. Terms. Address Box 1, Kelseyville, Cal.

**Arizona**—Gila River bottom lands \$15. \$40 per acre. On railroad. Power line and highway building. Two crops year rule—not exception, value \$150 to \$500 per acre. Splendid climate and water. Particulars. T. C. Davison, Box 101, Ontario, Cal.

**For Sale**—60 acres improved ranch, miles west from Bakersfield. Lots of buildings and plenty of water. One mile to store, school and half mile to boulevard. Price \$150 per acre. W. F. Marshall, Los Angeles, Cal.

**For Sale**—7 acres of citrus land in beautiful Monte Vista Valley. For other particulars write to C. G. Topplin, Rilton, Cal., R. F. D. No. 2, Box 29.

**Oregon, California Government Land**. Latest Green Booklet Free. To "How, Why, Where." Write Jose Clark, Sacramento.

### TO LET OR FOR SALE

**To Let**—Ranch at Bakersfield for term three to five years. Ideal for dairy, 100 acres (level); 80 acres in alfalfa, balance in wild grass. Ample ditch water for irrigation always available. Good well, stock and domestic purposes. Good two story eight room house, barns, shade a fruit trees, grapes, nuts and berries. Complete outfit on new farming implements, wagon, buggy, etc. Rental tenant who will put in ten or more additional acres of alfalfa each year \$1,200, second year \$1,500, third year and after \$1,800 per annum, or will sell \$25,000, half cash, balance five and ten years. Interest 6 per cent per annum with privilege of paying on account any time. Owner 636 Wesley Robert Bldg., Los Angeles.

### POULTRY

**Baby Chicks**—From my thoroughbred carefully selected flock of S. C. White Leghorns. Orders booked now for January and February delivery at \$12.00, \$100, \$110.00 per 1000. March delivery \$10.00 per 100, \$95.00 per 1000. Correspondence solicited. J. R. Heinrich Poultry Yards, Arroyo Grande, Cal.

**Spring Chicks**—We are booking orders now. S. C. White Leghorns, only selected and fully matured stock that bred to lay used in the breeding pen which assures strong and vigorous chicks. \$12 per 100; \$100 per 1000. H. Schlotthauer, Exeter, Cal., Route A.

**Day Old Chix**—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Cal.

**Poultry Wanted**—We pay the high market price for all the local poultry we can get no matter how large quantity; also fresh ranch eggs. We must immediately. National Poultry 607 E. Third St., Los Angeles, Cal.

**Loma Vista White Leghorn Ranch** Chicks from 240 record stock—hens—pullets lay at 4½ months. Chicks \$17.50 per 100, eggs \$6.50 per 100. G. CRMSBY, R. R. 2, Box 335, Pasadena, Cal.

**200-290 Egg Leghorns**, Reds, Rocks, V. and dots, Anconas, Orpingtons, Minors. Chicks, eggs weekly. Booking orders December-June delivery. Get best strain, feed high. C. Beeson, Pasadena, Cal.

**"Eastman's Bred to Lay"** Barred F. mouth Rocks. Choice Cockerels. Fairmead Poultry Farm, Fairmead, Cal.

**Buff Orpington, Buff Leghorns**, Bour Red Turkeys—Breeding stock, Ferris Ranch, S. Reservoir, Pomona, Cal.

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A critical stage has been reached in the live stock industry and it is up everybody to do his "bit." The nation's meat requirements have never been as great and as the war progresses this demand will be augmented.



# Household Department

## OUR THANKS TO THEE

Written for California Cultivator  
By Ruth Dougherty

hills lie golden beneath the sun,  
wheat is garnered; the harvest done.  
grass seeds but wait the raindrops'  
call  
spread a fair mantle of green over all;  
For Spring is at hand  
in this lucky land,  
the heels of Autumn following fast  
bring the new 'ere the old is past.

our harvest of plenty from field and  
tree,  
the greening promise of harvest to  
be,  
our chance to help lift the burden of  
woe

the brave world struck down by  
Liberty's foe,  
For strong hearts united,  
Our Nation's faith plighted,  
all that we have, that we are and  
can be  
rough the power of Thy grace, our  
thanks to Thee.

## THE THANKSGIVING RABBIT

**W**HAT can you do with a rabbit? Exactly what you can do with a chicken—roast, pan, fry, fricassee, and a dozen ways besides. Try one of these for your Thanksgiving dinner.

### Roast Rabbit

Wash the rabbit with soda water. Lay in salted water for an hour. Stuff rabbit with onion, celery or chestnut dressing and sew up. Line a baking pan with the following: one onion, one carrot cut up, a few cloves, one peppercorn and one bay leaf. Put rabbit with salt and pepper and fat upon the dressing, putting fat over and there over the rabbit. Sift little flour over the top and pour a cup of stock or hot water into the pan. Cover tight and roast, basting frequently. When ready to serve, put on hot platter and garnish with slices of lemon and cranberry or currant jelly.

### Baked Rabbit

Wash rabbit in soda water. Disjoint hind legs; cut off the saddle; remove the forequarters, making in all five pieces. Lay in salt water about an hour. Place rabbit in dish with vinegar poured over it and let it remain over night. Remove from pickle, pat each piece lightly, and arrange in baking pan. Cut up an onion in it, adding one bay leaf, a dozen peppercorns, part of a celery root, a cup of milk, and a little vinegar from the pickle. Cover with another pan, put in a quick oven and bake an hour. Remove upper pan, and brown, basting frequently. When brown, remove and arrange pieces on a hot dish. To the pan add a tablespoon of flour browned in fat drippings and a cup of stock. If spiced enough, add pepper and a little mace. If desired, add a can of mushrooms that have been drained and washed. Pour the gravy over the rabbit, dust with chopped parsley, and send to the table.

### Chestnut Stuffing

Shell one quart of Italian chestnuts. Boil until skin is softened, then drain and remove the skins; put back in water and boil until soft and rub through a sieve while hot. Season with mashed chestnuts with one tablespoon bacon fat, one teaspoon each of salt, grated lemon rind and chopped parsley. Add three tablespoons of sifted bread crumbs and two well-beaten eggs. Be sure the stuffing is not too wet.

## THREE WORTH TRYING

### Pumpkin Pudding

Two cups stewed pumpkin, one-half cup brown sugar, one-half cup honey, maple syrup, two eggs, one tablespoon flour, one teaspoon cinnamon, one-half teaspoon nutmeg, one-eighth teaspoon cloves, one-eighth teaspoon ginger, one teaspoon vanilla, one cup of salt, two cups milk. Mix all ingredients and bake in greased pudding dish. Serve hot or cold.

### Italian Pudding

Five cups milk, one-third cup cornmeal, one-half cup honey, one teaspoon salt, one teaspoon ginger. Cook milk and meal in double boiler minutes. Add honey, salt, and ginger. Pour into buttered pudding dish and bake two hours slowly. Serve with tart jelly or preserves.

## Mock Duck

On a round steak cut thin, place a stuffing of bread crumbs well seasoned with chopped onions, butter or other fat, salt, pepper, and flavoring such as sage, celery seed, etc., if desired. Roll the steak around the stuffing and tie in several places with a string. If the steak is tough steam or stew the roll until tender before roasting in the oven.

If desired, the roll may be cooked in a casserole, in which case a cupful or more of water should be added.

## HOW TO SELECT FOOD FOR A FAMILY OF FIVE



**F**AMILY consisting of a man and a woman, who do moderately hard muscular work, and three children—say, between three and 12 years of age—would get the food they require if supplied daily with:

Four and a half pounds of bread, having about the same food value as three pounds of wheat or rye flour, oatmeal, corn meal, hominy or rice; or about 2½ pounds of such cereals and five or six medium sized potatoes.

Three-quarters cup of fat (butter or butter with oil, beef drippings, or other fat)—a weekly allowance of 2½ to three pounds.

A little more than one cup of sugar, or a weekly allowance of four pounds; or an equivalent amount of some other sweet, such as 1½ cups of syrup or honey a day, or three-quarters pound of dried figs or raisins a day.

Four pounds in all of fresh fruits and fresh or root vegetables.

One of the two following, the choice depending on the age of the children:

Three quarts of milk and one pound of other foods taken from the meat and meat-substitute group.

Two quarts of milk and 1½ pounds of other foods taken from the meat and meat-substitute group.

## Cereals Used Freely

In these combinations of food, it will be noted, bread and other preparations of cereal food are used as freely as they conveniently can be, without making the ration one sided or unattractive. A diet equal in nourishment might be planned with less cereal, but this would make it necessary to increase the amounts of more costly foods, such as meat, fruits, and vegetables.

Cereals can be used freely without making the diet monotonous if they are served in a variety of forms and combined with other nutritious or flavoring materials, such as meat, cheese, onions, celery, tomatoes, and other vegetables and dried, cooked, or fresh fruits.

## Sample Meals

The food materials indicated as being required may be combined into three meals in many ways. The following meals are given not because they are recommended above many others that might be prepared, but simply to show that such foods can be combined into dishes commonly used in American homes. These meals supply during the day all of the eight essential substances and also provide flavorings and condiments which, while not important as sources of nourishment, add to the attractiveness of certain foods.

**Breakfast—Fruit:** 1½ pounds of fresh fruit (equivalent to three medium sized oranges, five small apples, or a quart-box of strawberries), or three or four ounces of dried fruits (equivalent to 10 or 12 dates or four or five figs).

**Cereal breakfast food,** four ounces before being cooked, or about 1½ pints after it is cooked. The equivalent in food value in puffed or flaked, ready-to-eat cereals would be five or six cups.

**Milk on cereal,** one-quarter cup for each person.

**Sugar on fruit, on cereal, or in coffee,** 2½ level tablespoons or 1½ ounces.

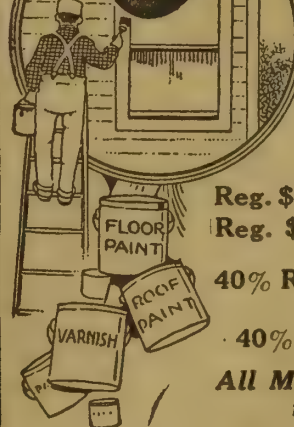
**Bread,** eight slices, or eight ounces.

**Butter,** 1½ ounces, or 2½ cubic inches.

**An egg, or two ounces of meat, fish, or poultry for each older person, and a glass of milk for each young child.**

**Dinner—Meat, or fish, one-quarter**

# Paints



Save 10% to 50%

Regular \$3.25 Standard House Paint .....\$2.25 a gal.

Reg. \$1.50 Graphite Roof Paint 65c a gal.

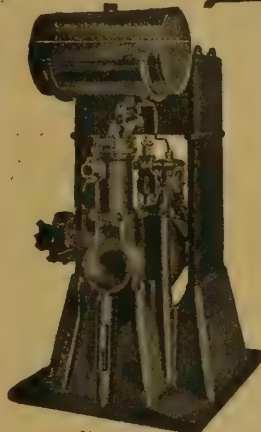
Reg. \$1.00 Shingle Stain 60c, 70c a gal. These two in 5-gal. cans.

40% Reduction on All Auto and Carriage Paints.

40% Reduction on All Paint Brushes.

All Material Sold by Us Must Be Satisfactory or Money Refunded.

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**AT WHITING'S LA.**  
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**Resident Suspenders**

A recent order of the secretary of agriculture lifts the Texas cattle fever tick quarantine from 65,520 square miles in southern states.

## 75c Special Offer 75c

PANSIES

250 Seed Gold Medal Mixture..\$0.25  
Large package Verbena Seed.. 10  
Large package Stock, ten-week Seed .....10  
One ounce Spencer Sweet Peas .35  
One ounce Nasturtium Seed..10  
Large package Carnation Seed .10

Total .....\$1.00

## 75c Special Offer 75c

POMONA FLORAL AND NURSERY CO.  
283 N. Garey Avenue Pomona, Cal.

## ATTENTION! Every Red Blooded American!

**P**RESIDENT WILSON'S reply to His Holiness Pope Benedictus' Peace note gives the clearest and most complete reason why the United States of America is at war with the Imperial German Government. It is a momentous document and will go down in history as being "one great masterpiece" equal to, if not greater, than the Declaration of Independence.

Every home should have a copy framed and kept where you may look upon it with the respect and reverence it deserves.

**"A Most Patriotic Christmas Gift"**

We have reproduced this "Reply" and illuminated it in a most beautiful manner, using the highest skill known to the Printer's and Engraver's Art.

The size is 11x17 inches. Single copies mailed to any address in the United States or Canada, 50c. Two or more copies at 50c each. Stamps accepted.

**SEATTLE ENGRAVING CO.**  
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Today home management is on a war, not a peace basis. "How much am I getting in nutriment for what I pay?" is the home manager's problem.

In peace or war Ghirardelli's Ground Chocolate makes good as an economical and appealing food. A blend of pure cocoa and sugar, two of the most nourishing foods known, it supplies energy and resupplies waste tissue at lowest cost. Use it freely as a food and you will practice food conservation.



**Ghirardelli's**  
Ground Chocolate

comes in 1/2-lb., 1-lb., and 3-lb. cans.  
Order from your grocer.

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Ready at the touch of a match—out just as quickly. No waste. No smoke or odor. Portable.

**HEAT WITH PEARL OIL**

Standard Oil Company (California)

## PERFECTION OIL HEATER

To keep thoroughly posted subscribers should read every advertisement in the California Cultivator columns.

pound per grown person; or, for each child, an egg or a glass of milk.

Potatoes (five medium sized), 1 1/4 pounds.

Another vegetable (turnips, spinach, corn, cauliflower, or other), one pound.

Bread, eight slices, or eight ounces.

Butter, 1 1/4 ounces, or 2 1/2 cubic inches.

Steamed apple (or other fruit) pudding. (Ingredients: Two cups flour, two tablespoons butter, three-quarters cup milk, four apples, one tablespoon sugar.)

Sauce. (Ingredients: One-half cup sugar, 1 1/2 tablespoons flour, two teaspoons butter, one-quarter cup water, flavoring.)

Supper—A gravy made out of one pint of skim milk, one-quarter cup flour, two level teaspoons butter, and four ounces salt or smoked fish (just enough for flavor). To this can be added the egg yolk left from the frosting of the cake. (See below.)

Rice, eight ounces, or one cup, measured before being cooked.

Bread, eight slices, or eight ounces.

Butter, 1 1/4 ounces, or 2 1/2 cubic inches.

One-half of a cake. (Ingredients for whole cake: One-fourth cup butter, one-half cup sugar, one egg, one-half cup milk, 1 1/2 cups flour, 2 1/2 teaspoons baking powder.) Frosting made with one egg white and one-quarter cup sugar.

### PRESSING CLOTHES AT HOME

Pressing clothes requires time, patience and some knowledge and skill. When tailors are making garments they always press them on the wrong side; but when the garments are finished, the fabric and the shape determine whether you shall press them on the right or the wrong side.

The first precaution in home pressing is to see that your ironing board or table is well and smoothly padded, preferably with a wool fabric, and that it has an outside covering of fine and even texture that will not leave its imprint on the garment.

Wool garments usually require wet pressing on the right side. Wring out a heavy cloth that you have wet thoroughly in warm water, place it on the garment, and press it with a hot iron very lightly. Do not press the cloth dry, as that may cause the garment to show the mark of the iron or may leave it shiny. The garment itself should be damp after you have finished the pressing, and should be hung carefully where it can dry without wrinkles. Always use the iron lightly; pushing or shoving it heavily stretches and cockles the material.

The shine that comes from wear and from careless pressing often can be removed, or at least materially lessened. One of the methods is the wet pressing described above; the other is the semiwet, with a dry cloth placed between the garment and the wet cloth. Steam always helps to remove the shine. An additional help is a brisk brushing of the steamed garment with a stiff brush, followed by a second wet or semiwet pressing.

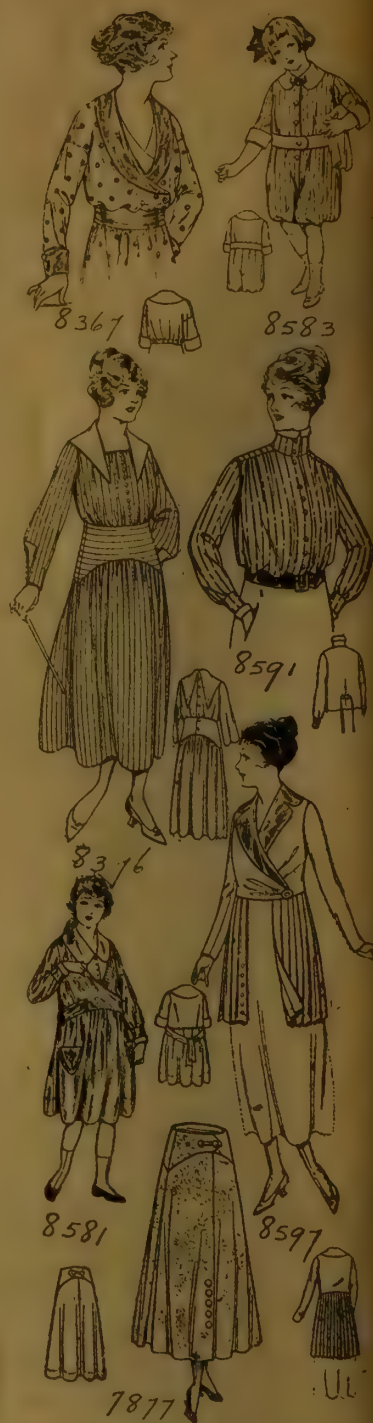
Because silk scorches so easily, the safest plan is to press it very carefully on the wrong side with an iron that is slightly warm, light in weight, and preferably with no moisture. A hot iron causes it to crack and split.

Many lightweight cotton fabrics can be pressed without moisture of any kind; others require dampening. Linen requires dampening or wet pressing. If the garment is of a light color, test it with the iron in some inconspicuous spot to make sure that the pressing will not cause it to fade. Often the color will return as the fabric cools and is exposed to the light.

To press a seam, wet it slightly with a small sponge or cloth wrung out of water; a heavy fabric of course requires more moisture than a light fabric, but silk rarely needs any. Place the seam over the edge of the ironing board and press it with a hot or only warm iron, your choice depending upon the fabric. That prevents the edge of the seam from marking the garment with a perceptible ridge on the right side. Always keep the iron in motion; never let it come to rest with its full face upon the cloth. A small rolling pin or broomstick well padded or slipped under the padding of the ironing board is useful in pressing curved seams or sleeves. Only the edge of the iron should touch the edge of a corded seam.

Garment sections that contain bastings threads must be pressed very

## The Cultivator Patterns



8367—Ladies' Waist. Cut in sizes 36, 38, 40 and 42 inches bust measure. The smart feature is the Japanese collar in surplice effect.

8583—Misses' and Girls' Overalls. Cut in sizes 2, 4, 6, 8, 10, 12, 14 and 16 years. The bloomers may be long or short. The garment buttons down the front.

8376—Ladies' Dress. Cut in sizes 36, 38, 40 and 42 inches bust measure. The dress buttons down the center back and the collar is cut in the fishtail style. The skirt is gathered to the yoke.

8591—Ladies' Shirtwaist. Cut in sizes 36, 38, 40, 42 and 44 inches bust measure. The high, close-fitting military collar is the smart feature of this waist.

8581—Girls' Dress. Cut in sizes 6, 8, 10, 12 and 14 years. The surplice closing is cut very low to show the smart little set-in vest and collar. The skirt is in one piece.

8597—Ladies' Waist. Cut in sizes 34, 36, 38, 40 and 42 inches bust measure. This pattern shows one of the new close-fitting surplice waists. A side plaited pleum is attached to the waist.

7877—Ladies' Yoke Skirt. Cut in sizes 34, 36, 38, 40 and 42 inches waist measure. An under box-plait at each side gives the stylish flare.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

### HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send 10 cents in coin or (1 or 2) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department  
California Cultivator  
Los Angeles





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Front 2 1/2 in. Back 2 1/2 in.

## TROOPER

Front 2 1/2 in. Back 1 1/2 in.

In addition to being stylish and comfortable, this new collar does not rub and wear your shirt across the shoulders—it is made with "modified curves." Better ask for

## SLIDEWELL COLLARS

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Hall, Hartwell & Co., Makers, Troy, N. Y.

Of course, you know that all Slidewell collars are made with this Patented Tie-Protecting Shield and Graduated Tie-Space.



## HALLMARK SHIRTS

Quality Kept Up—Indanthrene Colors

For Style, Fit and Wear buy

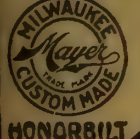
# Mayer

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For all the Family

Ask your dealer for Mayer Shoes. Look for the trade-mark on the sole.

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Make the reading of advertisements in the California Cultivator a habit. They will broaden your knowledge of the manufacturing improvements.

lightly to prevent the threads from marking the fabric. The time for the permanent pressing is after you have withdrawn the threads. All pressing should be done thoroughly and evenly; otherwise there may be a difference in shading or finish between the pressed and the unpressed portions.—Youths Companion.

### HEALTH BREADS

#### Gluten Bread

Bread made from flour from which most of the starch is eliminated is often prescribed for persons on a diet which prohibits sugar and starch. The batter should be made with gluten flour, water, yeast and salt only. Dissolve one-fourth of the yeast cake in one-fourth cup of lukewarm water and add one-half teaspoon of salt, one pint of lukewarm water and two cups of gluten flour. Beat until the batter is smooth, then begin to add flour gradually, beating and stirring all the time until you have beaten in as much as you can. The beating must be continuous, as the bread cannot be kneaded and this is the only way to make it smooth and fine grained. Let rise until light; mold carefully into loaves, adding as little flour as possible. The dough should be as soft as can be handled. Put in greased pans, let rise again and bake from 45 to 60 minutes in a moderate oven. If the bread has not the needed consistency, the white of one egg, beaten light but not stiff and dry, may be added when the batter is made.

#### Rollled Oats Bread

Two cups boiling water, 1/2 cup brown sugar, 2 teaspoons salt, 1 yeast cake, 1/4 cup lukewarm water, 1 1/2 cups rolled oats, 5 cups flour. Dissolve the yeast cake in the lukewarm water. Pour the boiling water over the rolled oats, salt, and sugar, and let stand until lukewarm; add the dissolved yeast and flour. Let rise until very light, beat thoroughly, and turn into two buttered bread pans. When the loaves have doubled their volume bake them an hour in a moderate oven.

### HEALTH ESSENTIALS

The National Council of Education through its committee on health problems has issued "Health Essentials for Rural School Children," a booklet of 24 pages all filled with a fund of information as indicated in its title, "Essentials for Health." A companion book, though much larger, is "Health Charts", a series of charts containing illustrations, diagrams, aphorisms and concisely stated conditions. We do not know any price on them and think that any teacher or one interested in rural school sanitation and health improvement should write the Committee on Health Problems of the National Education Association, 525 West 125th Street, New York City, and the booklets might be secured.

### THE TORCH

The beautiful verses under the above caption in the issue of November 10 were credited to a California paper without due credit to the author. Dr. Ford A. Carpenter, of the United States weather bureau writes: "These verses were written by Lieutenant Colonel McRae of the Canadian Expeditionary Forces and originally appeared in the Santa Fe magazine with an article by the editor."

### EXEMPTION CLAIM

One of the registrars in a Virginia country district tells a story of a negro man, obviously within the prescribed ages and of powerful physique, who turned up on registration day. The registrar had a good deal of difficulty in making the applicant understand the questions. "Do you claim exemption?" he asked.

"What's dat, sah?"  
"Is there any reason why you should not render military service—why you should not fight your country's battles?"  
"Oh, yes, sah," replied the applicant, much enlightened. "I'se gun-shy."—Richmond Times-Dispatch.

A laugh is just like sunshine,  
It freshens all the day,  
It tips the peak of life with light  
And drives the clouds away.  
—Farm Journal.



## Renew the old, worn kitchen chair

paint the soiled, marred woodwork, and give the rough, unsightly floor a clean glossy surface. That's the way to make your kitchen a 'healthful, cheerful, easier place to work. You can do it yourself—you will enjoy doing it because the result will be so satisfying. For your chairs or other furniture or your floors if you want a natural wood effect, use Sherwin-Williams

# FLOORLAC

The All Around Varnish Stain

Select a pretty shade of brown or green or mahogany and apply as you would any paint. It produces a durable, glossy surface and a rich, attractive color with one operation.

If you like a painted kitchen floor, Sherwin-Williams Inside Floor Paint will give splendid service. Water will not spot it nor will constant walking affect its

hard surface for a long, long time.

Sherwin-Williams Family Paint has a lot of inside uses—on woodwork, shelves, cupboards and all surfaces of soft wood.

There is no excuse for a cheerless, hard-to-clean, run-down home when you can get just the right finish for every surface, all ready to apply of the Sherwin-Williams dealer in town.

We have a book telling you how to paint everything on the farm that we send free on request.

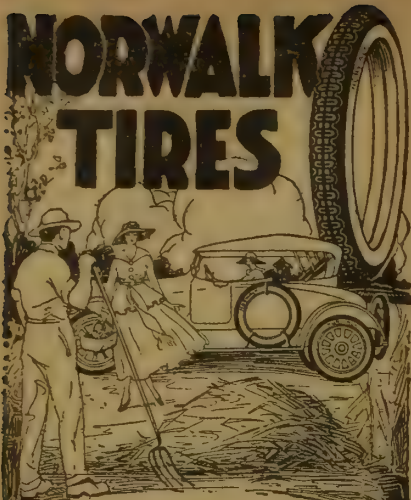
# SHERWIN-WILLIAMS

## PAINTS & VARNISHES

Address all inquiries to THE SHERWIN-WILLIAMS CO.  
16 Canal Road, N. W., Cleveland, O.  
Showrooms—New York, 116 W. 32d St.; Chicago, People's Gas Building;  
San Francisco, 523 Market St.  
Sales Offices and Warehouses in principal cities. Best dealers everywhere.







## Mileage Leaders

These tires lead in mileage service, as actual records prove. There are many instances where Norwalk Tires have given more than twice the service of any other tire when used under the same conditions. Ask for literature and price list.

Factory Distributors

**Lichtenberger-Ferguson Co.**

Pico and Hope Sts.  
LOS ANGELES

1211 Van Ness Ave.  
SAN FRANCISCO

## Los Angeles Market

Los Angeles, Nov. 21, 1917.

### BUTTER

Produce Exc. Quotations.  
Price to trade 4c higher.  
California extra creamery .....41½  
Dairy Exch. prices past week.  
Nov. 14 15 16 17 19 20  
'17 ... 41½ 41 41 41 41  
'17 ... 41½ 41 41 41 41½  
Rets. wk. ending Nov. 20, 173,600 lbs.

### CHEESE

Brokers prices:  
California fresh, lb. ....26  
Eastern Daisies .....29  
Oregon Longhorn .....29  
Tillamook Trip .....27  
Domestic Swiss .....34

### EGGS

Exchange quotations. Prices include cases and fillers valued at 35c. Prices to retailers 4 cents above Exchange.  
Fresh extras .....55  
Case count .....50  
Pullet .....48  
Dairy Exch. prices past week.  
Nov. 14 15 16 17 19 20  
'17 ... 55 55 55 55 55  
'17 ... 55 55 55 55 55  
Rets. wk. ending Nov. 20, 349 cases.

### LIVE STOCK

We quote cwt. f. o. b. L. A.  
Corrected Wednesday morning November 21, by the Cudahy Company.

Cattle—  
Beef steers, av. 1000 to 1100 lbs. 8.50@9.00  
Heifers, good .....6.00@6.50  
Cows, good .....5.50@6.00  
Canners .....4.50@5.00

HOGS—  
Av. 125 lbs. ....14.50  
Av. 150 lbs. ....15.50  
Av. 175-200 lbs. ....16.00  
Rough, docked 20 lbs.; piggy sows, 40 lbs., stags, 40 per cent. ....9.50@10.00  
Prime wethers .....9.00@9.50  
Ewes .....14.00@14.50  
Lambs .....10.50@11.00  
Yearlings

### POTATOES

Wholesale selling price:  
Northern Burbank, cwt. ....2.80@3.00  
Nevadas .....3.00  
Russets .....2.70@2.75  
Sweet, cwt. ....2.75@3.00

### ONIONS

Wholesale selling price:  
Brown, cwt., 2.50; white .....2.50  
Garlic .....7

### VEGETABLES

Wholesale prices:  
Artichokes, doz. ....1.25  
Beans—Wax .....11@12  
Limas, lb. ....11@12  
Ky. Wonder .....11@12  
Beets, sk. ....1.00  
Cabbage, lb. ....14  
Carrots, doz. ....4  
Cauliflower, doz. ....1.15  
Celery, cr. ....3.25@3.75  
Cucumbers, lug. ....1.25@1.35  
Egg Plant, lb. ....6@7  
Horseradish, rt. lb. ....15  
Lettuce, doz. ....40@45  
Leeks .....40  
Mint .....40  
Onions, green, doz. ....25  
Okra, lb. ....13@14  
Peas, lb., Telephone .....11@12  
Peppers, Chili, lb., 6@7; Bell .....8@9  
Parsnips, doz. ....40  
Parsley, doz. ....20  
Pumpkins, lb. ....2  
Radish, doz. ....20  
Rhubarb—Strawberry .....1.25  
Romaine, doz. ....50  
Spinach, doz. ....25  
Squash, Summer, cr. ....1.25  
Crownneck .....70@75  
Hubbard, lb. ....2  
Tomatoes, cr. ....1.25  
Turnips, doz. ....35

### FRUITS

Wholesale prices:  
Apples—Skinners Seedling... 1.50@1.75  
Bellflowers .....1.35@1.50  
Greenings .....1.75  
Jonathan .....1.75@2.15

King David .....1.75@2.00  
Spitzenburg .....2.40@2.75  
Y. Newton .....1.40  
Avocados, doz. ....6.00@9.00  
Bananas, lb. ....5@5½  
Casabas, lb. ....2  
Cranberries, bbl. ....16.00  
Figs, bx. ....1.35@1.50  
Grapes—Cornichon .....1.60@1.65  
Guavas, lb. ....8  
Peaches, lug. ....1.25@1.35  
Pears, Bartlett, lug, 2.25; bx. ....3.00  
Persimmons, lb. ....7@10  
Plums, lug. ....1.25@2.00  
Pomegranates, lug .....1.50

### CITRUS

Lemons, 4.50@6.00; juice .....2.25  
Grapefruit .....3.75  
Idms, basket .....1.00  
Valencias .....4.00

### DRIED FRUITS

These are not prices to producers but prices made by wholesalers to retailers. (Twenty-five-lb boxes, faced, 50s, ½c less.) Apples, evaporated, 50s, 16; extra choice, 17½; fancy, 18. Peaches, choice 12; fancy, 18½; peeled 16; pears 12½, citron 30 lb, lemon peel 25; prunes 20-30s, 16½; 30-40s, 12½; 40-50s, 11; 50-60s, 10; 60-70s, 9½; 70-80s, 9; 80-90s, 8. Figs—Bulk, 25 lb. bx., blk. \$3.00, wh. \$2.75.

### HONEY

Prices of wholesaler to retailer:  
Extr. White, lb. ....14@15  
W. W. lb. ....15@16  
Comb, case, W. ....3.75  
W. W. case .....4.80

### BEANS

These are prices made by wholesaler to retailer.  
Lady Washington .....13.00@14.00  
Limas .....13.50@14.00  
Pinks .....9.50@10.00  
Manchurian Reds .....9.25  
Baby Mex. ....9.00  
Garbanzos .....9.00  
Small White .....13.00@14.00  
Blackeyes .....9.50  
Tepary .....9.00@10.00  
Lentils .....18.00

### HAY

Quotations by Nichols-Loomis Company. Prices to growers f. o. b. L. A. carlots:  
Tame Oat .....24.00@26.00  
Volunteer Oat .....17.00@19.00  
Wheat .....19.00@22.00  
Barley .....21.00@24.00  
Alfalfa .....21.00@24.00  
The Alfalfa Growers Association of Southern California quotes:  
Alfalfa, \$27.50 per ton f. o. b., where the \$1.50 freight rate applies, and \$26.50 f. o. b. where the \$2.50 freight rate applies.

### GRAIN AND FEEDSTUFFS

Wholesale cwt. f. o. b. L. A.  
Alfalfa Meal .....1.95  
Alfalfa Molasses .....2.00  
Barley, Rolled .....2.85@2.95  
Barley, Re-cleaned, Whole .....3.00  
Barley, Hulled .....3.55  
Beet Pulp .....2.00  
Bran, Heavy .....2.15  
Cocoanut Meal .....2.50  
Cottonseed Meal .....3.40  
Corn, Yellow .....4.45  
Corn, White .....4.55  
Corn, Cracked .....4.55  
Corn, Feed Meal .....4.55  
Corn, Egyptian .....3.40  
Middlings .....3.05  
Milo .....3.15  
Oat Chop .....1.90  
Oats, White .....2.85  
Oats, Rolled White .....3.05  
Oats, Hulled .....4.75  
Oats, Rolled Chicken Groats .....4.85  
Oileake Meal .....3.65  
Wheat, No. 1 .....4.00@4.05  
Wheat, Cracked, No. 1 .....4.40  
Red Millet .....4.65@4.75  
Rye .....4.00  
Blood Meal .....5.00@5.10  
Bone, Green .....2.75@2.85  
Bone, Dry .....2.95@3.05  
Charcoal, 50-lb. sk. ....3.00  
Clam Shell .....70@80  
Grit, Granite .....75@85  
Oyster Shell .....1.45  
Sunflower Seed .....5.25  
Soya Bean Meal .....3.60  
Scratch Feed .....3.80@3.90  
Gritless .....3.90@4.00  
Rice Bran, ton .....40.00  
Middlings, ton .....45.00  
Rice Polish, ton .....49.00

## San Francisco Markets

San Francisco, Nov. 20, 1917.

### BUTTER

Dairy Exchange quotations, lb.:  
Fresh extras .....40  
Prime firsts .....39½  
Dairy Exc. quotations past week and year ago:  
Nov. 13 14 15 16 17 19  
'17 ... 40 40½ 40½ 40½ 40 40  
'16 ... 33½ 34 34½ 37  
Rets. wk. ending Nov. 19, 384,500 lbs.

### CHEESE

Dairy Exchange quotations:  
Cal. Flats, 18@23. Y. Am. ....22@25  
Ore. Young Am. ....25  
Jack Cheese, full cream .....23@24  
Half skim .....17@18

### EGGS

Extra .....56  
Firsts .....54½  
Selected, Pullets .....54  
Firsts .....52  
Dairy Exch. quotations past week and year ago:  
Nov. 13 14 15 16 17 19  
'17 ... 55 55 55 55 55½ 56  
'16 ... 50½ 51 52½ 54  
Rets. wk. ending Nov. 19, 60,022 cases.

### POULTRY

We quote from producers, lb.:  
Hens, large, 27@28; Leghorns .....22@25  
Small colored .....23@25  
Broilers .....28@40

Appliances Sold on Time Payments

## The Eden

\$9.00 down

\$8.75 per month



Write for Name of Dealer in Your Territory

The Eden, cylinder type galvanized body, zinc cylinder washing and wringing machine takes all the drudgery out of wash day. Washes the clothes cleaner, with less wear and tear, quicker and with no physical effort on your part. A demonstration or trial in your own home will convince you. Price \$105.00, on terms \$115.00.

ESTABLISHED 1891

**Woodill & Hulse**  
Electric Co. Inc.  
111-113 EAST 3RD ST  
JUST AROUND THE CORNER FROM 3RD & MAIN

## Reliability Means Economy

There is little or no difference in the price per pound between Jevne's Coffee and ordinary coffee, but the difference in the satisfying qualities to the consumer between Jevne's Coffee and just plain coffee is about as broad as the Pacific Ocean.

In three distinct blends

**Jevne's Hotel Blend Coffee**  
**Jevne's "35" Coffee**  
**Jevne's Best Blend Coffee**

If your Grocer does not sell Jevne's Coffee he will get it for you.

**H. JEVNE CO.**

LOS ANGELES

## DAVENPORT'S

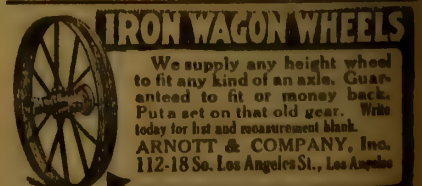


Teach Your Dollars to Have More Cents; to Buy the Best for no More Money.

Made in CALIFORNIA -- **Disc Harrows**

beat them all. Come and inspect them and be convinced.

**L. M. Davenport Co.** 110-112 N. Los Angeles St., Los Angeles, Cal.



Better service is assured by the advertiser if when writing you mention the California Cultivator.

## "THE BOSS" TREE PROTECTOR

Made of Yucca Palm.

Is cheap, durable and quickly put on the tree. It prevents rabbits from destroying your trees. A sure protection against frosts, sunburn, grasshoppers, or dry winds. Can be easily removed, will last for years. Send for samples.

### Prices

Per 1000  
10 in. long, 7 in. wide....\$10.00  
12 in. long, 7 in. wide.... 11.00  
14 in. long, 7 in. wide.... 12.00  
16 in. long, 7 in. wide.... 13.50  
18 in. long, 7 in. wide.... 15.00  
24 in. long, 7 in. wide.... 18.00  
30 in. long, 7 in. wide.... 21.00

**YUCCA MANUFACTURING CO.**  
1380 Willow St., Los Angeles, Cal.

When writing advertisers, mention the Cultivator.

## SUPERIOR DRILLS



ALFALFA DRILL



BEET DRILL



GRAIN DRILL

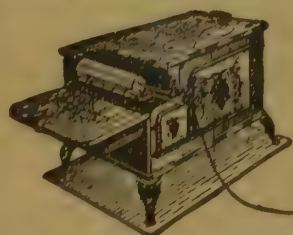


ORANGE GROVE FERTILIZER DRILL

Before buying any drill get the Superior Book of Complete Information. Superior Drills are different from others. Bearings guaranteed for life of drill. A Superior for any purpose. Grain, beets, alfalfa and fertilizer. Ask your dealer or send to us. Call and look at samples when in Los Angeles. After reading the Superior book you will buy no other.

**ARNOTT & COMPANY, Inc.**  
Exclusive Superior Agency  
112-18 S. Los Angeles St., Los Angeles

## How About Your Fuel? Protect Yourself Now



If you read you know both wood and coal are scarce and high priced. If you have burned either you know of the dirt and inconvenience.

Here is a fully tried and proven distillate burner with over eight years of public service. That's the real test.

Why not add this convenience and economy to your home?

**BLUE FLAME DISTILLATE BURNER CO.**

MAIL ADDRESS, P. O. BOX 202 330 Mountain View Ave., PASADENA, CALIFORNIA

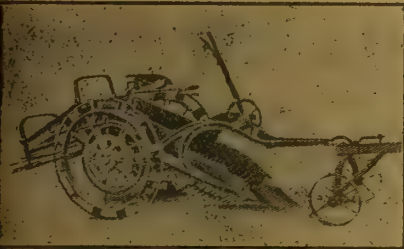


Roosters	25@27
Squabs, doz.	8.00@4.00
Ducks	14@20
Geese	18@19
Belgian Hares, live 17@19; dr.	17@20
Turkeys, lb., live young	27@29
Old, live, 24@25; dr. young	30@35
dr. old, 3 cents under.	
POTATOES	
Wholesale selling prices at wharf:	
Salinas Burbank, cwt.	3.00@3.15
River	1.75@2.10
Sweets, lb.	23@23
ONIONS	
Wholesale selling prices at wharf:	
Australian Brown, cwt.	1.00@2.10
Garlic, lb., new	5@6
VEGETABLES	
Wholesale selling price:	
Beets, sk.	1.40@1.50
Beans, string, lb.	5@8
Fy. Garden, 10@12; Lima	8@9
Brussel Sprouts, lb.	4@5
Cauliflower, doz.	50@75
Carrots, sk.	85@1.00
Celery, doz.	40@60
Cucumbers, lug	1.00@1.25
Hothouse	1.25@1.50
Lettuce, cr.	75@1.25
Egg Plant, lug	1.40@1.50
Onions, bx.	85@1.00
Okra	65@85
Peas, lb.	8@13
Paranips	1.15@1.25
Peppers, Bell, lug, 75@1.00; Chili	65@75
Pumpkins, sk.	85@90
Rhubarb, bx.	1.50@1.65
Squash—Marrowfat, sk.	85@90
Cream, lug	1.00@1.15
Hubbard, sk.	85@1.00
Summer, lug.	2.25@2.50
Italian	2.75@1.00
Tomatoes, lug.	40@1.25
Turnips, sk.	85@1.00
FRESH FRUITS	
Berries—Strawberries, 15.00@17.00. ch. to trade; raspberries, 8.00@10.00; huckleberries, lb., 14@17.	
Peaches—Oregon, Salways, bx.: Fancy, 1.00@1.10; other grades, 50@85.	
Plums and Prunes—German and Grand Duke, cr., 1.00@1.25.	
Figs—Black, double layer, bx., 75@	

Increase Your

POTATO

PROFITS



The Aspinwall Elevator Potato Digger is recognized the world over as the most serviceable, durable and practical potato digger made. Aspinwall Potato Machinery book mailed free on request.

E. P. Bosbyshell Co.  
125-127-129 North Los Angeles St.,  
Los Angeles, California

For Sale

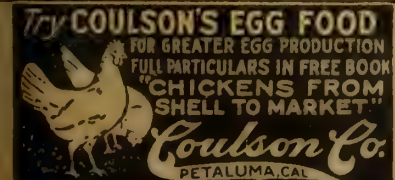
OLIVE and ALMOND

ORCHARD

Two and a Half Miles from Orland in Government Irrigation Project

On account of owner being drafted he has for sale a forty acre orchard, of which twenty acres are planted to olives and twenty acres to almonds, set out in spring of 1915. Trees are in first class condition, no better in the country. There is also on the place a new modern cottage, well, with tank, tank-house, engine and pump, and tool shed. Will sell as a whole or each twenty acres separately; we invite inquiries and will quote prices and terms on application.

Address R. R. No. 1, Box 158, Orland, Cal.



WITTE Engines  
BURN KERO-OIL. Easy to use—easy to own. Save \$35 to \$200. Immediate Shipment. New Book FREE.  
WITTE ENGINE WORKS  
3181 Oakland Ave. Kansas City, Mo.

1.00; single layer, 25@50.
Pears—Bartletts, wrapped, bx., 2.00@
2.50; Winter Nellis, wrapped, 1.50@1.75;
winter pears, 75@1.25.
Grapes—Tokay, 1.00@1.50; Cornichon,
1.50@1.75; Isabella, 1.00@1.25.
Apples—Bellflower, 1.15@1.35; Spitzen-
burg, 1.00@1.85; Red Pearmain, 70@1.00;
W. W. Pearmain, 1.10@1.50; Jonathan,
1.00@1.50; Baldwin, 1.00@1.50.
Melons—Casabas, cr., standard, 65@85;
doz. 65@85.
Citrus Fruits—Bx.: Lemons, fy., 5.00@
6.50; ch., 4.50@5.50; lower grades, 4.00@
5.00; lemonettes, 2.00@3.00; grapefruit,
Tulare seedless, fy., 3.25@3.65; ch., 3.00@
3.40; Mexican limes, 2.25@2.50. Oranges
—Bx.: New Valencias, ch., to fy., 3.25@
3.75; lower grades, 1.25@2.00; Mandarin,
cr., 2.00@2.25; half orange bx., 2.75@3.00.
Tropical Fruits—Bananas, Hawaiian,
5 cents lb.
Pomegranates—One-half orange bx.,
1.50@1.75.
Persimmons—Bx.: 1.00@1.50.
Avocado—Doz., 5.00@7.00.
Quinces—Bx.: 75@1.25.
Olives—Ton, 140.00@180.00.

HOPS  
Per lb.: California crop of 1917, 28@33; on contracts, spot, 1916 crop, 18@22; old, 8@15.

RICE  
California rice, new crop, cleaned, 100 pound head rice, 6.60; brewers', 5.25; screenings 5.40.  
Rough rice, 100 lbs., 3.30@3.50 to growers at shipping points.

HAY  
Under date of November 17, Scott Magner & Miller says:  
Receipts past week, 1009 tons. It is practically impossible to obtain any transportation at shipping points for other than government purposes, with the possible exception of a car which has brought local freight to a point and is thereby available for loading back. Figures from interior sections show plenty of hay available, and if cars were furnished there is no doubt prices would be materially less for some time at least. This will cause considerable hay to be carried over until spring or even later before it can be placed on the market and should we have seasonable rains we believe lower prices can be looked for in the spring than prevail at the present time.

The demand in San Francisco is very light and considering the car shortage it is well that this is the case. Alfalfa is in good demand.  
We quote today wholesale prices in carload lots as appear from dealers' transfers upon the hay market. For prices to consumers charges of cartage, commission and handling must be added according to conditions.

Fancy Wheat Hay,	
(light 5 wire bale)	\$28.00@29.00
No. 1 Wheat or Wheat and	
Oat Hay	24.00@26.00
No. 2 Wheat or Wheat and	
Oat Hay	21.00@23.00
Choice Tame Oat Hay	26.00@27.00
Other Tame Oat Hay	22.00@24.00
Wild Oat Hay	21.00@24.00
Barley Hay	21.00@24.00
Alfalfa	21.00@25.00
Stock Hay	18.00@20.00
No. 1 Barley Straw	60@90

GRAIN	
Grain Exchange prices, cti.	
Corn, California Yellow	3.50@3.75
Australian	3.75
White Egyptian	3.00@3.10
Barley, Feed, cwt.	2.47 1/2@2.50
Oats, Red Seed, 2.90@3.15; Feed	2.55@2.65
New Black	3.25@3.50
White	2.80@2.85

FEEDSTUFF	
Wholesale prices per ton:	
Bran	41.00@42.00
Cornmeal	35.00@37.00
Cracked Corn	35.00@37.00
Middlings	50.00@55.00
Alfalfa Meal	29.00@31.00
Cocconut Meal	40.00@41.00
Rollod Barley	50.00@51.00
Shorts	43.00@44.00

Citrus Fruit Market

Los Angeles, Nov. 21, 1917.  
The orange and lemon market has remained in fairly satisfactory condition, no exceptionally heavy demands but with promise that every Valencia yet to go forward will receive satisfactory treatment. There are still approximately 500 cars Valencias yet to go.

Shipments  
Shipments of fruit from Southern California since November 1, 1917, oranges 1231, lemons 168, total 1399. To same date last season, oranges 326, lemons 335, total 661; shipments from Central California since November 1, 1917, this season, oranges 2, lemons 13. Same date last season, oranges 128, lemons 62, total 190. Northern California no shipments this season, same date last season, oranges 74.

AT THE AUCTIONS	
November 20	
New York: 12 Val. 1 Lem. Val. \$1.75-	
\$6.35. Lem. \$4.35-\$6.85.	
Philadelphia: 5 Val. 1 Lem. Val. \$2.25-	
\$3.95; Lem. \$3.85-\$5.15.	
Boston: 9 cars. Val. \$2.75-\$4.40; Lem.	
\$4.95-\$5.90.	
November 19	
New York: 24 Val. 3 Lem. Val. \$1.55-	
\$6.60. Lem. \$1.50-\$6.80.	
Pittsburg: 8 cars. Val. \$1.25-\$3.60.	
Lem. \$3.30-\$6.30.	
Philadelphia: 8 cars. Val. \$2.00-\$4.20.	
Lem. \$5.35-\$5.85.	

WEATHER CONDITION	
San Francisco, Cal., Nov. 17, 1917.	
	Temp.
	—Rainfall—
	Wk. Season. Norm. Max. Min.
Eureka	.68 3.07 6.45 64 42
Red Bluff	.49 1.74 3.87 72 40
Sacramento	.02 .69 2.36 70 42
San Francisco	.08 .39 2.61 69 50
San Jose	.02 .51 1.98 74 36
Fresno	.00 .34 1.47 70 42
San Luis Obispo	.06 .56 2.49 80 36
Los Angeles	.00 .34 1.46 80 50
San Diego	.00 .23 .91 72 48

Farm for Profit

and Help U. S. Win the War

Authoritative tests have proved that as high as 50 per cent increase in crop production may be expected from the proper use of fertilizer. Do you realize what that increase means? Fertilizer is the basis of crop production, and compared to the prices of the crops they help to produce, fertilizers were never so cheap as they are today.

MORE CROPS

will be raised in America this year than ever before. Make every acre you own or rent, produce to the limit. Fertilize your land—the increase in yield and price of crops will more than pay all the fertilizer expense—it will enable you to farm with profit. Don't spend your time working worn out land. Make it pay—Fertilize with Hauser's Organic Fertilizer.

HAUSER PACKING COMPANY

9th and Mateo Sts. PHONES 10336-Bdwy. 5600 Los Angeles, Cal.

Write for Catalog and Prices



We Are Headquarters for Fruit Bearing Trees

We have an exceptionally fine stock this year—trees are thrifty and well-rooted—grown under ideal conditions. Demand this season promises to be heavy. Get your orders in early.

Fresno Nursery Co.

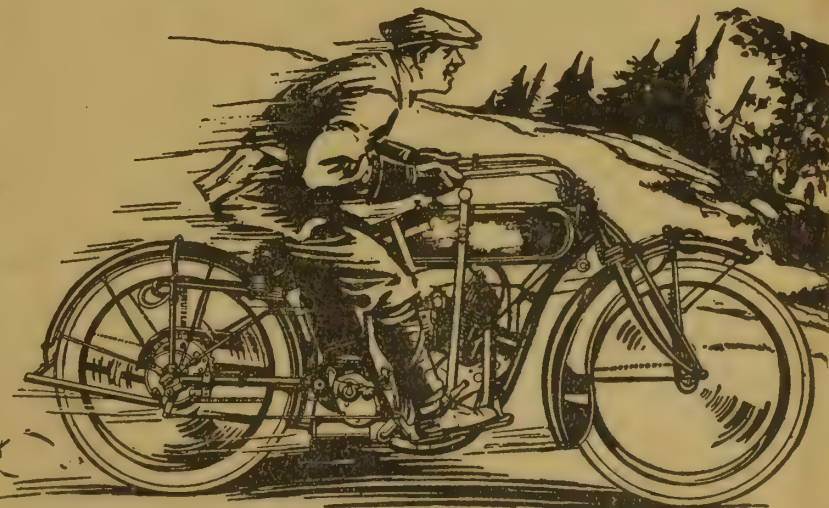
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ALFALFA LAND FOR DAIRYING

Leveled, checked and in stand of Alfalfa.  
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BRENTWOOD IRRIGATED FARMS, Sixty Three Miles from San Francisco in Contra Costa County. For Prices and Descriptive Matter Address BALFOUR, GUTHRIE & CO., LAND DEPT., 350 California St., San Francisco

Boys! Will You Work for a \$290 Motorcycle?



We are going to give away a \$290 Thor Motorcycle, a \$125 Miami and many other valuable prizes including Cash Pay, December 31, 1917; to those who answer this advertisement and do a little work for us that will be easy to do. Eleven motorcycles have been given away that were easily and quickly secured by our easy plan. This is the easiest way to get one. You do not have to pay any money or obligate yourself to do anything. Fill in the blank below and we will write and tell you all about it.

California Cultivator,  
115-117 North Broadway, Los Angeles.

Please tell me about the \$290 Thor Motorcycle and other prizes you will give away.

My Name .....

My Address .....



# What Will She Bring?

At the Guaranty Sale, Sacramento, Dec. 5.



Korndyke Sadie Vale Star-Rena

That is indeed hard to answer, but it is not hard to figure what she should bring. Veteran breeders, including a former president of the Holstein-Friesian Association of America, have said she should bring more than any animal, male or female, ever sold in public sale in California.

Her name is KORNDYKE SADIE VALE STAR-RENA.

Her sire is King Korndyke Sadie Vale, the famous 41 lb. sire. Nuff sed.

Her dam is Korndyke Segis Star-Rena, a 26.68 lb. junior 4-year-old daughter of King Segis DeKol Korndyke, the famous 37 lb. son of King Segis and Star Rena Wayne Pietertje 2nd, a 34.35 lb. 3-year-old daughter of a 29.93 lb. cow.

Her seven nearest dams average 33.86, which average is exceeded by but one other heifer living and she her half-sister.

She is a three-quarter sister to a 40 lb. 3-year-old and the youngest 29 lb. cow of the breed.

She is a beautiful individual, you couldn't wish for a prettier one, beautifully marked and but nineteen months old.

And she is safe in calf to "It" (being bred in July), the Premier Sire of the West. Her calf will be worth more money than she will bring.

We call her the leading lady in our consignment of stars, seven wonderful females, such as but few herds in the country can boast of. Of

course you want to know about the others. Look!

WOODCROFT YBMA PIETJE at 6 years, butter 7 days 31.28, butter 30 days 124.02, and a magnificent young cow but 6 years old, bred in May to "It."

YBMA PIETJE De KOL MEAD, her nine months old daughter by King Mead of Riverside and a little gem if there ever was one.

WESTVIEW PEARLIE ALCARTRA, a 25.68 lb. junior 3-year-old granddaughter of a 33 lb. daughter of Alcarta Polkadot and bred to "It" in May.

K. S. P. GOLDEN QUEEN, a daughter of King Segis Pontiac out of a 30 lb. daughter of Lord Netherland DeKol, bred to "It."

ABBEKERK KORNDYKE SEGIS, a 30 lb. daughter of King Segis DeKol Korndyke, sire of the first 40 lb. 4-year-old, bred to "It."

QUEEN BEAUTY JULIANA, a granddaughter of Juliana DeKol, out of a nearly 28 lb. cow, safe in calf to "It."

Seven magnificent animals, six of them in calf to the Premier Sire of the West, "It," whose dam is the first 37 lb. cow, Pontiac Clothilde DeKol 2nd, and whose grandam is the famous 35 lb. cow, Pietertje Maid Ormsby.

We are loath to part with them. We can't replace them with other animals of equal merit, we know, but you can buy them at your own price—you the fortunate purchaser.

## McALISTER & SONS,

## CHINO, CAL.



# CALIFORNIA CULTIVATOR

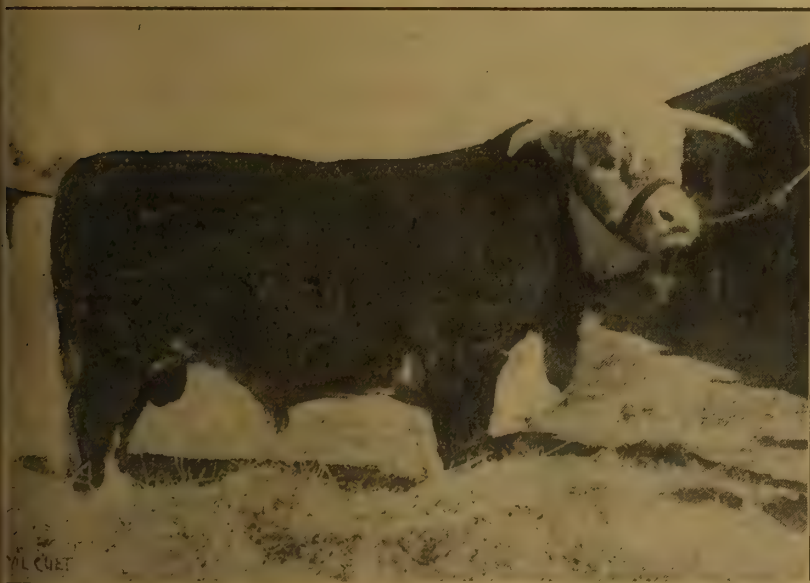
*THE LIVESTOCK and DAIRY JOURNAL* Combined with **CALIFORNIA CULTIVATOR**

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

December 1, 1917

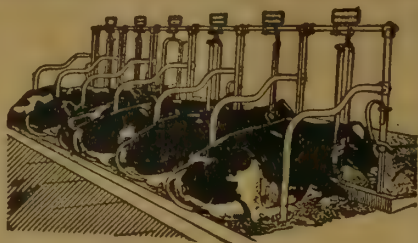
SAN FRANCISCO



Some Champions at Arizona State Fair. See Article on Page 547



## James Sanitary Barn Equipment



Cow Comfort in James Stalls

You can keep your stalls and your cows clean with half the labor—save time and feed, have healthier cows, better milk and more milk if you have your barn equipped the James Way.

### Steel Stanchions

If you are not ready to buy complete sanitary equipment don't hold back on the James Steel Wood Lined Stanchions. They are one of the first practical steps toward owning complete barn equipment; sanitary, convenient, afford cow comfort and can be immediate money makers for you.

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Bull Staffs, Pens, Hog Troughs, Watering Cups, Feed Trucks

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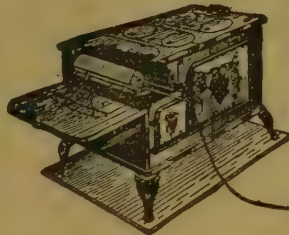
## De Laval Dairy Supply Co.

61 Beale Street

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## HEAT YOUR HOME WITH OIL

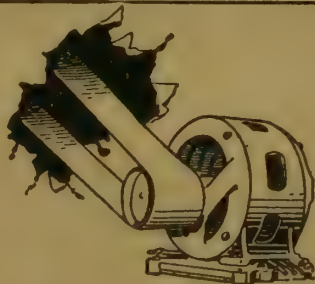
### AT LOWEST POSSIBLE COST.



If many people knew what hundreds of our satisfied customers have found out, namely, that our distillate or oil burners can be quickly and cheaply put on any cook stove or heating stove, thereby saving many dollars in the cost of fuel, THEY WOULD SEND FOR OUR DESCRIPTIVE PRICE LIST and FREE BOOK-LET AT ONCE. LET US SHOW YOU.

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Los Angeles

The Pump and Engine House of the Pacific Coast.

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Made of Yucca Palm.

Is cheap, durable and quickly put on the tree. It prevents rabbits from destroying your trees. A sure protection against frosts, sunburn, grasshoppers, or dry winds. Can be easily removed, will last for years. Send for samples.

### Prices

	Per 1000
10 in. long, 7 in. wide....	\$10.00
12 in. long, 7 in. wide....	11.00
14 in. long, 7 in. wide....	12.00
16 in. long, 7 in. wide....	13.50
18 in. long, 7 in. wide....	15.00
24 in. long, 7 in. wide....	18.00
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YUCCA MANUFACTURING CO.  
1380 Willow St., Los Angeles, Cal.

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Fish Scrap  
Whale Tankage  
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Contract Early Before  
Prices Advance

Rogers Brown & Co.

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## Holstein Friesians

Herd of over 200 head to select from headed by King Mead Acme, whose dam, Sadie De Kol Acme, made 885 pounds butter in one year. We breed for high production and high testers.

Will sell bulls that give satisfaction to the buyer and at reasonable prices.

Frank Helm

Fresno - - California

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Herd Sire, Dairy King of Arizona  
CHOICE BREEDING STOCK FOR SALE

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Remember the Name of That Great Holstein Show Cow

## JENNIE TERZOOOL HICKS 4th



This Great Individual and Her Son and Her Daughter Are Features of Our Exceptional Consignment of 8 Head to

## Breeders' Guaranty Sale

SACRAMENTO, DECEMBER 5

Jennie Terzool Hicks 4th has established her value by her production at the pail and her prepotency. She has a record of 600 pounds of milk and 32.7 pounds of butter in seven days and will make over 21,000 pounds of milk and about 1000 pounds of butter in 10 months. She was bred May 22 to the great producing sire King Pontiac Segis Korndyke.

Palo Terzool Korndyke, her son, was born January 19, 1917. By Rag Apple Imperial Korndyke, a son of Rag Apple Korndyke, who is the sire of the \$25,000-bull Rag Apple Korndyke 8th, the sire of the \$53,200-calf.

Alta Jennie, her daughter, was born February 18, 1916, and is a most promising heifer. In calf to King Pontiac Segis Korndyke.

### Our Other Great Individuals in the Sale Are:—

Finderne Soldene Pontiac Valdessa—A 35-pound bull of exceptional breeding born February 23, 1917. Sired by King Valdessa, the highest record bull of the breed. His dam, Finderne Soldene Hengerveld at three years made 486.6 pounds of milk and 35.33 pounds of butter in seven days, and 2,251 pounds of milk and 136.82 pounds of butter in 30 days—both world's records for heifer with first calf.

Springvale Ononis Vale—Record of 588.7 pounds of milk and 31.2 pounds of butter in seven days, and 2,461 pounds of milk and 127 pounds of butter in 30 days. Now fresh and bred to King Pontiac Segis Korndyke.

Mousie De Kol Lady 2nd—Record of 24.48 pounds of butter from 556 pounds of milk in seven days and 675 pounds of butter from 20,000 pounds of milk in 10 months. One of the most beautiful cows ever offered at any sale.

Mousie De Kol Imperial—Daughter of Mousie De Kol Lady 2nd and sired by Rag Apple Imperial Korndyke. A first class heifer in calf to King Pontiac Segis Korndyke.

Rosabel Korndyke—A great 30-pound prospect with a record of 23.18 pounds of butter in seven days. She is a wonderful producer both from the pail and the breeding standpoint.

We Are Sending the Pick of Our Herd

Palo Alto Stock Farm, Palo Alto, Cal.

M. H. Tichenor, Pres.

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Liberty  
Bonds  
Make a wise  
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Just so with  
the men who  
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# California Cultivator

Vol. XLIX No. 22

LOS ANGELES: December 1, 1917

One Dollar Yearly

## Arizona State Fair at Phoenix

M. E. Bemis and F. F. Stonerod Represent the Cultivator. Greatest Fair of the Southwest. Fine Exhibit from Home Canning Clubs. Demonstrations by Cow Testing Associations. Especially Strong Exhibit in Beef and Dairy Classes

HERE was nothing unlucky about the Arizona fair which closed November 17, even though it opened on the 13th. On several occasions during the week just preceding some of the other 12 fairs a rain has fallen which has materially reduced the attendance. This year not a cloud shadowed the sun and the people came by thousands, came early and stayed through the week. The attendance for the first five days was said to have been as great as the total attendance for the week of any of the previous fairs, and Saturday, the last day, was the big day, the automobile day which always draws the crowd.

Fairs are supposed to be educational, and we believe that the Arizona fair is accomplishing some things on the educational line that could not be done in any other way. I have attended seven of the 13 fairs, and it is a pleasure to me to note that the tendency is more and more towards the idea of teaching something useful to somebody. Mr. Stonerod tells you on another page of the livestock at the fair, most of which is owned and raised here. In the early days of the fair the numbers of pure bred cattle were few. It was at these early fairs, however, that the farmers learned the merits of good cattle and other livestock, and it was in no small degree the stimulus of the blue ribbons that induced many a farmer to become a breeder. The tendency is now more and more to fit the animals better and bring only the best. It is to me a healthy sign that the cattle exhibit is increasing so much in numbers and it is improving wonderfully in quality. The reason is that there are more breeders and they are bringing the best.

It was peculiarly fitting that the agricultural extension of the state college of agriculture and the several experiment stations should have exhibits and demonstrations showing

of Lowell produced on one-half of an acre of ground, vegetables which he sold for \$121. The exhibits were designed to show how more and better crops can be produced and also how they may be standardized for market or preserved for future food supply.

message from the president of the university to the secretary of the fair commission. The birds made the 110 miles in about three hours.

The demands for space in the agricultural hall were such that Superintendent Bartlett was forced to make

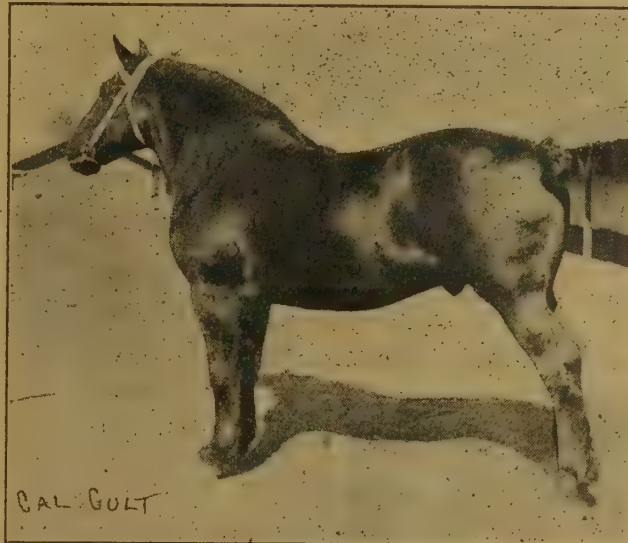
on alfalfa seed, first and second on paper shell pecans, first on almonds, first on Irish Cobbler potatoes, first on lettuce, first on Early Baart and Macaroni wheat and threshed milo.

Maricopa County's exhibit was given a touch of reality by a scene representing the Roosevelt dam with the water flowing from the outlet. As the agricultural and livestock products of this county are dependent upon the water from this dam, it was particularly fitting that it should have a place in the exhibit, and an interested crowd was always viewing this scene. Among the many ribbons won by Maricopa County was first and second for alfalfa cow hay, first for threshed barley, red oats and club cane, first for best 50 bolls of cotton, also for best ten pounds of lint and ten pounds of seed cotton; in vegetables first on red sweet potatoes, bunch turnips, bunch radishes, cabbage, table beets, parsley, table onions, green peas, and cantaloupes; in fruits first on Delicious apples, persimmons, pomegranates and several varieties of grapes, and best display of grapes by one grower. Maricopa won first on head milo and second on ear display of Mexican June corn and also second on all other varieties of Dent corn.

Pinal County received the honor of first prize for baled long staple cotton, yellow sweet potatoes and egg plants, and tomatoes and watermelons all won first prizes from this county as well as a number of second prizes.

Pima County had a booth representing the entrance to the famous St. Xavier Mission of Tucson. Not a large exhibit was shown but several first prizes were won including first on Mexican June corn.

Gila County for the first time had a place in the agricultural hall. Here some of the products from the famous war gardens of Inspiration were shown. Owing to an error in making the entries many products shown were cut out of prizes, which other-



Arizona Grand Champion

A California horse winning honors at the Arizona State Fair. Grand champion Percheron stallion exhibited by Ruby & Bowers.

Cooking demonstrations were given daily, and on the last day an Arizona luncheon was served, everything on the menu being an Arizona product.

The exhibit of the state game warden was more than educational; it was fascinating. Not only were many wild animals shown in cages, but there were also specimens of birds and animals that had been preserved by the taxidermist's art which, properly labeled, were a revelation to school children as well as many older ones, of the wonders of nature in this

some changes in the building to accommodate the needs of the various counties. In the grand prize of the counties, Maricopa not competing, the silver cup for best display was won for the first time by Yuma County. Yavapai was second, Coconino third and Pinal fourth. Yavapai was conceded to have the best decorated booth. Navajo County, one of the northern counties, won a first prize on King David and Wealthy apples; in dry farm products, a first on hard wheat, ten ears of sweet corn, sheaf



Cow Testing Associations Honored

Cow testing was given recognition at the Arizona State Fair, and methods of conducting a test were shown.

Methods of producing and preserving foods. In the division representing boys and girls club work one of the most striking exhibits was that of the Opal Webb, a 14 year old girl of Pima, who had on exhibit 211 varieties of canned fruit, vegetables and meats. This girl will stand a good chance of winning the national championship in the girl's canning clubs. No other girls had 99 and 100 varieties respectively. Floyd Medlock of Tempe is the winner of the national boy's championship in cotton raising, having produced 310½ pounds of lint on one-half acre. Another boy, Joseph Carbine of Jerome Junction, had 64 sacks of potatoes on one-half acre of ground. Harry Miller

big state. In this same class was the apary exhibit which this year was superintended by Dr. Morrill, the state entomologist. By placard and verbal explanation thousands of people learned something about these wonderful insects that in Arizona are producing more than 20 carloads of honey each year.

The poultry exhibit was not as large as in some former exhibits but in quality there was nothing lacking. The varieties represented nearly all the popular breeds. Judge Goodacre of California again placed the ribbons to the satisfaction of the exhibitors. Two pairs of Homer pigeons were shown that were released at Tucson the day before the fair, bringing a

of soft wheat, ten ears of flint corn, and peck of soft wheat, and a second on ten ears of popcorn. This county also won several other first and second prizes in fruit and dry farm products.

Graham County vies with Yavapai for honors in raising apples; the prize for the best six boxes of commercial pack of foremost commercial varieties was won by this county this year. Five first and second prizes were awarded on different varieties of apples. The second best five heads of dry farm milo was also credited to this county. First for best bale of wheat and best bale of alfalfa horse hay was won by Graham County.

Yuma County won first and second

wise undoubtedly would have won first honors. The exhibit was very creditable.

Coconino County carried off nearly all the prizes for potatoes and made a good showing of other products.

Cochise had a very attractive display of fruits, grains and vegetables, both dry farmed and irrigated, and carried off more than 20 blue ribbons as well as many more seconds.

Apache and Santa Cruz Counties, one from the extreme north and the other from the southern border, had booths side by side, and both made characteristic exhibits of the products of their respective counties, and



Mines Building at Arizona State Fair

Substantially built and indicates belief in the permanence of the mining industry near the head of which Arizona stands.

Continued on Page 556



# Plant Fruit Trees this Year

If you are going to plant trees this year, you will quite naturally want to buy the cleanest, healthiest, best rooted, most vigorous stock obtainable. Hundreds and hundreds of fruit growers who have made a big success in this state and "who know," will send their orders to the Fresno Nursery Company.

## Come To Headquarters

There is a reason why Fresno is a fruit tree center—climate, soil and abundance of water for irrigation purposes make this a wonderfully fertile section.

As we specialize in fruit bearing trees, we are in a better position, perhaps, than anyone else to take care of your requirements along this line. We would be glad to have intending planters write to us regarding the number and variety of trees they will probably want.

## The Muir Peach is in Great Demand

Growers throughout the San Joaquin Valley secured large returns from their Muir Peaches this year.

The California Peach Association strongly favors the Muir Peach, as they have found it the only variety that can be process peeled. We can say that if you have soil suitable for growing peaches, you will make no mistake in planting Muirs. We have an exceptionally fine stock of young, thrifty trees this year.

## Notice To Planters

We want every horticulturist in this state to have a copy of our new catalogue, just off the press. This book will contain more complete detailed information about the different varieties of fruit bearing trees than is usually found in a Nursery catalogue.

Address—

**Fresno  
Nursery  
Company**

Dept. A

**Fresno, Cal.**

## Humus



**A** FUND of valuable information as to fertilizers for citrus trees is gathered in Circular 171 by Dr. W. P. Kelley of the Riverside Citrus Experiment Station. Regarding the importance of humus Dr. Kelley says:

The most important consideration in the fertilization of citrus is California relates to the organic matter of the soil. The virgin soils are commonly low in organic matter and the tendency is ever toward the loss of this constituent. The forces which bring about decomposition of soil organic matter are stimulated by the more favorable conditions which ensue as a result of cultivation and irrigation; the temperature and moisture conditions are suitable for rapid decomposition throughout the main part of the year. Consequently, it is necessary to put forth special effort, if the organic matter be maintained.

Suitable physical conditions in soils are of great importance, without which no amount of fertilizer or other soil treatment can be expected to produce maximum effects. But the maintenance of suitable physical conditions in a soil is more dependent on the presence of decaying organic matter than on any other factor. Likewise favorable chemical and active biological conditions in soils are vitally dependent on the presence of organic matter. In fact, organic matter is the life of a soil.

As a means of supplying organic matter, leguminous cover crops are recommended. It is well known that legumes have the power of fixing nitrogen from the air and thus adding it to the soil, but it is doubtful whether the value of a cover crop can be adequately estimated by its nitrogen content. The effects of decaying organic matter on the soil itself are probably of as much importance as the actual nitrogen added from the air. Leguminous cover crops undergo rapid decomposition, leaving the soil in a physical and chemical condition that is better suited to plant life. In order to avoid bad soil conditions that may otherwise arise, it is recommended that, wherever possible, the cover crop be incorporated with the soil not later than the middle of March.

A second important means of replenishing the organic supply of soil is by the use of manure, and almost every orchardist, whether he be a citrus, walnut, or deciduous fruit grower, should put forth increased effort to enlarge and conserve his supply of manure.

In general the greatest value to the soil will result from plowing down the manure as soon as possible after it is applied, but no hard and fast rules be laid down regarding the time of application or the amount to be applied. As a general rule, better soil conditions result from making the application early than late in the season, and the amount available together with its cost will rarely permit the grower to use an excess. Ten cubic feet per tree may be considered to be a reasonable application.

Manures differ widely both in composition and in their effect on soil. The rates of decomposition likewise differ widely. Generally speaking, the more straw, sawdust, shaving, etc., a manure contains, the more slowly it will undergo decomposition, and just as in the case of covercrops, manures cannot be adequately valued by their plant food content. The nitrogen content of manure gives to special value for California soils, but too much stress should not be placed on the analysis of manures, for it is beyond doubt that the effects produced by this material are often not proportionate to the plant food content. The soils need to be enlivened with decaying organic matter, and manure is a valuable material for this purpose.

Another important source of organic matter is found in bean straw and alfalfa hay, but in view of the value and need of these materials as stock feed at the present time, the citrus grower is advised to make use of winter cover crops and manures instead. However, bean straw and alfalfa hay are valuable materials for use on citrus soils. The high nitrogen content makes it possible to supply a liberal amount of this element along with the organic matter, and the fact that these materials undergo rapid decomposition, insures rapid nitrification and therefore prompt availability.

## Fertilize

With the present high prices it is going to prove highly profitable to use fertilizers liberally this year. Moreover to fertilize so that every acre shall produce more than in the past is highly patriotic since it helps to feed the nation and its Allies. Such is the point of view urged by the state council of defense.

More nitrogen and more organic matter in the soil is the foremost problem of the California farmer, says Prof. C. B. Lipman in a paper on "Fertilizing California Soils for the 1918 Crop," just issued by the state university.

Here are the best ways to increase organic matter: The use of all available farm manure. The use in orchards and vineyards in the fall, and on summer fallowed grain land during the fallow year, of all available straw. The use of green manuring crops, preferably leguminous crops grown through the winter and spring and plowed under about April 1. The best

are melilotus indica, vetch, and clover. The plowing under of weed beet tops, and prunings from trees and vines, especially in the fall of the year. The use of straw mulch to prevent excessive oxidation of the organic matter which results from cultivation, and to bring organic matter into the soil. The best mulches are legume straws like bean straw or coarse alfalfa hay, but grain straw, rice hulls or farm manure may be used.

With the possible exception of the delta lands, potash fertilizer cannot be made to return profitable yields on arid California soils. Considering war needs and war costs potash fertilizers should not be employed during the war on California soils, save the on the delta lands or on some of the badly leached soils of certain portions of northern and northwestern California, where there is very heavy rainfall every year, potash fertilizer may be used to advantage if a cheap form like wood ashes is obtainable.

## Cooperating

Personal independence is a fine thing as long as it is intelligent. Lacking intelligence, it becomes the characteristic quality of the mule. Men who are masters of their own affairs are more interested in doing the right thing than in doing the independent thing. The man who says this week that he will eat what he pleases and would like to see anyone make him sign the food pledge, is doing more than his share to make sure that no food pledges will be necessary next week to force a limited diet. Usually he does not have any notion of where he gets his food beyond the fact that he buys it and now has the price. If he should still have the price, but not

be able to buy the food, next week, he will be still indignant, but entirely helpless.

We must expect to find people like this, who refuse to sign food pledges but we should not be discouraged. It is all a matter of education. We have all had to be educated on all sorts of public subjects. Some of us have never learned anything except through necessity. We have supported schools, not because we knew schools were good for our communities, but to save our property from being sold for taxes. Many others of us have had to support roads and parks and other public enterprises in the same way. But the great mass of people



# Kirkman Nurseries

Established 1888

Wholesale Growers of

## High-Grade Nursery Stock

DECIDUOUS AND CITRUS FRUITS

OLIVES AND GRAPE VINES SHADE AND ORNAMENTAL TREES

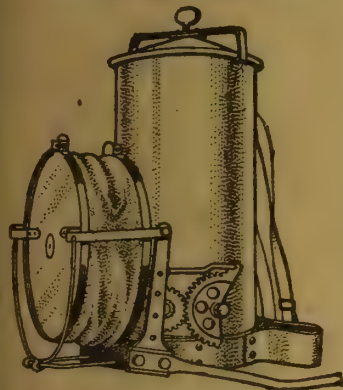
Twenty-nine years of continuous and consistent service to the Western fruit growers.

There is a shortage of trees this year. To make sure of getting just what you want, place your order now.

Address Main Office

2522 Tulare Street  
Fresno, Cal.

## American Beauty Dust Sprayers



AT YOUR DEALERS  
or we will send it to you for  
Standard Size ..... \$16.00  
Junior Size ..... \$13.50  
The California Sprayer Co.  
6001 Pasadena Ave., Los Angeles

## Leonard Coates Nursery Co.

MORGANHILL, CALIF.

New Catalogue is now ready. It will pay you to send for it. Our stock is unsurpassed.

## BIG MONEY TRAPPING COYOTES

Free Illustrated Book Tells How!  
Big demand in Denver for all western raw furs—Coyotes, skunks, muskrats, wildcats, sell here for big money. Denver, closest and best market on earth for western trappers and furshippers. Stephens of Denver is the largest exclusive buyer of western raw furs in the world—charges no commission—saves you 25% on express or parcel post and you get your money two to ten days quicker. Every shipment personally graded and priced by a member of the firm. Stephens sells traps, animal baits, and all trapper supplies at rock-bottom prices. Write today for big illustrated trap catalog, trapper's guide, fur price list and shipping facts. ALL FREE. Write quick.  
E. A. STEPHENS & CO.  
105 Stephens Bldg., Denver, Col.

ple do public things in a public way and do not think they are giving up their independence in cooperating.—Fresno Republican.

### KEEP THE TRACTOR IN GOOD ORDER

The tractor is as responsive to good treatment as an animal or any other machine. In the case of a great many machines the response to good treatment is not so noticeable. This is true because the tractor is a power-furnishing machine while the average farm machine consumes power. If the tractor is not just right in every way, it falls short in the production of power. This is sure to be very noticeable, as it is usually pulling a full load and only a small loss in power cuts down the amount of work done.

In the case of the power-driven machine, any disorder calls for greater power to operate it. The horses or the machine furnishing the power work harder and approximately the same results are accomplished. Hence it is much easier to overlook a slight indisposition on the part of a power consuming machine than on the part of the power producer.

If any part through which power is transmitted is loose, it may cause a reduction of power. The tractor operator should examine his machine thoroughly every week or ten days to prevent such loss. A bolt in the crank case is loose, oil is lost. The adjustment on a valve stem loosens, the valve is out of proper time and the cylinder does not give full power. The clutch is not adjusted to take hold evenly. Slippage here causes loss of power. Similar leaks may develop in the fuel system and the ignition system. Any of these cause heavy drains on the power. Usually they can be quickly repaired if attended to early. Left too long, they may result in a breakdown involving a large repair bill and loss of much valuable time.

The throb and rhythm of the tractor should be a part of the operator so that he detects the trouble in its earliest stage.—E. R. Gross, Colorado Agricultural College.

### HOW TO MAKE ELECTRICITY

How to make your own electricity is the subject of a university extension correspondence course offered by the state university at Berkeley. In this course an electrical engineer will teach how to harness the creek or, cheaper yet, put a gasoline engine to work making electricity, and how by the use of an economical equipment of storage batteries this stored power may be made instantly available at any time, not only, for lighting, but for sawing wood, pumping water, running a vacuum cleaner or the electric iron, or churning, or operating a washing-machine. The farmer who can obtain power from neighboring power lines can learn in this course how to wire his house and barns, how most economically and efficiently to use this supply of electricity, and how to make simple calculations in electricity as he now does in regard to steam engines or gas engines.

Book Review

### COOPERATIVE MARKETING

"Cooperative Marketing, its Advantages as Exemplified in California Fruit Growers' Exchange" by W. W. Cumberland, University of Minnesota. Princeton University Press, Princeton, New Jersey, publishers. Price, net \$1.50.

Mr. Cumberland is a California boy, born and brought up in the orange groves of eastern Los Angeles County, so that he is interested in the citrus industry. The book touches upon distribution; origin of citrus industry in California; beginnings of cooperative marketing among citrus growers; constitution and details of the exchange; benefits of cooperation, and one chapter is devoted to affiliated cooperative organizations. There are an even dozen chapters, 226 pages, egg shell paper, uncut edges and a generally attractive book.

### IRRIGATION CONVENIENCE

Henry Pitcher, an Orange County irrigator, has invented and secured patent on a combined ridger and blocker for preparing ground where the basin system of irrigation is followed. It may be handled with either team or tractor.

## TEAGUE QUALITY CITRUS TREES

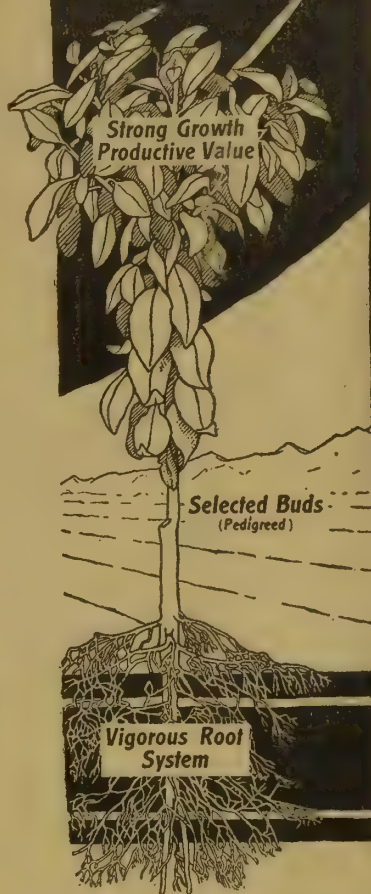
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## The California Fruit Growers Fiftieth Convention

Fruit Growers of State Gather at Sacramento. They are given a royal good time by the Sacramento Chamber of Commerce. Three days devoted to discussion of Standardization, Labor, Marketing and other Problems. Next Convention to Be held at Riverside.

**S**ROBLEMS brought up by the world war dominated the fiftieth state fruit growers' convention held last week in the city of Sacramento. Most important of these problems were perhaps brought out in the discussion of closer cooperation of labor to save wasting crops and the closing of saloons which lower labor's efficiency. On this point a resolution was introduced in effect that the governor call an extra session of the legislature to deal with "predatory saloons which waste the earnings of workers and lower the efficiency of labor at least 25 per cent." Another resolution called upon Commissioner Hecke to inaugurate a state wide campaign of one week, not later than April, 1918, for the extermination of the California ground squirrel. The resolution also urged upon the board of supervisors of the counties to appropriate funds for the use of the county horticultural commissioners to make this work effective.

In labor serious shortage was shown. In certain sections like Fresno, or in limited areas, thorough organization of the fruit growers and payment of a liberal wage has lessened the loss. Had all sections made an equal bid for these laborers the losses would have been more evenly distributed and the situation complicated. It was suggested that Chinese laborers be admitted, that laborers be secured from the Hawaiian Islands and from the West Indies. In the building of the Panama Canal, West Indian laborers were used and found efficient. It was stated that at least 15,000 unskilled laborers would be needed to harvest the crops of 1918. One point in favor of the West Indian laborers was better facilities for bringing them into California. The strongest objection put up against Chinese labor was the practical impossibility of securing transports to carry them to this country.

It has been most fortunate that the weather conditions and the harvest season have enabled prolonged harvesting, else California's loss would have been immense. The labor question was finally referred to Commissioner Hecke with the request to "use his best endeavors to bring about the material alleviation of the present shortage of labor and take up the subject with proper government authorities." A committee will be appointed by the state commissioner to present the matter to Washington. One entire day was given to the discussion of labor problems.

### Plant Trees

One speaker made a suggestion that in the matter of orchard planting with the present car shortage and transportation difficulties "the problem was so great that planting should

be discontinued." This was contrary to the belief of many of those attending the convention, for it was felt that the same determination with which this country is entering into the element of the war questions would meet the requirements of transporting California's fruits. It takes years to produce an orchard, and it is more than likely that America will meet increased production with increased facilities. Regarding the statement which had been made that California fruit shipments during 1918 must be curtailed at least 50 per cent, it was asserted that while all the conditions of transportation could not be positively predicted it was reasonably sure that no such serious shortage would be felt. Many cars which have been used in transporting lumber and materials for building in cantonments would now be released. The transportation problem for the next few months will be one more largely of movement of men and food supplies. California sent during last year over 23,000 carloads of fresh deciduous fruits to Eastern markets. This was vastly greater than any other preceding year. The construction of buildings in the cantonments has taken 50,000 carloads of lumber and 86,000 carloads of plumbing materials. Next year's output of deciduous fruits will not be so great. Next year's output of citrus fruits will also be materially below that of this year, when 54,504 cars were required to carry fruit to the market.

### Deciduous Experiment Station

The deciduous growers of the northern part of the state presented the matter of an experiment station having to do with deciduous fruits as does the citrus experiment station at Riverside with citrus fruits. There is now an experiment plot on the farm at Davis, but the growers have felt that this was not of sufficient scope to give the information which is required by those engaged in an industry so extensive as that of growing deciduous fruits in California.

### Cooperative Marketing

Cooperative marketing was handled by the state market director and by representatives of every form of cooperative effort in this state. It was urged that a more perfect coordination of present cooperative effort be effected. As the cooperative association aids the growers, so should the larger organization aid the different associations.

### At Riverside

The fifty-first state fruit growers convention will be held in Riverside and while no date was named, it is presumed that this will be a fall meeting, hence in November or December of 1918.

## To the Citizens of California:

Coal is absolutely necessary to the successful prosecution of the war; every available pound can and must be put to use by ourselves and our Allies. It is the patriotic duty of every citizen to avoid waste of coal and to consider how his coal requirements can be reduced.

California, in particular, is confronted by a most critical situation. Eighty per cent of California's coal supply comes from Utah and Wyoming, a distance of at least 1000 miles. Our railroads are now burdened to the limit of their capacity moving troops, supplies, munitions and other things essential to warfare; and still with these tremendous limitations upon our transportation facilities comes the greatest demand for coal ever known in the history of our country. Under these circumstances every California coal user must help.

### We ask all:

Not to use coal for heating unless the house temperature is below 60 degrees.

To burn wood wherever possible.

To use oil stoves or heaters when it is necessary to keep certain parts of the house at a special temperature.

To reduce the coal used in the stoves. Do your cooking at one time. Use wood wherever possible.

To be economical with gas and with electricity where it is generated by coal or oil using plants.

Not to burn coal in an open grate, for in such practice 75 per cent of more of the heat goes up the chimney.

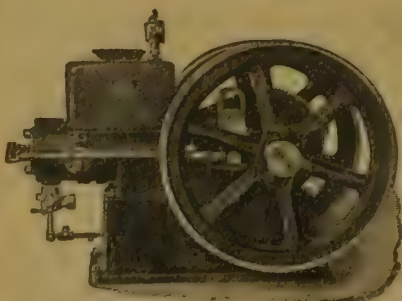
Not to heat every room. Close off spare rooms. Most people would be healthier if they slept in cold bedrooms.

The times call for more than usual skill and care in putting coal into stoves and furnaces.—Federal Fuel Administration for California.

Owners of land in Los Angeles and Orange Counties are planning a large drainage district which will reclaim hundreds of acres.

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## Queries

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

### Pie Melons for Poultry

Please tell me why my hens have stopped laying all at once. We feed them green alfalfa, bran and rolled barley. They have grit, a fine yard, and we let them out for a run every evening. We also give them ripe citron, or pie melon, letting them eat the seeds. Their combs are red, feathers fine, and they have pure water by them all the while. We keep no rooster with them. They are not crowded, and have good nests to lay in. I am told it is the melon seed we have to blame for it. What do you say?—Subscriber, San Jacinto.

I don't believe it is the pie melons that have checked your hens' laying. If you have allowed them to stuff themselves with the seeds to the exclusion of other and more nourishing food, the effect might be disastrous, but melons in moderation should not affect laying. More likely it is lack of animal food. You are feeding no beef scrap or fish meal or milk, and the bugs and worms which they may have found earlier in the season on their range are not so numerous. Better add about 20 per cent of some animal meal to your bran. It would be better, too, not to use all bran for your round grain, but to add one part midlings or oat chop for every two parts bran. A little linseed or soy bean meal could also be added, along with the scrap or meal. You do not say whether the hens are through the molt or not, but it often happens that a hen that has laid up to the time when the new feathers begin to grow stops laying then because all the protein in her ration must be used for making feathers. If more protein in the shape of one of the vegetable meals or sunflower seed or an occasional meal of green cut bone is added to the ration at this time, she will soon finish the feather-growing and get back into laying form again.—J. A. K.

### Water Sprouts

What causes the growth of sprouts from the roots of apple trees and how could one control them?—Subscriber, Reshwater.

If from the roots, these are usually caused by breaking off in plowing or cultivating, of the larger roots, and from these suckers will sometimes start some distance up the tree. More often they come up around the crown of the tree and prove to be robbers of the sap and possibly the life of the tree, and to prevent loss they should be removed with a sharp knife as fast as they appear. If kept off for a long time, this habit disappears.

### Weeds in Reservoir

Weeds of various kinds are growing in my reservoir. It is my intention to either cement or asphalt the reservoir, but before doing so I would like to know what to put on the ground to kill the growth of the weeds.—Subscriber, San Gabriel.

In case cement is used we think there will be no necessity of treatment of the weeds, but in case asphaltum is used we think that treatment with distillate on a good hot day before applying the heavier oils would be sufficient. We would be glad to hear from any subscriber having had experience along this line.

It was announced that this government was withholding supplies from Russia, but the war department asserts that this is not the case. Apparently the war department deems Russia's position worth supporting.

## FARM LOANS GROWING

Farmers of the United States have already secured over \$21,000,000 of five per cent money through the farm loan board. October was the biggest month in which over \$7,000,000 was paid out. Some states have applied for almost as much as the total loans yet made. These are being handled as rapidly as possible.

During October the 12 federal land banks received applications for loans amounting to \$27,416,463, and approved loans amounting to \$20,119,240. This brings the total applications for loans in the hands of the 12 federal land banks up to a grand total of \$193,250,945. This represents the applications only of organized farm loan associations, totaling approximately 3000, one-half of which have actually been chartered and the other half of which awaits action by the federal land banks. In addition the federal land banks estimate that there are approximately 2000 other farm loan associations being organized in the United States, which, when their applications are filed, will bring the grand total of applications to nearly double the present amount.

The most liberal in asking for these loans is Texas. She has applied for \$19,167,223, but thus far has only been granted \$729,000. California stands next in number of applications. Farmers of this state have asked for \$14,887,389, and loans actually placed aggregate somewhat less than one million dollars. This is within the boundaries of this state. The Berkeley federal land bank however, has closed loans for about a million and a quarter dollars. Considering the upheaval in the management of the Berkeley institution we think some exceptionally effective work has been done.

Every ball of the YUBA TREAD kept at work at food production helps as much as a hundred balls flung into German trenches.

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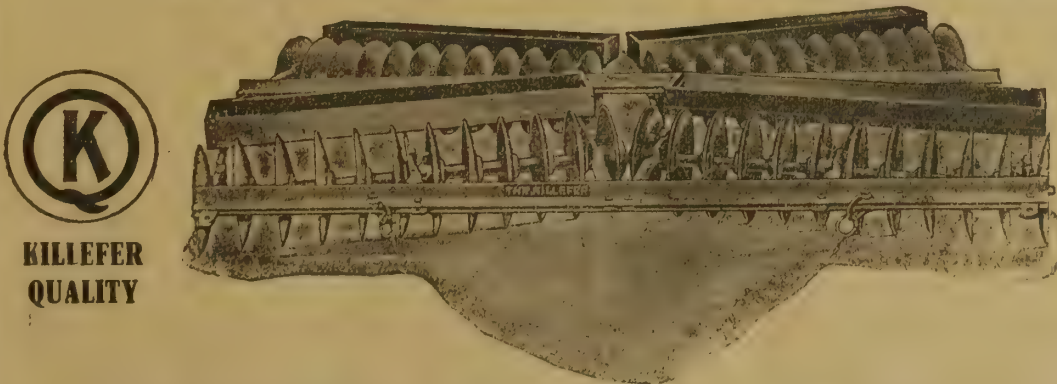
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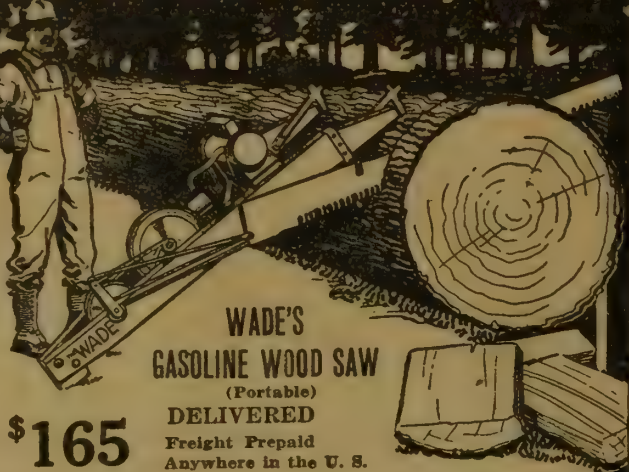
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and details about the 1918  
WADE Drag Saw.  
(Tear out Coupon—Write  
name and address in  
margin.)

## The Vegetable Garden in December in Southern California

Written for California Cultivator By D. F. Reichard

**T**HE lateness of the rains this year makes it necessary for those who can plant early winter stuff, to irrigate so as to get their ground in condition for planting.

Clear the garden of all crops that have matured. Prune all deciduous trees and shrubs. Burn or compost all the rubbish, spray all green stuff that may have aphids with Black Leaf 40. Destroying aphids at this time will materially reduce the possibility of having so many next season.

A generous amount of animal fertilizer should be worked into the soil at this time so that it may be decaying to make available plant food for early spring.

Having gotten the land apportioned for garden selected and cleared of the old crops, cover it with a good dressing of manure, after which thoroughly soak it so that the moisture gets down at least eighteen inches. As soon as the soil is in proper condition—in from one to five days, according to its nature—work the ground well to a depth of ten inches or a foot and thoroughly pulverize. This puts it in condition for the reception of seeds or plants.

Although December is not a good month, on account of its long cool nights and its short indifferent days, for seed planting in general, there are conditions and locations where many

varieties of vegetables may be planted with almost certain success. Hardy varieties may be planted in light warm soils. Among these would be Egyptian beets, Swiss chard, purple top turnips, Los Angeles Market lettuce, early radishes, prickly spinach, kale in variety and mustard. The seeds of all these will germinate and the plants will make slow growth until the early warm days come in February, by which time these young plants are well established and are in a condition to make quick growth at this first invitation of spring. In frostless foothill spots more tender things can be put out, such as potatoes, early tomatoes and peppers. Dormant plants of asparagus, rhubarb and horseradish and onion and garlic sets may be set out; also young plants of cabbage, cauliflower, kale and lettuce. None of these will make much top growth until they get some warmer weather but the roots will be getting well established.

Wet all plants well at once after planting to settle the dirt around their roots. Since the soil stays moist as well this cool weather seeds planted an inch in damp soil should not need wetting until after they are up, at which time run a furrow beside each row and irrigate by allowing the water to run slowly down each furrow. Cultivate as soon as soil is in condition.

## Southern California Cauliflower Crop

By R. G. Risser, Assistant Truck Crop Specialist

**N**OVEMBER 1, 1917.—Personal inspection of cauliflower in the fields and interviews with growers indicate that the condition is 90 per cent of the condition one year ago and 85 per cent of normal. October, 1917, was one of four Octobers in 40 years to have no rainfall. Hot drying winds have also occurred which have had a perceptible effect upon the growing cauliflower, and while sufficient water has been supplied for irrigation, the cauliflower crop is especially sensitive to atmospheric conditions and needs more favorable growing weather. The full extent of injury from the dry sunny fall of this year is not yet apparent and to the casual observer no damage is noticeable, but growers of long experience declare that the foliage does not look right, and if the present conditions continue much longer the crop may be materially affected. No serious consequences are expected, however, if the month of November is normal.

Extra early cauliflower has been moving out in mixed cars during October and several straight cars have been shipped, but the bulk of the crop has not yet made heads. About 95 per cent of the plants to be set out are now in the field, but, in general, the crop is later than last year. Planting of the seed beds started early in May and continued at intervals of two weeks into the month of August. Early, half early, and late varieties are generally used and with successive plantings they provide a con-

tinuous supply for heavy daily shipments over a long winter period. Broccoli is also grown to some extent and proves superior for late planting in especially cold seasons. The seed is produced by the growers of cauliflower, and strains well adapted to local conditions have been developed by years of selection.

Some of the growers planted a larger acreage of cauliflower than they intended at the outset to put in, and some of them were so short of labor during the beet harvest that they did not get their full acreage set out, but all information available to date confirms the preliminary estimate of 3500 acres in Los Angeles County. This acreage, together with a normal yield of 400 crates per acre, gives this district the distinction of being one of the few great cauliflower sections of the United States, and if the season from now on is favorable it is doubtful whether any district in the country will ship out a larger number of cars.

On account of a very short crop of navel oranges, it is expected that there will be more cars available for vegetable shipments than there would be otherwise. The present shortage of cars is a serious thing and until bad weather occurs to cut off grape shipments no improvement in the supply of refrigerator cars is in sight.

Labor shortage, which has also caused grave concern and heavy losses this season, is not expected to be at all acute during the winter months when cauliflower is moving.

## The Ornamental Garden in December in Southern California

Written for California Cultivator

**B**ERMUDA grass lawns are browning, which is not in the least attractive, and if they are given an application of nitrate of soda and thorough raking encouragement will be given to the blue grass which may remain to send up fresh shoots, for these are not affected by the cold as is the Bermuda. Besides the thorough raking and fertilizing gives the Bermuda a chance to brighten itself up.

It is a little late, but seeding of clover may continue, but one takes risk of damage from early frosts.

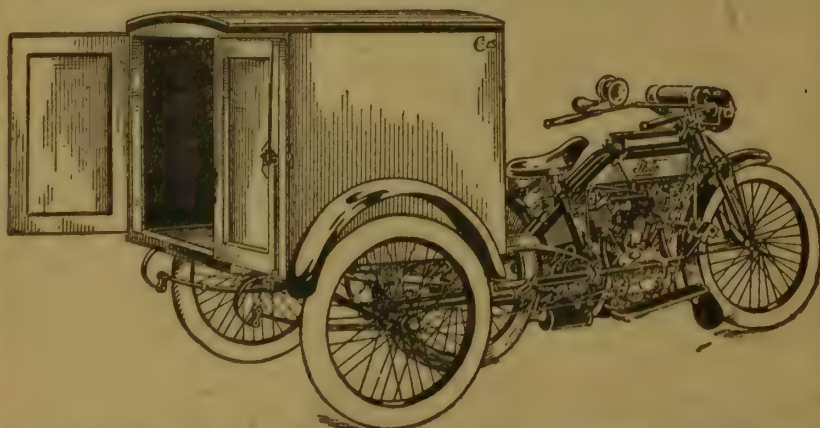
Autumn leaves are falling and be-

coming something of a nuisance. Don't burn them. Push them into a pile in an out-of-the-way corner and mix with weeds, rubbish and manure. Keep it wet, and within a year fine potting and garden soil will result. Or, in lieu of the compost heap, one may spade leaves into the garden and give thorough wetting, and by spring they will not seriously interfere and ultimately will provide a fine addition to the garden soil. In fact, a heavy manuring of the soil in addition to this spading of the leaves, and manure spaded in, is excellent treatment at this period of the year.

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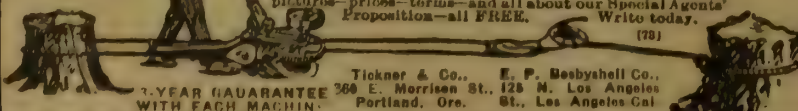
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Plant sweet peas, and practically all rden annuals of the hardier sorts. pecially put in some of the phlox d other "old fashioned" plants. th the planting, don't forget the lifornia poppy. Take out the dor- unt dahlia bulbs and put in more of ese hardy annuals. Store the dah- bulbs in cellar or other cool, dry ice. If daffodils have not been planted tensively, plant at once; also ane- ones, ranunculus, hyacinths, tulips, anish iris, sparaxis and freesias.

Alfalfa Molasses

Regarding alfalfa molasses about ich the Cultivator recently asked, requested of Professor F. W.Woll ormination regarding same and he ites: Alfalfa molasses is simply chop- d alfalfa, to which a certain per- tage of molasses has been added, linarily 25 to 30 per cent, I believe. number of firms in this and other estern states manufacture and sell ch feeds under certain trade names. sold at a reasonable price, say at out that of wheat bran, these feeds e worth a trial, but should be bought

The breaking up and replanting of the different types of the German iris is also in order now. Roses and practically all deciduous shrubs may be safely moved during this month. Chrysanthemums may be taken up and the ground given to more attractive winter blooming plants. They should be heeled in and the shoots taken from them for new plants next spring. The heavy prun- ing of the year may be given to prac- tically all roses and other shrubs.

of well known reputable firms only, as there is always a temptation to use inferior grades of alfalfa in their manufacture, which come nearer to alfalfa straw than alfalfa hay in composition and feeding value. Molasses is a valuable stock feed, whether from cane or beet sugar factories, although the former kind is generally preferred by manufacturers and stockmen. A ton of molasses has a feeding value nearly equal to that of a ton of grain, and in addition adds considerably to the palatability of the feed or feeds with which it is mixed."

Halting Road Construction

Road builders are seriously concern- over the order of the Council of tional Defense to the effect that en top freight cars, except flat cars, ay not be used for shipping supplies r the construction, maintenance or pair of highways, roads, streets, ewalks, etc. The same order af- cts supplies for construction of all eaters or other buildings used for usement purposes. Highway com- missions and all who are interested in eing America's ability to defend rself because of a perfect system of ads are seriously concerned over ls order. We think however they e mistaken in believing that be- use some of the members of the uncil who are responsible for the ler are largely interested in rail- ways, that is the cause of the order

which will cripple highway building. As a matter of fact, highways from farming to railway centers may mater- ially increase railroad traffic. This is the time of war and non essentials must give way. However, we do agree with the road builders that road build- ing is one of the essentials which should be maintained at this time and we hope the priority board of the council will see fit to modify the rul- ing which has been given. In portions of California various scenic highways, more for the benefit of our pleasure seekers and tourists, have been planned. True patriotism calls for discontinuance of any such work, but construction on such high- ways as lead between the larger centers and through farming sections should be continued as a war meas- ure.

Legal Queries

Louis B. Stanton, attorney, 243 Wilcox ilding, Los Angeles, will answer legal irding in this department. Immediate mail replies cannot be given cept where fee to Mr. Stanton is paid. hen replies are wished in Cultivator dress query to 115½ N. Broadway, Los geles.

Division of Property

A buys an undivided one-half inter- t in 160 acres of land. A wishes to vide, hold, and improve his half, but the other owner, insists upon a aking a give or take offer for the hole. Can B compel A to make a ve or take offer?—Subscriber. An action may be commenced by A the superior court of the county thin which the real property is situ- ed to have a partition decreed. If it ppear that a partition of the lands mong the respective owners cannot e made without great prejudice to e owners, the court may order the hole lands sold and decree the pro- portion of the monies resulting there- om; otherwise referees are appoint- l who view the land, make their re- port and set aside the lands among e respective owners, which report is onfirmed or set aside and the judg- ent of the court, decreeing the divis- ion and settling the lands in fee sim- e among the owners.

tax on Homestead

Can one holding down a homestead this state be assessed and taxed r county taxes either on the land or e improvements before receiving a tent for the land?—Subscriber. When the land has been entered in e land office, paid for, and a cer- tificate given to the purchaser, it is ble for taxation by the state in ad-

vance of the issuance of the patent; as the land has actually become the private property of the purchaser and the United States holds merely the dry legal title. In the same way, if the homesteader has completed his prescribed term of residence upon the land and he is entitled to make his final proofs, he has completed all that he is required to do and the United States again holds merely the dry legal title and the land is subject to taxation by the state. As to the im- provements placed upon the land the exemption which applies to public land never does apply and these im- provements are at all times taxable by the state.

INVESTIGATE TRACTORS NOW

Write for different tractor catalogs. Study the maker's claims for each. Note the advantages each would have when applied to your own farm prob- lems. But our recommendation to ev- ery farmer is to investigate farm trac- tors now. War or no war, power farming is here to stay and the most successful farmer of the future will be the one who, like the successful man- ufacturer, installs the latest and most efficient machinery.

A SUGGESTIVE COMBINATION.

"So this is the watch you are giv- ing your fiance for his birthday. I don't fancy quite so much engraving on it, dear. Instead of 'Grace Osborn to Henry Lewis' why didn't you simply have the initials put on?" "I wanted to, dear, but 'G O to H L' seemed sort of rude and pro- fane."

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RED CROWN GASOLINE

Because of its con- tinuous chain of boiling points, Red Crown gives you more miles to the dollar.

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—you can turn four furrows at once, plowing an acre an hour at half the cost of team work, when you SAMSON-ize your farm.

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SAMSON SIEVE-GRIP TRACTOR CO.

(Division of General Motors Corporation)

Stockton, California.

SAISON SIEVEGRIP TRACTOR CO., Stockton, California. Get the story and see what advantages it offers. A. C. Green, Agent, 115 N. Broadway, Los Angeles. Send to P. O. Address. Name. H. P. Tractor.



Established 1877

Forty-first Year

**The California Cultivator**

A Journal of Horticulture, Agriculture and Live Stock

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**OUR ADVERTISERS RELIABLE**

We guarantee our subscribers against  
 loss through dishonesty of any adver-  
 tiser in the Cultivator. We do not at-  
 tempt, however, to adjust trifling dif-  
 ferences between subscribers and honest,  
 responsible advertisers, nor will we pay  
 the debts of honest bankrupts. Notice  
 of complaint must be sent us within 30  
 days from date of the transaction, and  
 the subscriber must have mentioned the  
 Cultivator when writing the advertiser.

**INVEST THE PENNIES**

The director of the mint calls  
 attention to the shortage of small  
 coins, especially pennies, and urges  
 as one means of meeting the present  
 need that the children of America take  
 their pennies from toy banks and with  
 them buy war savings stamps. This  
 brings the pennies into daily circula-  
 tion and puts the savings of the kid-  
 dies of the country to earning interest.  
 It will now be but a few days until  
 these war savings stamps are on sale.

**EUROPEANS ARE SAVING**

The country is asking, "Why  
 are we eating of the less valuable  
 grains and sending our wheat to Eu-  
 rope? Why don't they eat potato  
 flour and the coarser grains?" In  
 answer to this, the information is giv-  
 en out that in England no bread may  
 be baked which does not contain at  
 least 20 per cent of potato flour or ma-  
 terial other than wheat flour. On the  
 other hand, to preserve health, the  
 same law prescribes that the bread  
 must contain 50 per cent of wheat  
 flour. In France the situation is still  
 more strenuous, and everyone is con-  
 serving from necessity.

May not Americans from choice aid  
 in the great conflict to the limit? Ev-  
 ery English and French soldier who is  
 made a better fighter because of be-  
 ing better fed may save an American  
 soldier.

**COOPERATE**

Cooperation never received  
 such attention nor such impetus as to-  
 day. Those having to do with affairs  
 in Europe are now suffering criticism  
 because each nation has been entirely  
 independent, and while there has been  
 no lack of harmony in feeling there  
 has been lack of harmony in action.

Now there is insistent demand that  
 there shall be oneness of thought and  
 action among all the Allies. Italy  
 made a wonderful fight, but she stood  
 alone and near-distaster came. Now  
 French and English troops are fight-  
 ing side by side with the Italians. Had  
 this cooperation come sooner the  
 Italian army would probably still be  
 in Austria. The same is true in the  
 affairs of our own government; this  
 lesson of cooperation is being learned,  
 and there has never been such unity  
 of action among people of all callings  
 and classes.

Now comes our state horticultural  
 commission with plans for a great con-  
 vention of fruit growers, and one day  
 is to be given up to the question of co-  
 operation. Some of the most success-  
 ful cooperators of the state will be  
 present and give and receive advice.

**KILL THE RAT**

California has some trouble  
 with the ordinary brown rat; it is,  
 however, of small importance in this  
 state as compared with the ground  
 squirrel. Even the gopher has it on  
 the rat for destructiveness. Let us  
 be diligent in eradicating all these  
 pests, incidentally keeping an eye on  
 the jackrabbit—which makes fine pot-  
 ted meats—and a few other of the  
 pests which are not so good to eat  
 but equally as destructive.

**BORROWERS BULLETIN**

The federal farm loan bureau of  
 the treasury department is issuing  
 the Borrowers Bulletin, which con-  
 tains rulings of the central board and  
 statements as to various requirements  
 and news of the growth of the farm  
 loan movement, also features of inter-  
 est to the borrowers, to whom it is  
 sent without cost.

The farm loan movement is report-  
 ed to be growing with great rapid-  
 ity, as shown by the applications for  
 new loans. The various local boards  
 have gone into operation and the work  
 is being pushed everywhere more sat-  
 isfactorily than during the first year.

**A FIRM HAND**

Now comes a new society, the  
 American Defense Society, circulat-  
 ing petitions in effect that the govern-  
 ment take a strong hand with those  
 who are pro-German or disloyal. We  
 believe with this organization that  
 swift punishment should be meted out  
 to those who are endeavoring to em-  
 barrass most efficient service of our  
 army, navy or producers of food or  
 other military supplies. However, we  
 believe the federal government is tak-  
 ing a much stronger hand than ap-  
 pears on the surface. The wonderful  
 efficiency of the German spy system  
 has been dinged into our ears until  
 we feel that sometimes Americans  
 fail to recognize the wonderful work  
 of our own secret service, but enough  
 hints have been dropped as to recent  
 occurrences to show that some re-  
 markably efficient work has been ac-  
 complished.

It is reported that when the Italian  
 forces found German officers within  
 their own ranks in Italian uniforms  
 that they were given "summary treat-  
 ment" without trial. We can imagine  
 how "summary" such treatment  
 would be, and we believe officials of  
 the United States will have fullest  
 support of our people in meting out  
 swift justice to traitors in this coun-  
 try.

Hohenzollern employees in America  
 are beginning to hear footsteps approach-  
 ing. Not conscience warns them, nor the  
 fear of God, but the very quiet and ef-  
 ficient work of our secret service.

**WAR TAXES**

Next week we will take up more  
 fully the discussion of the income tax,  
 but one point this week. One farmer  
 has said; "I will not worry over the  
 income tax matter. If the government  
 wants it, let it come for it." This  
 gives opportunity for warning in this,  
 that one of the principal provisions of  
 the income tax bill is that every unmar-  
 ried person with an income of \$1000  
 or more and every married couple  
 with combined incomes of \$2000 or  
 more must make and file with the in-  
 ternal revenue collector a sworn state-  
 ment called a Return, on return forms  
 to be had by application to the treas-  
 ury department at Washington or  
 from local revenue collectors, this to  
 be for the income received during the  
 12 months, January 1 to December 31,  
 and the return to be made prior to  
 March 1. Failure to file this return  
 makes one liable to severe penalties  
 which will be defined next week.

**War Estate Tax**

This tax is assessed and levied on  
 the estate of a deceased person before  
 distribution. It is imposed upon the  
 net estate of every decedent whether  
 a resident of the United States or not.  
 The procedure is fully outlined in the  
 law but is of such a nature that every  
 executor or administrator of an es-  
 tate would follow the advice of an at-  
 torney so that the details are not giv-  
 en here. In a word, however, the es-  
 tate consists of all real and personal  
 property held at time of death or con-  
 veyed by gift or in trust in contempla-  
 tion of death, and the interest of the  
 decedent in property held jointly with  
 others. Any transfer of a material  
 part of one's estate, which is in the  
 nature of a final distribution, made  
 within two years prior to death will  
 be considered as a part of the net es-  
 tate in levying this tax. This tax  
 must be paid within one year of date  
 of decedent's death. A penalty of  
 \$5000 and imprisonment for one year  
 may be imposed in case of false state-  
 ment in making the return. Other  
 penalties for not paying this tax when  
 due may also be levied.

**War Excess Profits Tax**

In addition to the income tax, all  
 firms, partnerships, or corporations  
 must pay an excess income tax of 20  
 per cent of the amount of net income  
 in excess of deductions and not in ex-  
 cess of 15 per cent of the invested cap-  
 ital. Other percentages obtain with  
 other net incomes until it is 60 per  
 cent of the net income in excess of 33  
 per cent of such capital. Effective  
 since January, 1, 1917.

\* \* \*

A taxable year means 12 months  
 ending December 31 excepting in case  
 of corporations whose own fiscal year  
 may be reckoned with.

The taxes are due from all living  
 within the boundaries of the United  
 States, which means all states, the  
 territories of Alaska and Hawaii and  
 the District of Columbia.

Remember all stamp taxes, which  
 includes parcel post special war stamp  
 taxes, become effective December 1.  
 Parcel post packages, one cent for  
 each 25 cents of stamps on the pack-  
 age, or fraction thereof. That is, if a  
 parcel post package calls for 25 cents  
 postage or less, then a one cent war  
 stamp must be attached. If it is 26  
 cents and under 50 cents, then two  
 cents war stamp tax.

Some of them live across the Rhine,  
 and some on the banks of the Rhenus;  
 but the worst enemies to whip in line are  
 the I and the WE and the MINE and the  
 US; for I don't like to eat fish and beans,  
 and WE don't want Our Boy to be shot,  
 and MY war tax is beyond my means, and  
 some of US play fair—some do not.

**This Week's War News**

British troops have advanced near-  
 ly to Jerusalem, and its capture is deem-  
 ed almost a certainty.

Less than ten per cent of Califor-  
 nia's national army candidates were  
 rejected because of physical disability

In the south the French are deliver-  
 ing some crushing blows on the forces  
 of the crown prince and have captured  
 two lines of trenches.

There has been a severe engage-  
 ment between the English and Ger-  
 man fleets in the North Sea, one Ger-  
 man vessel reported sunk—no par-  
 ticulars given out.

The navy announces that it can ac-  
 count for six submarines during the  
 last seven days. One of these was  
 captured and line attached, but ow-  
 ing to its crew opening seacocks, the  
 vessel went to the bottom.

The building of American warships  
 is being rushed, many of the ship-  
 yards running three shifts a day, and  
 it is said that the output of American  
 yards alone will soon be greater than  
 the daily toll of the U-boats.

We referred in last issue to the fact  
 that the Allies had little comfort in  
 the news of the past seven days. The  
 tables are turned, however, and Lord  
 Northcliffe has referred to the past  
 week as being the "best week of the  
 war."

The Italian army with its English  
 and French reinforcements, has with-  
 stood some of the hardest drives by  
 the pick of the German army. The  
 Italian navy has aided materially in  
 holding the line which ends on the  
 Adriatic. It is said that three-fourths  
 of the population of Venice has mov-  
 ed, but the city seems to be safe.

The situation in Russia is still one  
 of uncertainty. The latest informa-  
 tion is that a daughter of the former  
 czar, Tatiana Romanoff, is on her  
 way across the Pacific to this coun-  
 try, having escaped from Tobolsk, and  
 announces she has come to make an  
 appeal, not for the restoration of the  
 czar, but for the establishment of a  
 United States of Russia.

The sturdy resistance of the Ital-  
 ians is winning admiration. It is now  
 shown that the sudden break at the  
 first attack of the Germans was  
 largely because of treachery on the  
 part of German sympathizers in the  
 uniforms of Italian officers, giving or-  
 ders, which were too often obeyed.  
 Air men also scattered forgeries of  
 Roman newspapers known to be loyal  
 filled with false statements as to dis-  
 affection in ranks of the reserves  
 which were supporting the front line.  
 These reports were believed by many  
 of the Italian soldiers who were dis-  
 heartened and retreated.

"Byng, bang, bust" was the slogan  
 of General Byng's men as they made  
 their famous drive on the Hinden-  
 burg line in northern France. Thou-  
 sands of German prisoners and hun-  
 dreds of guns were captured. The  
 drive began with the tanks advancing  
 quietly without any artillery prepara-  
 tion. They were followed by 300,000  
 English, Scotch, Irish and Canadian  
 soldiers. The German lines were pene-  
 trated to a depth of seven or more  
 miles in some places for a length of  
 over 35 miles. Many small towns were  
 captured, the city of Cambrai practi-  
 cally surrounded. As we go to press,  
 the advance is beginning in Belgium,  
 and it is now thought that not only  
 Cambrai, but Lens, Lille and Douai  
 will all soon be in the hands of the  
 Allies.



# Agricultural News Notes of the Pacific Coast

## Northern California

"Citrus blast" is affecting the orchards of Butte County.

Yacaville has shipped 1225 carloads of deciduous fresh fruits.

Farmers at Gridley, Butte County, are making sorghum flasks.

Yolo County guarantees to reach quota in wheat production.

Buttle men of Eldorado and Amador counties met at Jackson last Saturday.

Eldorado County has made good and is now ready for its farm adviser.

One hundred and ninety students attended the short tractor course at Davis.

Nevada County's output of Bartlett pears amounted to about 70 carloads this season.

Ferndale, Humboldt County, creameries paid to the growers 54-55½ cents for butterfat.

Rice producers have been informed at the government will do no price fixing for rice.

Compulsory farm labor was talked at the state fruit growers convention at Sacramento.

The rice market has been quiet but the growers are now holding for four cents or no sale.

Capay Valley, Yolo County, is shipping large quantities of berries to an Francisco market.

One hundred and sixty-three are taking the tractor short course at the university farm at Davis.

The United States office of public roads is investigating as to road conditions in Sacramento Valley.

Fruit growers at Sacramento had a "Hooverized" banquet, no wheat, no meat, but some banquet all the same.

Sheepmen of Sacramento Valley are endeavoring to have pasturing areas in the national forest reserves enlarged.

Paradise, Butte County is anticipating great extension of farming and orcharding because of early completion of the Magalia dam.

The olive producers of Butte County report that they are well supplied with laborers and harvesting is proceeding satisfactorily.

The rice counties are appealing for "duck districts." In any case some step must be taken which will eliminate the pest of ducks.

At the last meeting of the Humboldt County Dairymen's Association the labor question and better dairying methods were discussed.

Roseville, Placer County, is shipping green olives to Chicago where an Italian processes them for special trade according to Italian formula.

Two million pennies is the need of San Francisco. War taxes have greatly increased the demand for small coins in business transactions.

Mr. Nagle's advice to cease planting orchards has stirred up the fruit growers in all parts of the state to feel that transportation will be provided.

Permit to graze livestock in the Shasta national forest has been denied for 1918 to a large cattle company whose manager refused to aid in fire protection.

The farm adviser of Placer County is urging careful selection of bean seed, and seed has already been saved which it is thought will materially increase that county's output next year.

## Central California

Tulare County expects to ship some oranges before the first of December.

Tulare County is going after speeders and other breakers of traffic regulations.

The Peach Growers' Association cleaned up about \$120 a ton for dried peaches.

State Market Director Weinstock is organizing the dairymen of San Joaquin Valley.

Dairymen of the west side of San Joaquin Valley are organizing for co-operative marketing.

Practically all bean crops of the valley have been harvested without a particle of injury from rain.

Tulare County is to have a farm adviser who will begin his service January 1. Name not yet announced.

Madera County farmers are contemplating growing sugar beets in 1918.

This state has shipped 22,000 cars of fresh deciduous fruits. This is largely in excess of any preceding year.

Turlock, Stanislaus County, estimates its next year's planting of cantaloupes at somewhat in excess of this year's.

Many cattle have died near Porterville, Tulare County, it is thought because of eating large quantities of acorns.

The work of forming a farm center at Hanford, Kings County, has been postponed because of lack of interest amongst the farmers.

Dairymen of Kings County received \$250,000 on a recent creamery pay day. Prices ranged from 52 to 53½ cents per pound of fat.

The Kings County live stock inspector reports no hog cholera and one case of anthrax in the county; other stock conditions excellent.

The seventh annual of the Stanislaus Poultry Association opens in Modesto December 5 and closes December 8. Entries close next Wednesday.

Friends of the Rominger initiative bill believe they have sufficient names for the securing of a ballot on the bill at the regular election in November 1918.

Horticultural Commissioner Rutherford of Stanislaus County reports the finding of European elm scale on various elm trees along the streets of Modesto.

One of Kings County's biggest fruit packing houses will have its capacity doubled and its output further increased by installation of new machinery.

The Prune and Apricot Association of San Jose is sending out "Sun-Sweet Recipes, or Ninety-Four Ways to Serve the Richest Sun-Sweet Prunes and Apricots."

During the present week, which is "Prune Week," the Santa Clara Valley is trying to make general the presentation of cartons of prunes to the boys in the trenches.

The California Peach Growers' Incorporated, has paid seven per cent as a first dividend to its stockholders. There are approximately 1400 members of the association.

It is stated that the state fish and game commission has handled in excess of \$1,000,000 in the past four years, and some are asking for an investigation of its affairs by experts from outside the state.

## Southern California

Butcher shops of Los Angeles are closed every Tuesday.

Pomona is organizing a local farm center of the county farm bureau.

California now supplies 71 per cent of the total United States lemon consumption.

The sugar factory at Oxnard produced about 1,000,000 bags of sugar this season.

The farm adviser of Riverside County has been giving a series of pruning demonstrations.

Some of the finest trotting horses from Hemet won long purses at the Arizona state fair.

Notwithstanding the hot weather "drop" California's lemon output will be greater than ever.

A vegetable packing house is being erected at Compton, Los Angeles County. It will cost about \$27,000.

Pig feeding clubs of the Imperial Valley are lining up for a new feeding contest which will begin December 1.

Expenses are being reduced by the forest service by discharging rangers from service during the rainy season.

All Southern California Valencia packing houses are sending out greater shipments than any preceding year this date.

The California Walnut Growers Association is now employing 400 people in its nut cracking and sorting department.

Chino, San Bernardino County, is continuing its effort to secure fruit acreage which will insure its cannery before another season.

Yucaipa, San Bernardino County, recently held a meeting to discuss wheat growing methods and greater acreage this year.

J. B. Lillard of the Los Angeles high schools has been made state supervisor of agriculture. He will make a campaign for practical agricultural work in the high schools of the state.

Ventura County will produce 952,000 bags of Lima beans; Orange County, 270,000; Los Angeles, 198,000; Santa Barbara, 72,000; San Diego, 62,000. The state will produce of all kinds of beans about 8,800,000 bushels.

The Imperial County horticultural commissioner is taking steps to secure the importation of cotton seed free of all pests and is appealing to cotton growers to aid in keeping the county clean of all cotton infesting insects.

The Poultry Producers' Association of Southern California was represented at the recent San Francisco meeting by President Davison. The association has insisted on all members remaining true to the contract for the season's marketing.

The government has placed an order for 100,000 pounds of small white beans and 75,000 pounds of limas, with prices fixed at 11 cents for small whites and 11½ for limas. It has been claimed that this is two cents under the price paid for the beans.

The National Farm Loan Association branches in various parts of Southern California are endeavoring to work in harmony and reduce the number of local associations so as to secure more uniform action. The amalgamated association was formed on October 20, and several of the old local associations have already been disbanded.

## The Coast and General

Arizona reports sheep coming down from ranges in excellent condition.

One evaporator at Payette, Idaho, is saving a thousand bushels of cull apples daily.

Washington sheep men complain because of stock coming from ranges in rather poor condition.

Two hundred and twelve Jerseys were exhibited at the National Dairy Show held at Columbus.

Eastern Oregon farmers are complaining because of the dry fall. Hay is now selling around \$20.

Arizona closed its most successful state fair last Saturday. Beef classes were especially well filled.

The 54th annual convention of the National Wool Growers' Association meets in Salt Lake City January 17-19.

The food administration has ruled that frozen poultry stored during 1916 must be sold during the present winter.

The California Wholesale Potato Growers' Association has asked for a minimum carload of 40,000 pounds for potatoes and onions.

One hundred thousand dozen eggs were recently landed at Wellington, New Zealand from California. They sold at 54 cents per dozen.

Eastern Washington dairymen are threatening delivery of their own milk to consumers in order to save paying tribute to milk distributors.

Sixteen thousand North Dakota farmers recently took part in a campaign against ground squirrels, and four and a half million acres were cleared.

The Commissary General of Italy has decreed that for bacon, lard, or other hog fat the wholesale price shall not exceed 525 lire (\$101.32) per quintal (220.46 pounds).

Experts connected with the departments of agriculture of Trinidad and other West India Islands are experimenting with flour of bananas and root crops to find a substitute for wheat flour in bread.

The Potato Association of America held its annual at Washington last week. Lou D. Sweet of Denver, was made president, W. P. Macoun of Ottawa, Canada, vice president, and Dr. Wm. Stuart of Washington, D. C., secretary.

Every liquor bar at Washington, D. C., is "Hooverized." This not for the sake of the booze in the trenches, but for the sake of grain conservation. The Anti-Saloon League will meet in Washington, December 10-13 and discuss ways of making this conservation more general.

The Northwest apple shipping section is having severe losses because of car shortage. One special fruit train of 52 cars was recently brought out of Wenatchee. Apple shippers are experimenting with shipping fruit in ordinary box cars with oil heaters to save the fruit, this because of lack of refrigerator cars.

It is declared to be illegal to take letters which would normally be mailed for three cents to the office of delivery where they may be mailed for two cents. San Francisco merchants with large numbers of letters for Los Angeles delivery have been instructed to cease sending by special messenger in large quantity to the latter city and mailing under two cent stamp.



## Jerseys for Net Profits



You're in the dairy business for profit—the *net* profit that your herd has made you at the end of the year will determine the size of your bank account. Jerseys yield the largest returns from every ounce of feed—proved by tests at two great expositions. Jersey milk averages 5.3% butter fat, 9.1%



solids not fat—highest of all breeds. Buy a Jersey bull. Write the breeders advertised below for prices, pedigrees, etc.

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### Young Jersey Bull

of excellent breeding at a fair price. Write for particulars to

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A fine straight one, bred right, priced right

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ALL MY RECORDS  
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YOUNG BULLS FOR SALE

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### Young Jersey Bulls FOR SALE

One at the head of your herd will pay  
big dividends on his cost. Write to

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Senior Sire: Imp. You'll Do Circus  
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High Producers

**Wm. Appleby & Sons**  
Mesa, Arizona

## Dairy Farming Under War Conditions

By F. W. Woll



MAKING dairies produce to the limit is a war measure which is being urged by our state university. The article which follows is a portion of the one under above heading begun in last week's California Cultivator. It touched upon the difficulties confronting the dairymen because of high feed cost and other conditions which the farmer cannot change but must consider. One hundred and fifty pound cows must be exchanged for cows that increase that yield at least 50 per cent. There must be improved feeding methods. Continuing Prof. Woll says:

The silo has proved a good investment on California dairy and stock farms, as it has in eastern and central states. It enables farmers to secure a maximum feed supply from crops like Indian corn, sweet sorghum, grain sorghums (milo, Egyptian corn, feterita), small grains, Sudan grass, rye grass and clover, and alfalfa (first and last cuttings only).

With a silo on the ranch the farmer can carry a maximum number of cows and supply his stock with palatable succulent feed of a uniform quality at any time during the year, thus furnishing conditions that are especially favorable to a large milk production. Where silage crops cannot be grown successfully, or where conditions do not permit the building of a silo, root crops, like mangels, carrots and turnips, (except when the milk is used for the manufacture of butter, in which case turnip feeding should be avoided), may be raised to advantage on good land; where large yields are obtained roots make excellent substitutes for silage although they are not as conveniently fed out. On hilly land or on ranches with only small areas of arable land it is necessary to feed more grain or other concentrates than given in order to secure and maintain a satisfactory milk flow throughout the lactation. Under such conditions the method of increasing the dairy production must come mainly through herd improvement.

Liberal feeding is always advisable for good dairy cows. It is only the feed eaten beyond that required for body maintenance which gives returns "at the pail", and if fair proportions of nutrients of different character are fed, like alfalfa and silage made from the crops mentioned above, with or without grain, there is no danger of fattening dairy bred cows which are the only kind that permit of profitable dairying under present conditions.

### Herd Improvement

Along with a correct system of feeding, herd improvement is essential for success in the dairy business. This may be accomplished by two methods, both of which should be adopted:

First, by determining which cows in the herd are low producers, considering an entire year and not only the time of maximum flow, and eliminating these from the herd. The information necessary to do this is furnished by regular weighing of the milk of the individual cows, say one day each month during the lactation, accompanied by testing of samples for butterfat. The milk is most conveniently weighed on so-called milk scales, costing about \$3.00, and the testing for content of butterfat is done by the Babcock test. If facilities for milk testing are not found at the farm, arrangements can generally be made for having tests made at a neighboring creamery or cheese factory. Most dairy farmers are busy men who have all the work they can attend to in taking care of the regular work of the ranch and the dairy, and they can hardly, therefore, take time to weigh and test the milk from their cows. In order to assist such farmers and others who cannot do this work themselves, cow-testing associations have been formed which employ young men to weigh and test the milk of cows owned by members. There are 18 such associations in operation at the present time in the state, some of them nearly ten years old. They have been of the highest value for the improvement of dairy conditions in their respective communities, and will no doubt increase in number as well as in usefulness in the years to come.

Every dairy center would be greatly benefited by the establishment of such a cow-testing association.

Second, by placing at the head of the herd the best pure bred dairy bull of a family of high producers that one can afford. It has been fully established that the power of transmitting a capacity for a large dairy production lies mainly in the male. It is often said that the male is half the herd, but in many cases his influence has proved to be still greater. A good dairy bull will largely increase the productive capacity of his offspring beyond that of their dams, especially when these are low producers. There are many examples showing that a bull of a high producing strain has increased the average production of his heifers by 50 to 75 pounds of butterfat per year over that of their dams.

An exceptionally high dairy production can only be reached by the use of such intensively dairy bred bulls in the herd and by developing the heifers and cows to their full capacity through careful methods of feeding and handling. This is the way in which records of 500 to 600 pounds of butterfat, or more, a year are obtained in individual cases, and records of over 400 pounds as a herd average. A good average herd standard, however, is 300 pounds of butterfat, corresponding to nearly a pound of butter per cow for each day in the year. This standard, which is twice the average yield for dairy cows in the state, can be reached by the methods outlined above, by any dairy farmer who has the requisite qualities that make for success in dairying: a knowledge of the characteristics of good cows and of modern dairy methods, a deep interest in his animals, with an ability to work hard and during long hours, and to produce abundant forage and grain crops on his land for the feeding of his stock. Such a farmer will make a success of dairying, even if present feed prices continue and milk does not bring much more money than it has in the past.

### ARIZONA STATE FAIR

Continued from Page 547

each won their share of blues and reds.

Greenlee County had a small but pleasing exhibit largely of vegetables.

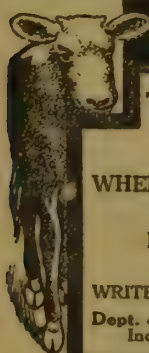
Yavapai, the "mother of counties," as usual showed box after box of apples and plates of almost all kinds of fruit, except citrus, which is grown in the state. In the grains and farm products too there was no lack of variety and quality. More than 30 first prizes, as well as a number of specials and many seconds, decorated the Yavapai log cabin, after the decision of the judge had been rendered.

### ARIZONA'S BIG HOLIDAY

Written for California Cultivator  
By F. F. Stonerod

IF Californians are not fully aware that those Arizona folks know how to stage a big fair and livestock exposition they should make it a point to run over to Phoenix next year and be convinced. Pendleton, Cheyenne, Buffalo Bill never put on a better show than we saw at Phoenix. World famous cowboys and cow girls were there to rope calves, break wild horses, bulldog steers, and put on all the hair raising stunts possible. There was many a \$5000 horse race and nothing under \$1000. Such a prize list brought out all the classy trotters, pacers, and runners in the West. Then there were a dozen other high class attractions, so many in fact that the thousands of spectators who filled the huge grandstand daily and overflowed onto the field could not possibly take everything in at once; it was like watching a five ring circus. Arizona's state fair week is the big event of the year. It is her holiday, and the people come from every corner of the great state and click the turnstiles so fast it keeps the gate-man dizzy.

We had heard much about the quality of the livestock exhibits at this fair but had no idea we would see one of the very best expositions of pure



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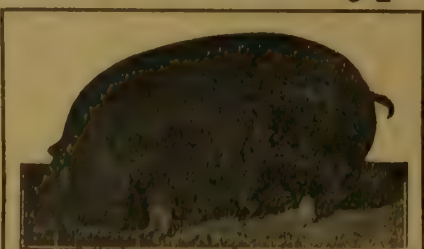
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bred animals held in the entire western country. The exhibit was all the more remarkable when it is considered that the Salt River Valley country is in the grip of the cotton fever, feed-stuffs are much higher in price than in California, and the labor problem is more acute also than in other sections. When farmers can get 80 cents a pound for Egyptian cotton, and it costs \$70 per bale to produce it, and several ranchers are producing a bale and a half to the acre, it can readily be seen that there are other attractions besides live stock. Then Arizona's rich mines are all running night and day, and the whole state is experiencing a boom.

One finds a large number of Southern born people in Arizona. They come from Texas, Kentucky, Tennessee, Mississippi, and other states, and they readily accustom themselves to the new conditions. Harold Bell Wright certainly went to the right spot to find local color for his great book, "When a Man's a Man," when he buried himself in the hills and valleys of Arizona. The streets of the cities are filled with tall cowboys fresh from the ranges. The hotel lobbies are overflowing with wealthy cattlemen and big landowners, and this is the class of people who come out to the big fair and take a real interest in the livestock section.

We saw the best Hereford show of the year at Phoenix, both in quantity and quality. Arizona is a Whiteface country sure enough. The Lone Star herd from Midland, Texas brought over about 25 head this year, and Governor Packard had a beautiful string which filled one entire barn. The Bartlett-Heard Land and Cattle Company showed a fine bunch of Shorthorns, while the sheep, swine, and dairy show was a credit to any state.

Ruby and Bowers were the only California breeders present, and they had a nice lot of prize winning horses

and jacks on hand. Locke's Jersey herd was missed; this is the first time for several years Mr. Locke has not been there. However, the Locke herd's place was taken by the Falfurrias Jersey herd from Texas, owned by Ed C. Lasater. Many of the animals in this herd had won high honors at Columbus, Waterloo, the Texas state fair and other big shows this year, so that we had the opportunity of seeing the best in the business.

Old time fair goers said the exhibit this year was not any larger than usual but was much higher in quality. One thing that impressed us was the number of young breeders showing their stock and winning prizes too.

Arizona probably has more open range left than any other Western state but even here the open range is passing rapidly before the onrush of the small farmer. Better seed stock is the cry here as elsewhere, and the cry is being answered by an influx of the best bred animals to be had. Registered herds of beef and dairy cattle, hogs, and even sheep are becoming more numerous every year, and as this tendency toward better animals grows, so will the size and importance of the state fair. We in California should endeavor to get into closer touch with our big neighbor, commercially, socially, and otherwise because we are her nearest outlet to the sea. Her ranges turn off hundreds of thousands of cattle every year which are eagerly sought by buyers from all over the country. Our California farmers who have abundance of grass and feed in normal years have been permitting Eastern buyers to take the bulk of this good feeder stock away from them. Here is a fertile field for our California breeders of registered stock, a field which has scarcely been touched. If it is cultivated properly, and only the best quality sold with a guarantee to that effect, there is no limit to its possibilities.

Phoenix fair this year, including a son of Count Avon, the noted Curtiss sire. The Heard bull is a half brother to Wm. Carruther's champion at San Francisco this year and looks very much like him. This concern is the largest breeder of registered Shorthorn cattle in Arizona and Mr. Heard himself is high in the councils of American livestock organizations.

Chas. Peterson, Gilbert, Arizona, exhibited the only herd of Guernsey cattle this year, which, while not in prime show condition, gave a good account of itself.

Morris B. Carpenter, Phoenix Holstein breeder, had 12 head at the fair. He won first on junior yearling bull and bull calf, and in addition won three red and two white ribbons.

Tempe Normal School exhibited nine head of Holsteins and was very much in evidence in the other livestock departments.

P. M. Arends, Phoenix, won second on aged bull, second on aged cow, and third on senior yearling heifer. As he only brought out three head his percentage of winnings was very good. He exhibited Holsteins.

Wm. Appleby and Sons, Mesa, Arizona, showed 16 head of Jerseys with which they won a long string of prizes. This company has been showing Jerseys at the Arizona fair for years and is numbered among the state's leaders in the Jersey field.

W. W. Bradshaw, Phoenix Jersey breeder, had 20 head out this year. He won 17 ribbons and is the proud owner of the leader in the state dairy cow competition, Duchess of Meadowbrook, who made 474.4 pounds butterfat last year on nothing but pasture.

J. Irwin Burk, Gilbert, Arizona, breeder of Brown Swiss cattle, showed 14 head at the fair but had no competition. However, he would have made it interesting for competitors as his stock is strictly high class.

W. H. Bukey, Mesa, Arizona Jersey breeder, was one of the heaviest prize winners at the fair with his 13 head. He has 40 females and two head bulls on his ranch and is a great lover of the Island cow. Before the fair was over he selected a bull calf and two bred heifers from the Falfurrias string, which are among the finest yet brought into Arizona. The calf is Noble Rosebud's Majesty, a six months old son of Rival Majesty of St. Cloud, who has 50 R. of M. daughters

MILK . . . . and WAR TIME



In these days of high prices for dairy products, the "poor milker" is more than ever a liability.

But before you sell the cow that is not producing well, try to improve her condition. Her milk value is much greater than her meat value.

Most poor milkers are non-productive because of some defect of health, which can be quickly remedied by intelligent treatment.

Kow-Kure is a medicine that acts quickly on the organs of digestion and milk production. Its widely known tonic and curative qualities have made it the standard cow medicine for the prevention of disease and the treatment of Abortion, Barrenness, Retained Afterbirth, Scouring, Lost Appetite and Bunches.

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ARABIAN THOROUGHBREDS: Two-year-olds, sired by imported Stallion Ibn Mahruus, head of our Arabian stud. Dams are the choicest thoroughbred mares on Santa Anita Rancho.

SADDLE HORSES: Some of which were sired by Ibn Mahruus, world renowned imported desert saddle stallion, and Don Castane, a five-gaited Kentucky saddle stallion. These horses are mostly three-year-olds.


POLAND-CHINA AND BERKSHIRE BOARS: Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

HOLSTEINS: We will sell a number of young bulls. Some sons and grandsons of the noted Prince Gelsche Walker, and bulls from one World Record cow and two California State Record Cows. Write for details.

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able, order direct.

Write for new booklet, "The  
Control of Blackleg." It tells  
about Anti-Blackleg Serum  
which cures Blackleg and  
may be used simultaneously  
with vaccine to combat out-  
breaks and safely protect val-  
uable stock.

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bottle; 6 for \$5.50. Ask  
your druggist for book,  
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breeding for SALE

H. P. Slocum & Son R 1 Willows, Cal.

and many more on test in the Falfur-  
rias herd. His dam is a 498 pound  
two year old and the calf was first in  
class at Phoenix and junior champion  
at the Texas state fair this year. Mr.  
Bukey got two wonderfully typey heif-  
ers from the same herd sired by Cow-  
slip's Golden Noble and in calf to Vil-  
lage Knight, the greatest son of Gam-  
bage Knight. Mr. Lasater paid \$5000  
for the sire of these heifers. Their  
names are Cowslip's Oxford Victress  
and Cowslip's Handsome Grace, both  
first prize senior yearlings.

Arizona State University also got a  
Falfurrias Jersey bull calf, Nobles  
Topsy's Eminent Lad, a senior year-  
ling son of Noble's Eminent Lad and  
out of Nobleman's Topsy of Falfur-  
rias, a wonderful young cow. The bull  
was first and junior champion at Pho-  
enix.

The Boys' Pig Club exhibit at the  
Arizona state fair was a credit to the  
industry of the youngsters and their  
feeding knowledge. They showed sev-  
eral breeds.

Rancho Aldona, Tucson, won senior  
champion Duroc sow at the fair on  
Wikleta Queen 3rd 451370.

O. M. Trotters, Sunset herd of  
Duroc-Jerseys from Artesia, New  
Mexico, was the big surprise of the  
swine division of the Arizona state  
fair this year. Mr. Trotter brought  
over a wonderful herd and one which

would have won consistently on the  
California circuit this year. He took  
the sweepstakes prize on both boar  
and sow and a flock of blue ribbons.  
His herd boar is Brookwater Chief, by  
Cherry King. Mr. Trotter is another  
breeder who expects to make the  
coast shows next year.

Frank Reed Sanders, Chandler, won  
12 firsts, four seconds, and four thirds  
in the Holstein class at Phoenix, in-  
cluding the junior and grand cham-  
pion bull, senior and grand champion  
cow, and junior champion heifer.

Scharbauer and Eidson, Midland,  
Texas, won grand champion Hereford  
bull on Prince Hesiod 165th, by Maple  
Lad 40th, he by Bonnie Brae 8th. He  
was an outstanding individual carry-  
ing a beautiful coat of hair, mellow  
flesh, perfect head, and a stylish car-  
riage. He would be a hard bull to beat  
in any show ring. This concern  
brought over a tip-top string of White-  
faces.

Cottrell and Packard, Tempe, Ari-  
zona, won junior and grand champion  
Hereford female on a heifer calf of  
their own breeding. This seems to be  
a big year for calves as the grand  
champion female at Sacramento also  
went to a February calf. The Pack-  
ard herd was a strong winner in the  
female classes and also won high hon-  
ors in bulls including the senior  
champion, Beau Tempter.

## Who's Who

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photographs and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Written for California Cultivator By F. F. Stonerod

### H. V. BRIDGFORD

**P**ROBABLY no other Holstein  
breeder in California has  
come to the front so rapidly  
as has H. V. Bridgford, the  
controlling factor in the  
Bridgford Company of Knightsen. Two  
years ago his name was little known  
in Holstein circles, but the winnings  
of his fine herd at the stock shows and  
fairs have been so sensational that  
the Bridgford name is written in large  
letters. Fifteen firsts, several sec-  
onds, and grand championships in the



H. V. Bridgford

bull and cow class at Sacramento this  
year is more than one exhibitor's  
share.

Mr. Bridgford is the son of Judge  
Bridgford of San Francisco, a man of  
Southern birth and a noted horseman.  
H. V. Bridgford was born in Colusa,  
graduated from the high school, and  
after a course at Pierce College entered  
the retail grocery business which  
he followed both in Colusa and San  
Francisco for about six years. Then  
he went into the lumber and manufac-  
turing business in Siskiyou County  
and made a marked success of both.  
I neglected to mention that the Bridg-  
fords owned a large herd of Short-  
horns when they were living on the  
home place, so that he does not come  
by his love for livestock accidentally.

Wishing to remain in the stock busi-  
ness, but also desirous of living in the  
vicinity of San Francisco, the idea  
came to Mr. Bridgford three years  
ago to buy a ranch on one of the is-  
lands in the lower Sacramento River  
and stock it with pure bred dairy cat-  
tle. He purchased a large acreage,  
and those familiar with the fertility  
and richness of the river bottom soil  
in that part of California know he got  
a first class plant. Holsteins appeal-  
ed to him because he believed that  
breed would pay bigger dividends on  
the investment and thrive under the  
conditions of soil and climate which  
are so similar to those of their na-  
tive country. In selecting his founda-  
tion Mr. Bridgford had invaluable as-  
sistance from Mrs. Bridgford who is  
an exceptionally good judge of Hol-  
steins, and his herdsman, Ed Thomp-  
son. His first purchase was made in  
the herd of David Monroe, Spokane.  
Then he added 60 head from the best  
herds in New York. He wanted both  
production and individuality in his  
animals and he got both. He has no  
less than four cows in his herd who  
have better than 30 pound butter re-  
cords, and we have already mentioned  
the Bridgford cattle's ability to win  
in the show yard. His aged cows av-  
erage over 29 pounds butter in seven  
days; three and four year olds av-  
erage 25½ pounds, and two year olds  
average 17 pounds.

Mr. Bridgford is extremely popular  
with his fellows. Everybody likes this  
quiet, unassuming gentleman who is  
never too busy to give his time to  
those who ask for it, who is a good  
loser, and by the same token a good  
winner. Mrs. Bridgford is his right  
bower and accompanies him on every  
business trip and also with the show  
herd each year.

### TEXAS HEREFORD BREEDERS ANXIOUS TO SHOW ON THE COAST

For the first time since they estab-  
lished their famous herd of Herefords  
at Midland, Texas, the Scharbauers  
exhibited a show herd at Phoenix dur-  
ing the state fair in November. Next  
year they expect to bring their show  
herd to the Coast, and if they do Cal-  
ifornians will see something worth  
while. The Lone Star herd was es-  
tablished in 1894 by the Scharbauer  
Brothers, Chris and John. Chris look-  
ed after the pure bred and John had  
charge of the range cattle. Forty-five  
head of registered Anxiety bred cows  
were purchased that year but the reg-  
istration papers were put in the of-

## Warranted to Give Satisfaction Gombault's Caustic Balsam



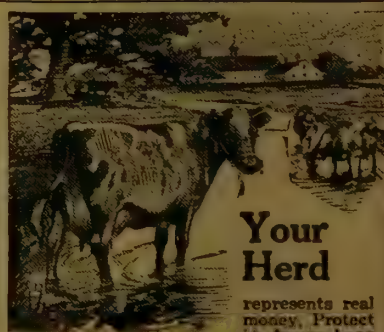
Has Imitators But No Competitors

A Safe, Speedy, Positive Remedy for

Curb, Splint, Sweeney, Capped Neck,  
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and Lameness from Spavin, Ringbone  
and other bony tumors. Cures skin  
diseases or Parasites, Thrush, Diphtheria.  
Removes Bunches from Horses or Cattle.

As a Human Liniment and Antiseptic for  
external use it is invaluable.

Every bottle of Caustic Balsam sold is war-  
ranted to give satisfaction. Price \$1.50 per  
bottle. Sold by druggists, or sent by parcel  
post, with full directions for its use. Send for  
descriptive circulars, testimonials, etc. Address  
The Lawrence-Williams Co., Cleveland, O.



Your  
Herd

represents real  
money. Protect  
it from loss  
through infectious disease, make its living  
quarters clean, bright and sanitary and  
save yourself time, labor and money. Use

## CARBOLA

a finely powdered, snow-white mineral pigment  
combined with a non-poisonous germicide 20  
times stronger than pure carbolic-acid. Ready as  
soon as mixed with cold water to apply with  
brush or sprayer. No disagreeable odor to taint  
milk. Will not blister, flake or peel.

A Disinfectant That Dries White  
—not dark or colorless—for use in stable, dairy,  
poultry house, cellar, etc. Used and endorsed by  
experiment stations, agricultural colleges and  
thousands of poultry, dairy and breeding farms.

10 lbs. (10 Gals.), \$1.00 and postage  
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Try package that covers 250 square feet and booklet,  
for 25c postpaid. Your dealer has it. If not, send his  
name and your order direct.

Germain Seed & Plant Co.  
Los Angeles, Cal.

## SHORTHORNS

PAICINES RANCH COMPANY

offers for summer and fall delivery  
both registered and unregistered  
weanling bull and heifer calves.  
For prices and particulars apply to

Paicines Ranch Co.  
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## Shorthorns

Bred for Range Purposes and of  
Pure Scotch Blood Lines.

Show Herd won highest honors  
in 1917.

Visitors welcome — information  
cheerfully given.

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FLESH COWS AFTER CALVING  
Most valuable for bringing after-birth  
and also for treating barren cows and con-  
trolling abortion. It kills the infecting  
germs, breaks the uterus, removes the slum-  
p and mucus—no odor, no straining. More ef-  
fective than iodine, Lugol's solution, carbolic  
acid, creosol, much safer. Send for our Bul-  
letin 52 "Contagious Abortion" and testimony  
from leading breeders. Special Trial Offer  
General Laboratories—Madison, Wis.  
4120 So. Wisconsin St.



ice safe and forgotten, which accounts for the extra fine quality of the Lone Star unregistered stock today. Some time afterward this concern decided to establish a registered herd and a show herd for advertising purposes, and up to four years ago had the largest herd of registered White-face cattle in the country. It numbered 2300 cows and over 150 bulls. They showed at all the principal state fairs, the American Royal, and the International at Chicago. The home ranch property at Midland consists of 300,000 acres on which are ranged 20,000 high grade range cattle, 4000 purebred but unregistered cattle, and the registered herd consists of 800 cows and 50 bulls. Maple Lad 40th, whose get at Phoenix created so much favorable comment, is one of the best sires in this herd. The herd carries the best blood possible and the quality of the Lone Star stock is proof of the careful selection of individuality and breeding. Of recent years Chris Scharbauer has been in poor health and a short time ago sold out his interest to Mr. Eidson, and the firm is now known as Scharbauer and Eidson.

NOTED HEREFORD BULL COMES TO CALIFORNIA

One of the best bred and outstanding individual Hereford sires to come into this state in years is the December, 1913 bull calf, Bonnie 4th 625952, by Maple Lad 40th, he by Bonnie Brae 8th. His dam, Carrie Lee 6th 309008, was a wonderful cow with the same line breeding as the sire. Lamplighter, Don Carlos, and Paladin occupy prominent positions in this calf's pedigree. He was bred by Scharbauer and Eidson of Midland, Texas, and sold to George Watterson, of Bishop, Inyo



A \$2,000 Calf  
Bonnie 4th 625952. Owned by George Watterson of Bishop.

County, during the Arizona state fair at Phoenix for a long price. Rumor had it that the calf cost Mr. Watterson \$2000, and his owner said that if he had been born after January 1 instead of December 13 he would have been worth \$4000 to them for show purposes.

Bonnie won first in class and junior champion bull at Phoenix. He attracted a lot of attention throughout the show with his style and quality. He has a wonderful quarter, smooth shoulder, thick coat of hair, remarkably fine feeder head, and if he does not develop into a winner for Mr. Watterson a lot of cattlemen who saw him at Phoenix will be disappointed. Mr. Watterson has been quietly breeding up a splendid herd of registered Herefords for several years. He has been using one of Harris best Repeater bulls and the Repeater heifers crossed on this Anxiety, Bonnie Brae blood of the Texas calf should produce something fine.

Tagus Ranch reports the sale of a week old Aberdeen Angus calf to a Tulare County man for \$50. The youngster is an outstanding individual and is the youngest male Tagus has yet sold. The demand for Angus fat exceeds the supply, and the California cattlemen are just commencing to appreciate the qualities of the great black breed.

W. B. Carpenter, Red Bluff, is building up a fine herd of Berkshire hogs. He is an old breeder of Berkshires having been in the business off and on since 1887, most of the time in Australia. He is an admirer of the English type of Berkshire, one which is much sought after by many of America's best breeders on account of the bigger bone and better fleshing qualities.

The regular annual meeting of the Western Berkshire Congress will be held at the university farm, Davis, on February 21 and 22, 1918.



TO SUM UP

THIS SALE OFFERS: Six 30-pound cows and fourteen daughters of 30-pound cows, a greater number of both than have appeared in all previous California sales combined.

NOT A SINGLE FEMALE IN THE SALE has a record below 20 pounds butter in seven days at mature age.

THE HIGHEST SEVEN-DAY RECORD COW, Jennie Terzool Hicks 4th, ever offered in a public sale in California, and she is also the highest yearly record cow.

MISS KORNDYKE MERCEDES, Grand Champion Cow at California State Fair, 1917, and she is a granddaughter of Hengerveld De Kol.

MEADOW HOLLAND NUDINE, Grand Champion Cow at Riverside District Fair, 1917, and she is a 22.75-pound junior three-year-old.

A DAUGHTER OF KING KORNDYKE SADIE VALE, with an average of 33.86 pounds butter in seven days for her seven nearest dams, second highest in the world, and the highest of any heifer ever offered at public sale on earth.

A DAUGHTER OF K P TOLA JOE, 27-pound State record two-year-old daughter of King of the Pontiacs, and this heifer is sired by one of the best young sons of King Korndyke Sadie Vale. Money can buy no better combination of breeding.

FIVE SISTERS TO THE WORLD'S OFFICIAL BUTTER RECORD COW, Aaggle Acme of Riverside 2nd, and they are all out of A. R. O. dams with records up to over 31 pounds butter in seven days. First daughters of King Mead of Riverside ever offered at either private or public sale.

TWO DAUGHTERS OF PRINCE GELSCHIE WALKER, one out of a 29-pound dam, and bred to King Morco Alcartra.

FIVE DAUGHTERS OF SEGIS PONTIAC DE KOL BURKE, one of whose daughters has just finished a record of 934.25 pounds butter in one year as a senior two-year-old, California record in class and sixth highest in the world in class.

A SON OF THE WORLD'S RECORD FIRST CALF HEIFER, 35.33 pounds butter in seven days, and he is sired by the 41-pound bull, King Valdessa.

A SON OF MISS VALLEY MEAD DE KOL WALKER, 36.81 pounds butter in seven days as a junior three-year-old, California record for all ages, and he is sired by King Korndyke Pontiac, one of the best sons of King of the Pontiacs.

EVERY ANIMAL GUARANTEED AGAINST TUBERCULOSIS FOR SIXTY DAYS AND EVERY ANIMAL GUARANTEED TO BE A BREEDER.

THESE ARE JUST A SAMPLE of the great record making and show winning families that are represented in this sale. To describe every top notch animal would require a description of every animal in the sale. The catalog does it, and a copy is yours for the asking.

Under Management of  
CALIFORNIA BREEDERS SALES AND PEDIGREE COMPANY  
Sacramento, California

Sale Starts Promptly at 9 A.M., Wednesday, Dec. 5th., State Fair Grounds, Sacramento

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Esparto - California  
Breeding Stock for Sale

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Give Satisfaction  
John A. Bunting  
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Anxiety-Herefords

Stock for Sale in Season  
Chas. Rule, Duncans Mills, Cal.  
Choice Breeding. Bred and Raised on Range

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Mayfield - California

Registered Herefords

Office: 216 Hobard Bldg.  
San Francisco - California

Harris Herefords

O. Harris & Sons, Harris, Mo.  
Clifford B. Harris  
Western Representative

Herefords

Over 100 choicely bred females in herd. Have been selling to cattlemen for years.  
W. J. Bemmerly, Woodland, Cal.

THE HEREFORDS ARE COMING  
Last year at California state fair only one Hereford herd exhibited—that of the State University. This year there were five with strings of fine stock.  
The Pacific Coast Hereford Association has now been formed and it proposes to make known the merits of Whitefaces of the West.

ALAMO HERD

(Founded by the Late Gov. Sparks)  
Registered Herefords  
Herd and range bulls reasonable. Largest Hereford herd in California.  
W. D. DUKE, Likely Modoc Co., Cal.

Herefords Farms

Geo. Watterson, Owner  
Bishop, Inyo County, Cal.  
Anxiety, Repeater, and Bonnie Brae breeding. Bred and raised on mountain range.

Herefords

A large herd of selected stock to choose from. Everything is of the highest quality. Save time and money by writing us for particulars about this herd. We ship either S. P. or Santa Fe.

COTTRELL AND PACKARD

Temple Arizona

LONE STAR  
Registered Herd

800 Cows and 50 Bulls Best of Breeding Show Winners

All stock guaranteed as represented. Write for terms and particulars. We offer for immediate delivery, 200 two year old bulls, 200 yearling bulls, and 600 heifer calves. Thick coats, good color, and markings.

Scharbauer and Eidson, Midland, Texas



HEREFORDS  
Unregistered Herd

4000 Head Both Sexes Same Breeding as Registered Herd

Elevation 3000 Feet





## A Pennsylvania Farmer Says Concerning Electric Motors on His Farm

"A one-horse power motor is located in the spring house for separating milk, churning butter, turning a grinding stone, etc.

"In the house, my wife has a 1/2-horse power motor for running a washing machine. This motor can be attached to any lamp socket.

"In the barn a 15-horse power motor mounted on a little truck may be moved to any part of the barn or barnyard for grinding feed, baling hay and threshing grain. By extending the cable we have used this motor 400 feet from the barn."



This letter suggests equally profitable installations around your house and barns. The General Electric Company manufactures all sizes of electric motors for farm use. Information will be gladly furnished by your lighting company or our nearest motor agency.

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BEET DRILL

GRAIN DRILL

## Veterinary

Answers in this column by Dr. Wm. Petrie, 2714 South Harvard Blvd., Los Angeles, are without charge. For immediate mail answer remit \$1.00. In writing questions give full symptoms or particulars of injury of animal.

### Cow Growing Thin

I have a Jersey cow that has become very thin in flesh. The bowels and kidneys seem to be working all right and we notice her chewing her cud. She is fed principally alfalfa with a very little bean fodder. She seems to have some difficulty in swallowing and does not like to drink cold water. We have noticed slimy froth hanging from her mouth.—Subscriber.

Something wrong in the mouth or throat. Something may have lodged in the soft tissues of the throat or well back in the mouth. If you could examine the mouth and throat you may find something sticking in the tongue or side of the throat that you could remove. That would probably end the trouble.

### Congestion of the Kidneys

Have a young mare that when heated up quickly becomes so stiff in the front legs that she can not walk on them and apparently suffers intense pain, throwing her head violently forward and backward. This condition will last from 15 minutes to two hours according to the exertion she has been put to. She is also sore in the back over the kidneys. She is an unusually heavy drinker. What is the trouble and what can be done?—Subscriber, Lathrop.

The stiffness and the throwing of the head as you describe are indications of congestion of the kidneys. Avoid overheating her. Apply a good liniment over the kidneys and give this: Two ounces salicylate of soda, eight ounces tincture of juniper berries and enough alcohol to make one pint. Mix. Give a full tablespoon of the medicine in the feed three times a day. Continue the medicine until it is all used.

### GREAT INTERNATIONAL

The livestock shortage the world over, and the determination on the part of American breeders and farmers to meet this condition as quickly as possible will doubtless cause greater interest in the International Stock Show which will be held at Chicago, December 1-8, than in any preceding event. There may not be as many entries from California, and California will hardly come home with as great honor as she did in 1916, so that the local interest may not be as great, but reports from other sections and efforts on the part of councils of defense in many of the Middle Western states indicate intense interest. The increase in the amount of livestock is urged not only because of the immediate need of meat but because of the immensely big corn crop which needs to be consumed in this country and made into a more condensed form of better "war food."

All authorities agree that about 80 per cent of the total annual corn crop of the United States is fed to livestock, about 30 per cent being fed to hogs in the principal corn belt states.

That leaves only about 20 per cent, or less than 600,000,000 bushels, to be marketed as corn. Now suppose that only 70 per cent of the entire corn crop were fed to livestock, that would leave ten per cent, or about 300,000,000 bushels more corn to be sold as corn. That would mean an increase of 50 per cent in the quantity of corn thrown upon the grain market.

Now if we take into consideration the further fact that there is an estimated yield this year in the United States of 3,210,000 bushels of corn, which is an increase of 627,000,000 bushels over the crop of 1916, or 456,000,000 bushels over the previous five-year average, and to this increase we add the above increase of some 300,000,000 bushels which would ordinarily be fed to livestock, to say nothing of the millions of bushels heretofore used for making whisky, alcohol, etc., it is easily seen that the usual quantity of corn thrown upon the grain

market and sold as corn will be more than doubled during the season just about to open.

### THE NATIONAL DAIRYMEN'S SALE

Holstein history was made at Columbus, Ohio, October 26 and 27 in the National Dairymen's Sale, when 134 head were sold for a total of \$85,285, which means an average of \$636.45, these figures not including \$3000 paid for a bull calf which was donated to the Red Cross. Only four other Holstein sales have ever been held which equaled this average, namely the Dollar Sale, Stevens Brothers' Sale, the Detroit Sale and the Worcester Sale. In this sale there were no \$10,000 to \$50,000 animals to help swell the total, the highest price being \$7100 for the 44 pound cow, Pauline De Kol Ophelia, followed by \$6000 for a 35 pound son of Rag Apple Korndyke 8th and \$4000 for a 30 pound cow bred to Rag Apple Korndyke 8th. Outside of these three animals, nothing in the sale crossed the \$3000 mark, although altogether 31 animals in the sale sold for \$1000 or over.

### A NOTED ARIZONA HEREFORD HERD

Everybody in Arizona and the Southwest knows Gov. Packard, cattleman, banker, capitalist, politician and public benefactor. Just over the international boundary line Mr. Packard runs enormous bands of Whiteface cattle over more than 150,000 acres of the best grass range in that section. He has his registered herd of Herefords at Tempe under the firm name of Cottrell and Packard. Mr. Cottrell has entire charge of the beautiful Tempe ranch and manages it in a very capable manner. The governor came to Arizona from New York nearly 40 years ago and engaged in the mining business from which he graduated into the cattle business some years later. He is a man of great vitality, is a dominant factor in Arizona affairs in general, drives his big high power automobile over the Arizona mountain roads for days at a time, and of all his many and varied interests he loves his Herefords best.

We started out to tell about the Hereford herd and digressed a bit to say something about the personality of one of Arizona's biggest men. The governor has been a frequent visitor to all the larger Eastern public Hereford sales the past few years and always brings home some of the good ones. The company has about 100 choicely bred cows and a number of high class herd bulls on the Tempe ranch in addition to a fine lot of heifer and bull calves. The Packard entry is a big prize winner at the state fair every year, and the Packard brand is scattered throughout the Southwestern beef herds, as he sells a large number of registered bulls every year. Governor Packard attended this year's California state fair and took an active interest in the cattle show and breeders' meetings and before he left Sacramento joined the Pacific Coast Hereford Cattle Breeders' Association. It is the plan of Cottrell and Packard to exhibit a show string at the Coast shows next year, and they will be a welcome addition to California exhibitions.

### RAISE THE HEIFER CALVES

Regarding the destruction of calves or rather the effort to secure greater conservation Prof. F. W. Woll of the state university says that the reason why so many calves are being wasted is that there is at present a great demand for casein and farmers get such high prices for their skim milk that they are loath to keep enough of it to feed their young stock.

But not only can calves be raised without feeding whole milk, but after two or three weeks they can be gradually changed over from a diet of milk to a gruel made of calf meal. Homemade calf meal is likely to be cheaper and better than commercial calf meal if the dairyman prepares it from standard suitable food stuffs such as ground barley, ground oats, wheat middlings, and linseed meal—two parts of any one of the first three feeds and one part of linseed meal. A new bulletin on "Feeding Dairy Calves in California" may be obtained free by writing Director of Experiment Station, University of California, Berkeley.



# Corn a White Man's Crop in Arizona

Written for California Cultivator By M. E. Bemis

**T**HE first white settlers in Arizona tried to raise corn, and each in turn gave up the attempt so far as making it a commercial crop was concerned. It is true that some truck gardeners and the Indians have raised corn more or less and with varying degrees of success. During the past few years there has been a marked improvement in corn growing, and it seems very likely that with continued improvement it will take its place next to alfalfa and cotton in acreage.

The prehistoric races who tilled the valleys of Arizona, New Mexico and some parts of old Mexico left in their ruined houses, particularly the cliff dwellings, ears of corn that might score high at a 1917 corn show.

So it is evident that corn has been grown here for centuries. There is a more or less legendary belief that the corn plant is a native of old Mexico, and since ethnologists tell us that the prehistoric races that once inhabited this part of the country were probably of the Maya race, which was supposed to have had its origin in old Mexico, it is therefore quite reasonable to suppose that corn was being

grown in our valleys during those days when many of our now quiet, peaceable mountains were lava spilling volcanoes and so corn in Arizona may be said to be literally "older than the hills."

for increased yields of 10 to 25 per cent both of corn and silage.

It is being demonstrated now that two crops of corn for silage may be grown on the same land in one season. Mr. C. W. Norton, manager, and with his brother, Dr. C. J. Norton, owners of the Norton Dairy Farm, were pioneers in the building of silos in this part of the country and this season they have filled one silo in July with corn planted in March, thus beginning a new era in dairy management in the Salt River Valley. This land was immediately planted to corn for the fall crop. This same plan was followed a few weeks later on the farm of the United States Indian school located near Phoenix.

One of the unique exhibits of Arizona at the International Soil-Products Exposition now being held at Peoria, Illinois (September 18-29), is a sheaf of corn planted in March and harvested in July, shown beside a sheaf of corn planted in July and cut immature September 10, but with stalks twelve feet high.

The most popular place for corn, however, will continue to be following grain or possibly after the second cutting of alfalfa on fields that need to be plowed up and renewed.

There are other varieties of corn which are being improved and which will prove of untold value to other sections of the state. Some years ago the state experiment station discovered some kernels of sweet corn in an ear of the Squaw corn grown by some tribe of Papago Indians. From these few kernels there has been bred up a variety of corn which has been given the name of Papago Indian sweet corn. On the Prescott experiment dry farm, elevation over 5000 feet, I saw this corn growing entirely without irrigation, and I should judge that it would make 12 to 15 tons of silage. At the same farm they are growing the Moqui Indian corn. These two varieties with further selection and improvement will enable the dry farmers to grow corn instead of the grain sorghums.

In the irrigated valleys, such as the

Some few years ago the govern-

Salt, Yuma and the Imperial in California, we have ideal conditions for corn planted in July, for there is the rich soil, warm sunshine and plenty of water. With the development of the Mexican June corn we have a variety adapted to the climate. What then is more logical than to suppose that corn will gradually take the place of the grain sorghums and that the acreage of corn will increase far beyond the present acreage of the so-called summer crops.

The nation's brood sows are needed in breeding pens far more than in pork barrels.

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and have fun TRAPPING  
Skunk, coon, fox, etc., are bringing high prices. Write for price list and our 36-page free book, TRAPPING FOR PROFIT. Tells how to trap, and how to handle furs to bring the most money.

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California Redwood shingles defy the attacks of sun, rain and changes of temperature. They resist wet and dry rot, and when properly laid make a permanently tight roof.

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And since Redwood contains no pitch, it is hard to ignite, burns very slowly and is easily extinguished.

## California Redwood

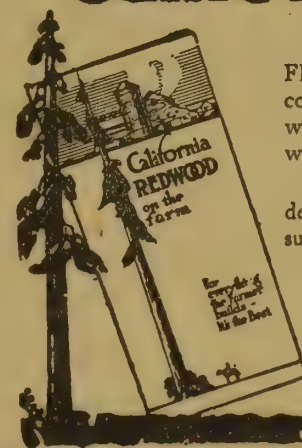
Resists rot and fire

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Ask for the Child's Story of the "big trees" of California—there's a copy for every child in the nation.



## FRICITION!

That's what happens when the spindle and sleeves rub together—due to the microscopic roughness on all metal surfaces. But the powdered mica in Mica Axle Grease fills up this invisible roughness—makes a far smoother, cooler bearing, and the grease lasts twice as long.

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**Pear Trees**—Offer several thousand Bartlett's, 2 and 3 feet, heavy caliper at 9c each. French prunes. Trees of all kinds. No agents; we sell direct. Write for price list. Carlton Nursery Co., Carlton, Ore.

**By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator.** The cost is only 2 cents per word per issue, with a minimum of 35 cents.

**\*\*PAYNE SEEDLING WALNUTS\*\***  
Orders taken now for spring delivery of PAYNE SEEDLING WALNUT grafting wood. Five cents per foot. R. W. Miller, Linden, San Joaquin Co., Cal.

**For Sale**—Valencia trees, extra fine yearlings, straight, thrifty, sour root, high buds, not fertilized, fine soil for balling. Will contract for spring planting. S. R. Cate, Anaheim, Cal.

**For Sale**—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. Randall Bros. Nursery Co., Whittier, Cal.

**Olive Trees**—Mission, Manzanillo, Ascolano. Propagated by me from trees of known bearing qualities. Guaranteed. L. T. Schwacofer, Hemet, Cal.

**Citrus Trees**—All kinds, any quantity. Butler's Morning Side Nursery, Laramanda Park, Cal.

**Fig Trees**—Thrifty, large Calimyrnas and Capris. Correspondence invited. C. A. Nelson, Exeter, Cal.

**Citrus Nurseries**, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

### WANTED

**Wanted**—The best USED A. C. 5 h. p. motor that can be procured for cash, also a good 2 horse road grader. "The Glide make preferred." These machines must be in perfect condition, ready for service. Address Box 27, Lakeside, Cal.

**We Pay Cash for Hogs of all Sizes, weights or colors.** Any number from one to several thousand considered. What have you? Durbin & Forbes, 722 San Fernando Building; Broadway 4170, Los Angeles.

**Position Wanted**—Competent Dairyman wants position on pure bred Holstein ranch. Experienced feeder and milk tester. Will want bull calf. Address Philip C. Burt, Bend, Oregon.

**Wanted**—Position as manager of breeding and beef herd by graduate veterinarian who knows how. Address Park, Care Cultivator.

**Wanted**—Second hand hog wire, 26 or 30 inches high of a mesh suitable also for turning rabbits. S. N. Kemp, Box 531, Wilcox, Ariz.

**Wanted to Lease**—200 to 400 acres of proven bean land. State locality and terms. Address Box 25, Cultivator.

### SEEDS AND PLANTS

**We Have Field Selected a large stock of GREEN GOLD BRAND alfalfa seed.** More than half of our stock is already sold. Good alfalfa seed will be scarce. Order now while quality is highest and price is low. Bomberger Seed Co., Box 986, Modesto, Cal.

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If you are going to need any seed for next season now is the time to render your order. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbuckle, Cal.

**\*\*ALFALEA SEED OUR SPECIALTY\*\***  
Alfalfa Seed—Common variety, Halcy and Smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. E. F. Sanguinetti, Yuma, Arizona.

**Rhodes Grass**—The strongest and best feed. Most drought resisting forage known. Will grow on hard alkali ground where nothing else will grow. Imperial Valley Nursery & Seed house, El Centro. **Thoroughbred Strawberry Plants**, Early Ozarks, Gold Dollars, Wm. Belt, Goodells, Magoons, Improved New Oregon, \$2.50 per thousand. J. Christiansen, R. F. D. 2, Canby, Oregon.

**Rhubarb Plants**—Crimson Winter Burbanks \$3.00 per hundred; Victoria \$3.00, Wagner's Giant Crimson Winter \$3.00, 50 cents per dozen. Currier Bulb Co., Seabright, Cal.

**Rhubarb**—\$127.00 from one acre. A crop every month of the year. Write to me and I will tell you how you can do as well. J. M. Stone, Lodi, Cal., Route 4.

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**New Crop Alfalfa Seed** now ready. Not the lowest in price, but high in quality. Leo Turner, Yuma, Arizona.

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**Lumber**—Sash—Doors—Plumbing—Supplies—Building materials of all kinds. New and second hand. \*A.R.W. shingles 6¢ cents per bundle. Send list for estimate. Dan P. (Mission Street) Dolan, 1629 1659 Mission Street, San Francisco, Cal.

### HOGS

**Registered Durocs**—We offer for sale a choice service boar out of a daughter of Modesto King and by a grandson of Burk's Good E Nuff; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col.; three young boars out of a great sow of Crimson Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. Derryfield Farm, L. O. O. F. Building, Sacramento, Cal.

**Chester Whites, the Billiken Brand**—The big winners at the California State Fair; Billiken was Grand Champion boar; a son was Reserve Grand Champion and a daughter was Grand Champion sow. Do you want some of this strain? Twenty gilts bred to farrow during October and November. Fifty Billiken pigs, both sexes—March and April farrow. Every animal is cholera immune. Write for prices and booklet on Chester Whites. C. B. Cunningham, Mills, Sacramento County, California.

**Grape-Wild Farm Berkshires**—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

**20 of the Finest Boars Ever Sold** to improve the herds of pork producers. High price of pork assured because of the scarcity of breeding stock. Improve your herd with a good Poland-China boar. I have them from six to eighteen months old, priced from \$40 to \$100. Saving all sows for Kings County Poland-China Breeders' Sale, February 20, Bernstein's Ranch, Hanford, Cal. Hogs shipped on approval.

**Make Big Money with our famous Whitten Ranch Poland-Chinas**—the prolific, fast growing, easy feeding, money making kind. Special sale of service boars and bred gilts. Prices reasonable; satisfaction guaranteed; everything immune. Send for free illustrated book, "Hogs for Profit," packed with valuable information. Ranch in Tulare County but address owner, R. H. Whitten, 519B Marsh-Strong Bldg., Los Angeles.

**Superba, World's Grand Champion Poland-China boar** and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

**Berkshires**—First prize junior boar; first and second senior boar pigs including junior champion; fifteen spring and fall open gilts sired by Ames Rival 116, champion boar; and two junior yearling bred sows priced cheap for immediate sale. F. D. Hall, Perris, Cal.

**Rancho Rubio Durocs**—Some extra good gilts sired by Orion Model and California Keen 5th and out of my best sows. Write for prices bred or open. Weaned pigs either sex. Elmer Lamb, Ceres, Cal.

**For Sale**—Six Poland-China pigs two months old, eligible to registry, fine ones. "Superba" and "Big Bone" breeding. Sow and sire registered. \$10.00 and \$12.00 each if sold at once. M. A. Packard, 141 North Jefferson St., Riverside, Cal.

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**PLW. Duroc-Jerseys**, the most consistent winners wherever shown. Peters, Lamson & Walker, Devore, San Bernardino County, Cal.

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**Carruthers' Farm Berkshires Hogs**—Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

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**Registered Holsteins** out of A.R.O. Dams. Grandsons of King Korndyke Hengerveld Ormsby who has 20 A.R.O. daughters with records of over 23 pounds. Look up this sire, Geo. Kounias, Modesto Farms, Modesto, Cal.

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**Registered Holstein Bulls** from high producing dams for sale at reasonable prices. Also a few choice females. Mo-Alister Sons, Chino, Cal.

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### MACHINERY

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**WHY BUY NEW? SAVE HALF**  
Material guaranteed. It's second-hand after used few times; but not worn out. Engine snaps: 4-horse Gray, \$58; 2½ h., \$39; 8-horse, \$115; 18-horse, \$250; 34-horse, \$350. Many others.

**USED TANKS, NEW TANKS, GALVANIZED and redwood tanks**, 100-gal. oil tanks with covers and faucets, \$5 to \$7; 2000, 3000, 4000, 5000, 6000, 10,000, 25,000-gal. redwood, about half-price; new 1000-gal. galv., \$35; 2000, \$48; used 5000 galv., \$75; 10,000 galv., \$150; 17,000 galv., \$250; extra fine 25,000-gal. redwood, \$125; many others guaranteed first-class or money refunded.

**PUMPS, PUMPS, PUMPS, CENTRIFUGAL**, rotary, single, double-acting deep well pumps, few snaps for this week's offerings. No. 2 Ames, double-acting, fine, \$145; 50 brass cylinders, all sizes; old-style pump head, 18-inch stroke, \$38; new small Bulldozer, \$42.50; large size, 20-inch stroke, \$68; 24-inch Stearns pump, \$75; horizontal centrifugal, sizes 2, 3, 4, 5, 6-inch, old-style but guaranteed to pump as much as new; No. 5 vertical centrifugal pump with shaft, frame, complete, \$95; No. 5 two-stage horizontal B. & J. good as new, cost \$400, our price \$150; 2-inch rotaries, \$22; 2½ others.

**WINDMILLS, SPECIALLY PRICED** 8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel.  
**900-GAL. WAGON TANK AND WAGON**, \$90; 700-gal. galv. wagon tank, \$48; 5-ft. Fresno scrapers, \$16; slip, \$5; lawn mower, \$6; low down tank pump, \$6; diaphragm pump, \$16; broadcast seeder, \$13.50; 60 ft. 10-in. riveted pipe, \$25; 4 gang Stockton plow, \$28.

**RANCH MACHINERY**  
Walking and riding plows, harrows, cultivators, ¾-in. cable, 60; bone grinder; feed mill; mowers, rakes, h-tling; sundries. DEMMITT CO., downtown office, upstairs, 120 N. Main. Yards, 816 Yale, Los Angeles.

**For Sale**—One 26 inch Cyl. Owens Bean Thresher, complete; derrick wagon for same; cookhouse; 3 beanbeds—6 nets. Above property in good condition can be seen at my place near Oxnard. Price \$1,000. Herman Nauman, R. 1, Oxnard, Cal.

**Gasoline Engines**, the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles.

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**For Sale**—1914 Samson Tractor, size 6-12 with extension. Good condition, \$200. Oscar C. Harms, Duarte, Cal.

**Disk Plows**—Rolled Cold. Auto trailers built to order. J. O. Parrish, 359 South Garey Pomona, Cal. Phone 3132.

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**For Sale**—Highly bred Kentucky Jack. Black with white points, five years old this winter. Good height, weight and length. Bought of Ed Bradley, Trenton, Ky. Eligible to registration. He is by Silver Crown No. 2852, by King George No. 3189, by Silver Crown No. 79; first dam, Black Anna No. 3984, second dam, Rox Anes No. 149. J. C. Joplin, Santa Ana, Cal.

**Butte City Shorthorns**, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

**Registered Shires**—Blackhawk Stock Ranch. Importers and Breeders. J. Barton & Ward, Burlingame, Cal.

**For Sale**—Eleven weanling mules. Chas. Hubbard, Riverdale, Cal.

### FARM LANDS FOR SALE

**For Sale**—Vineyard and Ranch in Lower California. 450 acres; 90,000 grapevines, full bearing. Zinfandel, Burgundy and Mission varieties. Rest of land used for farming. Winery with all necessary apparatus. Storage tanks for 75,000 gallons. Only winery on Pacific Coast of Mexico. High protective tariff. At present import duty on wines 90 cents U. S. per gallon. Will sell reasonable figure, part cash and balance in exchange for income property. Retiring from business. Address F. Andonaegui, Ensenada, Lower California.

**Lake County, California**—Climate uncalled. We have two 160 acre ranches; both have an abundance of running water, fruit, grain, wood and pasture land. Orchards of walnut, prunes, pears, peaches, apples, berries, etc. Three room cottage, five room house, barns and out buildings. Fenced and cross fenced. Three miles to good small town, one mile to school. Price \$7,000.00 and \$7,500.00. No exchange. Terms. Address Box 71, Kelseyville, Cal.

**Florida Muck Land**—Decomposed vegetation of centuries. Richest land on earth. Tract 400 acres Central Florida for sale. Adjoining lands produced 100 bushels corn and ninety barrels early potatoes per acre. No fertilizer used. Weeds grow fifteen feet high. Tract exceptional bargain for quick sale. Photo of crops and description free. R. L. Mosa, St. Augustine, Florida.

**Oregon, California Government Lands**. Latest Green Booklet Free. Tell "How, Why, Where." Write Joseph Clark, Sacramento.

### POULTRY

**Mission Hatchery Chicks**—January-February. R. I. Reds, Barred and White Rocks, Black Minorcas, Anconas, Brown, Buff, White Leghorns. First class utility stock, well mated; hatched right, in our large modern plant. 12,000 chicks weekly. Price and quality talk, see our free circular about them. MISSION HATCHERY, Box 17, Campbell, Cal.

**Baby Chicks**—From my thoroughbred and carefully selected flock of S. C. White Leghorns. Orders booked now for January and February delivery at \$12.00 per 100, \$110.00 per 1000. March delivery \$10.00 per 100, \$95.00 per 1000. Correspondence solicited. J. R. Heinrich Poultry Yards, Arroyo Grande, Cal.

**200-250 Eng Leghorn, Wvandottes, Anconas, Rocks, Reds, Minorcas, Orpingtons**. Chicks, eggs, weekly. Booking few large, small orders. January-April delivery. 25 cent reduction. Breeders, pullets, cockerels, half-price. \$3-\$10 profit per hen last year. C. Beeson, Pasadena, Cal.

**Spring Chicks**—We are booking orders now. S. C. White Leghorns, only selected and fully matured stock that is bred to lay used in the breeding pens, which assures strong and vigorous chicks. \$12 per 100; \$100 per 1000. H. A. Schlotthauer, Exeter, Cal., Route A.

**For Sale**—Petaluma electric incubator. New. Also Black Breasted Red Game and White Frizzle Bantams. Pair Silver pheasants and one golden male pheasant reasonable. Mrs. C. W. Kellogg, East Bakersfield, Cal.

**Day Old Chix**—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Cal.

**Poultry Wanted**—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

**Baby Chicks (White Leghorns)** shipped on approval before remitting. No weak ones charged for. Schellville Hatchery, Schellville, Cal.

**"Eastman's Bred to Lay"** Barred Plymouth Rocks. Choice Cockerels. Fairmead Poultry Farm, Fairmead, Cal.

**Buff Orpington, Buff Leghorns, Bourbon Red Turkeys**—Breeding stock. The Ferris Ranch, S. Reservoir, Pomona, Cal.

### MISCELLANEOUS

**Famous Halcy Peruvian Alfalfa Seed**—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.

**For Sale**—"Pony Rig," black and white mare, good driver, good saddle, nice buff harness, rubber tired buggy, with canopy top for sale cheap for cash. Address B. Care Cultivator.

**Slacked Lime**—Send for sample and information. Price right. Let me help you. H. B. Matthews, 350 Woodberry Road, Pasadena.

**To Reduce the high cost of living**, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

**Quality Trees**, Seed Potatoes, berry plants, seeds, milk goats. Cash Nurseries, Sebastopol, Cal.

### TURKEYS

**Our Geese and Turkeys Win Again**—Grand Champion Sweepstake Special, for best pair of birds in show. For size vigor and quick maturity, our stock are best. East or West. Stock and eggs in season, also Colly pups. Correspondence solicited. John G. Mee, St. Helena, Cal.

**For Sale**—Mammoth Bronze turkeys. The Best In The West. Geo. A. Smith & Son, Corcoran, Cal.

### AUTOMOBILE STORAGE BATTERIES

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The cannery at Oakdale, Stanislaus County, is planning for a great increase in the acreage of peas. The output of the cannery can be greatly increased by improving the roads so as to facilitate auto truck deliveries.



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The Turkey---A Problem

Written for California Cultivator By Jean A. Koethen



IT TAKES some nerve when turkeys are bringing from 30 to 40 cents live weight to keep back the biggest and strongest for next year's breeders. Next year looks a long way off. The four or five dollars a good bird will bring is needed in a dozen places, and so off they go, and we trust that the kind Providence which takes care of fools and children will somehow provide suitable breeding stock for another season.

And when you speak of suitable breeding stock, how many of the folks who raise turkeys year after year (I don't mean professional breeders), do give any particular consideration to selection of birds which are really fit to produce hardy, quick-growing stock? Don't we always buy the cheapest and mate whatever we have regardless of age, size, relationship or vigor? It is foolish and in the end disastrous to breed from pullets. Eggs are largely infertile, poulters are small when they do hatch, an easy prey to blackhead in their infancy and usually undersized if they reach maturity. The breeding hen should be two years old and the largest and most vigorous hen of the flock. The breeding male should be at least one year old, or close to a year, and as near standard weight as can be obtained. Extremely large males are not the best breeders, but if large birds are wanted for an early market a good-sized male is indispensable. Careful breeders never use the same male two years unless they are able to mate him the second year to entirely new hens not related to the rest of the flock, or keep the original mating. There is no reason why the same pen should not be used two years in succession if they are in good condition, but mating sire to daughters or mother to son, as is commonly done with chickens, is a fatal mistake with turkeys.

It is not my purpose here to go into the cause, character or cure of the disease called blackhead which has been the ruin of the turkey industry in the East. Most careful study by experiment stations and other investigators has failed to find a complete explanation of its existence, but of two or three things we may be fairly certain. The most recent bulletin on the subject calls it "a disease of captivity, a disease of management." Wild turkeys are not subject to it. Domesticated turkeys, confined and fed as chickens are, almost inevitably develop it. The nearer the care of the young turkey can be made to approach that which it would receive if it were running wild in the woods with its mother, the more likely is it to survive. Range and freedom it must have. Exercise is absolutely essential. "When I was a girl," said a woman of 70 to me, our turkey hens used to take their broods off into the woods as soon as they were hatched, and we never saw them again till fall. Then they came back, and what splendid, fine birds they were!" Those turkey hens knew how to raise their poults, but who has learned the secret? What did they feed, how much and how often? Bugs and worms and tiny seeds and bits of vegetation, with sand and gravel for grinding must have been their fare, for there was nothing else. We may be sure that their food was not placed before them on a tray to be gobbled down as rapidly as possible. They had to hunt for it, exercising a little for every bit of food they swallowed, chasing bugs and flies, squabbling over choice mouthfuls. If they went to sleep hungry some nights they were up all the

earlier next morning and all the more eager in their search. The turkey hen never hurried her brood. Nobody stood over them, anxious lest they might fail to get every mouthful they could possibly digest, ready with a pill at the first suggestion of stomach-ache.

Inbreeding is blamed by some authorities for the prevalence of this disease. Wild birds never mate with their sons and daughters. That our domestic chickens can do it is only because of their thousands of years of domestication. Turkeys have only been known about 400 years and have been domesticated for a far shorter period than that. Indeed, they are not fully domesticated now, and that is just why our management fails. It seems probable that inbreeding began with the first attempts to domesticate them. Ultimately we may look forward to a race of turkeys as domestic as our chickens now are, but that can only be reached by more careful and intelligent management than the past has known. Then the turkey can

CALIFORNIA POULTRY SHOW

Modesto, December 5-8—B. L. Bissel, secretary.

Pasadena, December 11-15, L. W. Colby, Secretary, 779 Sunset Avenue.

Coalinga, December 28-January 1—Claude T. Walker, secretary, Coalinga.

Los Angeles, January 9-15 — Walter M. Ross, secretary, 224 W. Colorado Street, Glendale.

be made to produce more meat at less expense than any other fowl or animal.

The Thanksgiving turkey is usually of the variety known as Mammoth Bronze. Whether it is its great size or its beauty that makes this the most popular breed, the fact remains that it is. The White Holland and the Bourbon Red have their admirers and are excellent birds, probably no whit behind the Bronze except in size. The Narragansett was the popular breed in Rhode Island years ago, but seems less hardy here than the others. Slate and Black and Buff are kept more as curiosities than anything else. It would seem as if breeders might better concentrate on making the Bronze as hardy as it ought to be than spend their time developing other breeds, however excellent. One variety, immune to blackhead, would be more of an asset to turkey growers, and to the whole state and nation, than seven of doubtful vigor. When General Haig wishes to make a "smash," he concentrates. Why should not turkey growers do the same?

SCALY LEGS

This disease, if it may be termed such, often appears among our birds. It is easily cured and should not be allowed to let run as it rapidly spreads from one to the other. It is said that the best thing to use is an ointment composed of one ounce of sulphur and ten tablespoons of lard or vaseline. Rub this ointment well into the rough parts of the shanks and toes every other night for a week and the disease will soon disappear.

Food for our Allies is ammunition for the first line of defense.

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Casing—3, 3 1/4, 3 1/2, 4, 4 1/4, 4 1/2, 5, 5 1/2, 6, 8, 10, 11, 12, 14 inch; 2000 feet 6 1/2-inch 20-lb. ten thread.

Riveted Pipe—4, 6, 8, 10, 12, 14, 16, 18 inch.

All above pipe and casing is practically as good as new, with good threads and couplings on each joint. We also carry valves and fittings, pumps, engines, boilers and rail. See our stock and get prices before buying elsewhere.

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## Household Department

## THE INFANTRY

Give my love to the rank and file of the  
Regular Army men,  
Who can march all day and march all  
night  
And win a battle then.  
The seasoned soldiers hard as nails,  
The flower of the brave and free.  
For the good right arm of Uncle Sam  
Is the U. S. Infantry.

It's a long red road that the boys must go  
Where the bombs and the bullets fly,  
But the starry flag is their charge to keep  
Aloft in the sunlit sky!  
So my spirit follows the guidons gay  
And my heart goes over the sea  
With the footsore, dusty but dauntless  
men  
Of the U. S. Infantry.

It's the biggest hike that they ever took  
And the end is far away,  
Where the quick and the dead together  
sleep  
In dugouts scooped in the clay.  
But the first ones up and over the top  
In the battle front will be  
The olive drab and the slanting steel  
Of the U. S. Infantry.

—Minna Irving in New York Sun.

## WHAT SHALL I DO?

Written for California Cultivator  
By Ida M. Blake

"Vera Redfield you've lost your pocketbook, I heard it splash!" Vera laughed and said, "Oh, no it must have been a stone falling into the water that you heard. I'm sure my purse is safe in my pocket." But careful search failed to reveal the pocketbook and Vera's usually smiling face lost its happy look and she cried, "Oh, Helen what shall I do?"

You see it was the last day of the girls' vacation and they had taken the boat that morning for Block Island. The day was one of those perfect summer days of which New England can sometimes boast and the girls had enjoyed a delightful sail down to the island. It would be about an hour before the boat sailed so the girls went ashore and wandered out

on to the breakwater nearby to watch the waves roll in, which to both was great fun. But waves sometimes have a trick of taking a person most un-awares and this is just what happened now.

Vera, who usually kept her possessions hidden had this time carelessly left her purse in her lap and when an unusually big breaker came rolling in she jumped to get out of the way and the pocketbook fell down, down, among the rocks and sea weed.

"Why Helen, all my money, my return trip tickets, my keys, why they are all in that purse, why, whatever shall I do?" Helen, who was far from pessimistic, advised her friend not to worry. When it came time to go back to the boat Vera had made up her mind to tell her story to the purser and trust he would believe her.

The purser proved to be such a gruff appearing individual that she almost lost courage, but straightening her shoulders and looking the purser unflinchingly in the eye she told her tale of woe and almost like magic the ice melted on his frosty old face and he said, "All right, get aboard and I'll give you another ticket." "There," said Helen, "I told you not to worry and you see it always pays to tell the truth."

About ten days later after the girls had settled down to work and the incident was almost forgotten, a letter came for Vera from Block Island addressed in an unfamiliar writing. It read:

"Miss Vera Redfield, Dear Madam: Did you, while at Block Island lose a pocketbook? If so please describe contents. Yours truly, John Hammond."

When the purse reached its owner it was full of sand, but all the contents were safe and the little name and address card had done its duty.

## Old Bread

How California Women Make Use of It

**S**INCE the request by Mrs. A. S. in the Cultivator of November 17 for suggestions for utilizing left-over bits of bread many helpful hints have been received, which we give below.

For these suggestions we offer a three months' extension of subscription to the California Cultivator.

If you find these answers of value and have a problem you would like to lay before our readers, send it in and we will make the same offer for solutions to your difficulty.

First toast all left-over bread to prevent mold and place in glass jars for future use. Then use as crackers in your beefloaf, in soups, in heated tomatoes, etc. They will take the place of crackers anywhere you use them.—Mrs. L. E. Gillett, Holtville.

War Fritters—Soak odds and ends of stale bread in enough milk to cover. When the bread is soft add two well beaten eggs, one teaspoon baking powder and one of salt, enough flour for a batter. Bake as hotcakes on a well greased griddle. By substituting these for the breakfast hot cake, every ounce of flour is made to do its "bit" for the war.—Caroline M. True, Lancaster.

Spaghetti, French Style—Take two cups of spaghetti that is boiled tender in salted water. Grate one cup bread crumbs and brown in two tablespoons of butter. Place the spaghetti and bread crumbs in alternate layers in a vegetable dish and serve hot.—Bertha Dunlap, Willows.

Nut Loaf—Six tablespoons bread crumbs, one-half teaspoon salt, one-half cup or more of milk, one cup or more chopped nut meats, fine, two eggs. Season with sage, onions or parsley, form into roll and bake.—Mrs. E. A. Follensbee, Chino.

I notice a call for the use of stale bread, and as we love all dishes prepared from same will send some of our ways of using them. Every piece of bread, either brown or white, even

corn bread, is thoroughly toasted and run through the food chopper. (If one is lacking place on molding board immediately on taking from toasting oven and roll with rolling pin, which makes them quite fine. These crumbs will keep for some days and are always ready. One nice way of serving is to heat the crumbs in oven. If dripping pan is buttered and crumbs stirred a few times during heating process it adds to the flavor. Serve with sugar and cream for cereal.

A Meatless Dish—To a can of salmon add one cup bread crumbs, one cup of milk, stock or water. Mix well. Put a small piece of butter in frying pan. When well browned turn in the salmon. I use my pancake turner and turn by spoonfuls until the whole is pretty well browned, heap on center of platter, pour over it a cup of catsup, garnish with parsley. An egg or two adds to this but it's very nice without. Will serve about six.

A Meat Dish—About 15 cents worth of Hamburger, one cup of bread crumbs. Turn into frying pan in which has been heated a small piece of fat or butter. Stir and cook until all is well heated. Add a little water if not moist enough. In another pan fry a small onion, then add to it three good sized tomatoes, a little green pepper if liked, salt to taste. When thoroughly cooked add Hamburger. Cook all together a moment. Heap, mashed potatoes around outside of platter, turn meat into center. Bits of leftover meats can be used in the same way.

This is also nice with macaroni. Alternate in baking dish layers of well cooked macaroni and the Hamburger mixture. Add a few extra bread crumbs over top and a few dots of butter. Bake 15 minutes in hot oven.

Still Another—Brown a small piece of butter one-half the size of an egg. Pour over enough bread crumbs soaked in milk to serve six people. (If you have a rich meat broth the crumbs may be soaked in it and butter omitted). Add two eggs, turn in buttered pan and bake. Should be about as moist as thick cake batter. A Spanish sauce of tomatoes, onion and pep-



## Pictures from Home

OVER there, with thousands of miles of sea and land between them and home, are Our Boys, smiling and fighting—fighting with bullets, against a dogged foe; with smiles, fighting homesickness and dread monotony.

It's a part of the nation's job to-day to keep those boys cheerful, to hold fast the bonds between camp and home, to make light hearts and smiling faces—and these things pictures can help to do—pictures of the home folks and the home doings, pictures of the neighbors, pictures that will enliven their memories of the days before the war—simple Kodak pictures, such as you can make. These can help.

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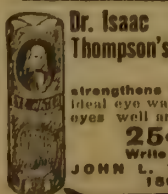
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Th' chronic borrower generally aims to keep in touch with his friends.



## The Cultivator Patterns



8575—Ladies' Matinee and Cap. Cut in sizes 34, 38 and 42 inches bust measure. The matinee is all in one piece. The pointed collar gives a pretty finish to the neck.

8571—Girls' One Piece Dress. Cut in sizes 8, 10, 12 and 14 years. This dress is to be slipped on over the head. A narrow shawl collar finishes the neck.

8603—Ladies' Long Waisted Dress. Cut in sizes 36, 38, 40 and 42 inches bust measure. The novelty is the center back closing, and the high collar with the flare about the face.

8364—Ladies' Waist. Cut in sizes 36, 38, 40 and 42 inches bust measure. The fronts of the waist are tucked as far as the bust line. The back is in plain shirtwaist style.

8372—Girls' One Piece Dress. Cut in sizes 8, 10, 12 and 14 years. The dress is made so that it can be opened all the way down the front. The back hangs straight from the shoulders.

8388—Ladies' One Piece Apron. Cut in sizes 36, 40 and 44 inches bust measure. This apron has the Russian side closing. The apron is in one piece from shoulder to hem.

8365—Ladies' Skirt. Cut in sizes 24, 26, 28, 30 and 32 inches waist measure. The front and back gores form wide panels and the sides are gathered to the slightly raised waistline.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

### HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send 10 cents in coin or (1 or 2 c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department  
California Cultivator  
Los Angeles

per is nice served with this or any nice gravy. We often use an onion gravy as follows: Fry a good sized onion in a large spoon of drippings. When cooked blend with it a spoon of flour, add a pint of milk or water. Cook until thick. — Mrs. Fred Klahn, Orange.

### HOW TO SELECT FOOD

**T**HIS is the third installment in this series of articles. More are coming. We believe all are worth saving and keeping together. They should be read together to be of full value.

If the housewife will group the various foods in her pantry, vegetable bins, and refrigerator into five simple groups and will see that foods from each of the groups appear in each day's meals, she can feel sure that she is giving her family the different substances the body needs for well-being.

#### Group 1—Fruits and Vegetables

Without these the food would be lacking in mineral substances needed for building the body and keeping it in good working condition; in acids which give flavor, prevent constipation, and serve other useful purposes; and in minute quantities of other substances needed for health. By giving bulk to the diet they make it more satisfying to the appetite.

Foods depended on for mineral matters, vegetable acids, and body-regulating substances: Fruits; apples, pears, etc., berries, oranges, lemons, etc., bananas, melons, etc. Vegetables; salads—lettuce, celery, etc., green peas, beans, etc., tomatoes, squash, etc., potherbs, or "greens," potatoes and root vegetables.

#### Group 2—Meat and Meat Substitutes

These are sources of an important body-building material, protein. In the case of children part of the protein food should always be whole milk.

Foods depended on for protein: Milk, skim milk, cheese, etc., poultry, eggs, meat, fish, dried peas, beans, cowpeas, etc., nuts.

#### Group 3—Foods Rich in Starch

Cereals (wheat, rice, rye, barley, oats, and corn) and potatoes (white and sweet). Cereals come near to being complete foods, and in most diets they supply more of the nourishment than any other kind of food. It is not safe, however, to live only on cereals.

Foods depended on for starch: Cereal grains, meals, flours, etc., cereal breakfast foods, bread, crackers, macaroni and other pastes, cakes, cookies, starchy puddings, etc., potatoes and other starchy vegetables.

#### Group 4—Sugar

Unless some of the fuel is in this form the diet is likely to be lacking in flavor.

Foods depended on for sugar: Sugar, molasses, syrups, honey, candies, sweet cakes and desserts, fruits preserved in sugar, jellies, and dried fruits.

#### Group 5—Foods Very Rich in Fat

These are important sources of body fuel. Without a little of them the food would not be rich enough to taste good.

Foods depended on for fat: Butter, and cream, lard, suet, and other cooking fats, salt pork and bacon, table and salad oils.

Some food materials really belong in more than one group. Cereals, for example, supply protein as well as starch; potatoes supply starch as well as the mineral matters, acids, cellulose, and body-regulating substances, for which they are especially valuable; and most meat supplies fat as well as protein.

The groupings will help the housekeeper who wishes to save money or time to simplify her meals without making them one-sided or incomplete. For example, from these groups, the housewife who has been serving bread, potatoes, and rice or hominy in one meal, will see that one or even two may be left out without omitting any important nutrient. They will show her that a custard which is made of milk and eggs, two foods from group 2, would hardly be needed after a meal in which a liberal supply of meat had been served, and that a child does not need milk at the same meal with an egg or meat. It will suggest that baked beans or other legumes, or thick soups made of legumes, are substitutes for meat rather than foods to be eaten with meat.

## Why Not Save That Extra on Underwear?

It's really a startling eye-opener to see just what amazing value you can get when you buy Hanes Underwear. Read about the extra features over there in the illustration. Add 'em all up—then get this:

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A boy's union suit that combines the best features of the men's suits with a downy softness and cozy warmth just right for youngsters. Its value can't be duplicated anywhere.

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## Los Angeles Market

Los Angeles, Nov. 27, 1917.

## BUTTER

Produce Exc. Quotations.					
Price to trade 4c higher.					
California extra creamery.....42					
Daily Exch. prices past week.....					
Nov. 20	21	22	23	24	26
'17	42	43	42	42	42
Rets. wk. ending Nov. 26, 315,400 lbs.					

## CHEESE

Brokers prices:					
California fresh, lb. ....26					
Eastern Daisies.....29					
Oregon Longhorn.....29					
Tillamook Trip.....27					
Domestic Swiss.....34					

## EGGS

Exchange quotations. Prices include cases and fillers valued at 35c. Prices

to retailers 4 cents above Exchange.					
Fresh extras.....54					
Case count.....51					
Pullet.....48					
Dairy Exch. prices past week.....					
Nov. 20	21	22	23	24	26
'17	55	54 1/2	54	54	54
Rets. wk. ending Nov. 26, 452 cases.					

## POULTRY

We quote to producers:					
Broilers.....34					
Fryers.....27@28					
Hens—Leghorns.....22@26					
Roasters, 3 lbs. and up.....27@28					
Ducks, lb.....17@22					
Squab, doz.....4.00@5.00					
Rooster, old.....15					
Turkeys.....26@28					
Geese, lb.....17					

## LIVE STOCK

We quote cwt. f. o. b. L. A. Corrected Wednesday morning November 21, by the Cudahy Company.

Cattle—	
Beef steers, av. 1000 to 1100 lbs.	8.50@9.00
Helpers, good	6.00@6.50
Cows, good	5.50@6.00
Canners	4.50@5.00

HOGS—	
Av. 125 lbs.	14.50
Av. 150 lbs.	15.50
Av. 175-200 lbs.	16.00
Rough, docked 20 lbs.; piggy sows, 40 lbs., stags, 40 per cent.	
Prime wethers	9.50@10.00
Ewes	9.00@9.50
Lams	14.00@14.50
Yearlings	10.50@11.00

## POTATOES

Wholesale selling price:	
Locals, cwt.	2.25@2.35
Northern Burbank, cwt.	2.30@2.50
Nevadas	3.00
Russets	2.15@2.20
Sweet, cwt.	2.60@3.00

## ONIONS

Wholesale selling price:	
Brown, cwt., 2.50; white	2.50
Garlic	7

## VEGETABLES

Wholesale prices:	
Artichokes, doz.	1.25
Beans—Wax	11@12
Limas, lb.	11@12
Ky. Wonder	11@12
Beets, sk	1.00
Cabbage, lb.	1 1/4
Carrots, doz.	35
Cauliflower, doz.	1.00
Celery, cr.	3.00@3.50
Cucumbers, lug	2.50
Egg Plant, lb.	6@7
Horseshoe, rt. lb.	15
Lettuce, doz.	30
Leeks	30
Mint	40
Onions, green, doz.	25
Okra, lb.	13@14
Peas, lb., Telephone	11@12
Peppers, Chili, lb., 6@7; Bell	8@9
Parsnips, doz.	40
Parsley, doz.	20
Pumpkins, lb.	2
Radish, doz.	20
Rhubarb—Strawberry	1.25
Romaine, doz.	50
Spinach, doz.	25
Squash, Summer, cr., 1.25; lug	65
Crookneck	70@75
Hubbard, lb.	2
Tomatoes, cr.	1.25
Turnips, doz.	25

## FRUITS

Wholesale prices:	
Apples—Skinners Seedling	1.50@1.75
Bellflowers	1.35@1.50
Greenings	1.75
Jonathan	1.75@2.15
King David	1.75@2.00
Spitzenburg	2.40@2.75
Y. Newton	1.40
Avocados, doz.	6.00@9.00
Bananas, lb.	5@5 1/2
Casabas, lb.	3
Cranberries, bbl.	16.00
Figs, bx.	1.35@1.50
Grapes—Cornichon	1.60@1.65
Red Emperors	1.50
Guavas, lb.	6
Peaches, lug	1.25@1.35
Pears, Bartlett, lug. 2.25; bx.	3.75
Persimmons, lb.	7@10
Plums, lug	1.25@2.00
Pomegranates, lug	1.50

## CITRUS

Lemons, 4.50@6.00; juice	2.25
Grapefruit	3.75
Limas, basket	1.00
Navels, bx	4.00@4.25
Valencias	4.00

## DRIED FRUITS

These are not prices to producers but prices made by wholesalers to retailers. (25-lb. bx., faced, 50s, 1/2c less.). Apples, evaporated, 50s, 16; extra ch., 16 1/2; apricots, ch., 16; extra ch., 17 1/2; pears, 12 1/2; peaches, ch., 12; ly., 12 1/2; peeled, 16; citron, 30 lb.; lemon peel, 25; orange peel, 25; prunes, 20-30s, 16 1/2; 30-40s, 12 1/2; 40-50s, 11; 50-60s, 10; 60-70s, 9 1/2; 70-80s, 9; 90-100s, 8. Figs—Bulk, 25 lb. bx., blk. \$3.00, wh. \$2.75.

## NUTS

Almonds—Not growers' prices but prices of wholesaler to retailer.	
I. X. L.	22 1/2
N. P. U.	21 1/2
Peanuts, raw	12 1/2
Walnuts—Cal. Walnut Growers' Association named prices Oct. 1:	
No. 1 Soft Shell, lb.	20
No. 2 Soft Shell, lb.	16
Budded, Diamond Brand	24
Budded, Standard Brand, (same size as No. 1 Soft Shell)	21
Prices delivered in East 1 1/2c higher.	

## HONEY

Prices of wholesaler to retailer:	
Extr. White, lb.	14@16
W. W. lb.	16@18
Comb. case, W.	3.75
W. W. case	4.80

## RICE

Wholesale quotations: Price to growers around 4 cents pound.

Cal.	7.50
Broken	5.60@6.00

## BEANS

These are prices made by wholesaler to retailer.	
Lady Washington	13.00@14.00
Limas	13.50@14.00
Pinks	9.50@10.00
Manchurian Reds	9.25
Baby Mex.	9.00
Garbanzos	9.00
Small White	13.00@14.00
Blackeyes	9.50
Tepary	9.00@10.00
Lentils	18.00

## HAY

Quotations by Nichols-Loomis Company. Prices to growers f. o. b. L. A. carlots:	
Tame Oat	25.00@27.00
Volunteer Oat	18.00@20.00
Wheat	20.00@23.00
Barley	22.00@25.00
Alfalfa	22.00@25.00

The Alfalfa Growers Association of Southern California quotes: Alfalfa, \$27.50 per ton f. o. b., where the \$1.50 freight rate applies, and \$26.50 f. o. b. where the \$2.50 freight rate applies.

## GRAIN AND FEEDSTUFFS

Wholesale cwt. f. o. b. L. A.	
Alfalfa Meal	1.95
Alfalfa Molasses	2.00
Barley, Rolled	2.85@2.95
Barley, Re-cleaned, Whole	3.00
Barley, Hulled	3.55
Beet Pulp	2.00
Bran, Heavy	2.15
Cocoanut Meal	2.50
Cottonseed Meal	3.40
Corn, Yellow	4.45
Corn, White	4.55
Corn, Cracked	4.50
Corn, Feed Meal	4.55
Corn, Egyptian	3.40
Middlings	3.05
Milo	3.15
Oat Chop	1.90
Oats, White	2.85
Oats, Rolled White	3.05
Oats, Hulled	4.75
Oats, Rolled Chicken Groats	4.85
Oilcake Meal	3.65
Wheat, No. 1	4.00@4.05
Wheat, Cracked, No. 1	4.40
Red Millet	4.65@4.75
Rye	4.00
Blood Meal	5.00@5.10
Bone, Green	2.75@2.85
Bone, Dry	2.95@3.05
Charcoal, 50-lb. sk.	3.00
Clam Shell	70@80
Grit, Granite	75@85
Oyster Shell	1.45
Sunflower Seed	5.25
Soya Bean Meal	3.60
Scratch Feed	3.80@3.90
Gritless	3.90@4.00
Rice Bran, ton	40.00
Middlings, ton	45.00
Rice Polish, ton	49.00

## San Francisco Markets

San Francisco, Nov. 26, 1917.

## BUTTER

Dairy Exchange quotations, lb.:	
Fresh extras	43
Prime firsts	42
Dairy Exc. quotations past week and year ago:	
Nov. 19	20 21 22 23 24
'17	41 43 43 43 42 43
'16	37 37 37 37 36
Rets. wk. ending Nov. 24, 430,000 lbs.	

## CHEESE

Dairy Exchange quotations:	
Cal. Flats, 18@23. Y. Am.	22@25
Ore. Young Am.	25
Jack Cheese, full cream	23@24
Half skim	17@18

## EGGS

Extra.....56	
Firsts.....54 1/2	
Selected, Pullets.....61	
Firsts.....49	
Dairy Exc. quotations past week and year ago:	
Nov. 19	20 21 22 23 24
'17	57 59 57 55 54 51
'16	54 54 52 49 48
Rets. wk. ending Nov. 24, 6705 cases.	

## POULTRY

We quote from producers, lb.:	
Hens, large, 28@29; Leghorns	24@27
Small colored	25@27
Broilers and fryers	26@40
Roosters	27@29
Squabs, doz.	3.00@4.00
Ducks	14@20
Geese	18@19
Belgian Hares, live 18@20; dr.	17@20
Turkeys, lb., live young	27@29
Old, live, 24; dr. young	30@35
Dr. old, 3 cents under.	

## LIVE STOCK

Prices gross weight: Cattle: The following prices are for grass fed stock. Hay fed prices 1/2 to 3/4c 10. Steers, lb. 9 1/2@9 3/4; undesirable, 6@8; cows and heifers, 6 1/2@7 1/2; undesirable, 4@6; calves, 7 1/2@9 1/4. Hogs—Hard grain fed, weighing 100 to 150 lbs., 14 1/2; 150 to 300 lbs., 16; 300 to 400 lbs., 15 1/2. Sheep—Wethers, 12@12 1/2; ewes, 9 1/2@10.

## POTATOES

Wholesale selling prices at wharf:	
Salinas Burbank, cwt.	2.50@3.00
River	1.50@2.00
Sweets, lb.	2 1/2@3

## ONIONS

Wholesale selling price on wharf:	
Australian Brown, cwt.	1.75
Garlic, lb., new	4@5

## VEGETABLES

Wholesale selling price:	
Beets, sk.	1.25
Beans, string, lb.	8@12
Fy. Garden, 10@12; Lima	8@9
Brussels Sprouts, lb.	4@5
Cauliflower, doz.	50@75

Corn, green, sk.	75@1.25
Carrots, sk.	75
Celery, doz.	20@25
Cucumbers, lug.	2.00@2.50
Hothouse	1.25@1.50
Lettuce, cr.	75@1.25
Egg Plant, lug	1.40@1.50
Onions, bx	85@1.00
Okra	65@85
Peas, lb.	70
Parsnips	1.15@1.25
Peppers, Bell, lug, 1.50@1.75; Chili	85@90
Pumpkins, sk.	85@90
Rhubarb, bx.	1.25@2.00
Squash—Marrowfat, sk.	85@90
Cream, lug	1.00@1.15
Hubbard, sk	85@1.00
Summer, lug	1.25@2.00
Italian	75@1.00
Tomatoes, lug	50@1.50
Turnip, sk.	75@1.00

## FRESH FRUITS

Berries—Strawberries, 8.00@12.00 ch. to trade; raspberries, 8.00@10.00; huckleberries, lb., 15@17. Peaches—Oregon, Salwaya, bx.: Fancy, 1.00@1.10; other grades, 50@85. Plums and Prunes—German and Grand Duke, cr., 1.00@1.25. Figs—Black, double layer, bx., 75@1.00; single layer, 50@60. Cranberries—Bx.: 4.00@5.00. Pears—Bartlett's, wrapped, bx., 2.00@2.50; Winter Nellis, wrapped, 2.00; winter pears, 75@1.25. Grapes—Tokay, 1.50@2.00; Cornichon, 1.25@2.00. Apples—Bellflower, 1.00@1.25; Spitzenburg, 1.00@1.85; Red Parnmain, 70@1.00; W. W. Parnmain, 1.10@1.50; Jonathan, 1.00@1.50; Baldwin, 1.00@1.50; Newton Pippins, 1.25@1.50. Melons—Casabas, cr., standard, 65@85 doz., 65@75; Persian, pony cr., 1.00@1.25. Citrus Fruits—Bx.: Lemons, according to size, fy., 4.75@6.75; ch., 4.25@5.75; lemons, 1.50@3.00; grapefruit, Tulare seedless, fy., 3.25@3.50; ch., 2.50@2.75; Mexican limes, 2.25@2.50. Oranges—Bx.: New Valencias, ch., to fy., 3.25@3.75; lower grades, 1.25@2.00; Mandarin oranges, cr., 1.50@1.75; half orange bx., 2.75@3.00; navels, 4.00@4.50. Tropical Fruits—Bananas, Hawaiian, 5@5 1/2 cents lb.; pineapples, doz., 3.50@4.50. Pomegranates—One-half orange bx., 1.25@1.75. Persimmons—Bx., 1.25@1.50.

## DRIED FRUITS

Not producers' prices but prices of wholesaler to retailer. Peaches—Unpeeled, lb. standard, 9 1/2; choice, 9 1/2; extra choice, 10; fancy, 11. Figs—In 50-pound boxes, per pound. White Adriatic, standard, 8 1/2; choice, 9 1/2; extra choice, 10 1/2; fancy, 11 1/2. Calmyrna, fancy, 15 1/2; extra fancy, 16 1/2. Apricots—Bulk basis: Standard, 13 1/2; ch., 15; extra ch., 15 1/2; fy., 16 1/2; extra fy., 17 1/2; fy. Moorpark, 17 1/2; extra fy., 18 1/2. Prunes—60s to 90s, 6 1/2 basis; 50s to 60s, 5 1/2 premium; 40s to 50s, 1 1/2 premium. Apples—In 50-pound boxes, lb.: Fancy 14 1/2; extra ch., 14; ch., 13 1/2. Pears—Bulk basis, lb.: Fancy, 11 1/2; extra ch., 9 1/2; ch., 8 1/2; standard, 6 1/2. Raisins—Cases: Sun Maid, seeded, 16-oz. cartons, \$4.20 for 48s and \$3.15 for 36s; fy., \$4.20 for 48s and \$3.15 for 36s; do, 12-oz. 45 to cs. \$5.25; ch. 16-oz. cartons, \$3.00 for 36s; do, 12-oz. cartons, 45 to cs. \$3.10. In bulk: Sun Maid, 1.75; fy., 1.90; ch., 1.75. Sulphur-bleached Thompsons, extra fy., \$5.37 1/2; fy., \$5.12 1/2; ch., \$4.87 1/2; soda-bleached, \$4.75. Loose: One-crown, \$4.15; 2-crown, \$3.40; 3-crown, \$3.65; 4-crown, \$3.20. Avocado—Doz., 5.00@7.00. Quinces—Bx.: 75@1.25. Olives—Ton, 140.00@18



Receipts past week, 1465 tons. The dry weather still continues with the result that interior demand is better and if cars were available considerable hay would move this way. As soon as these government contracts are cleaned up, which promises shortly, it is to be hoped that more cars will be furnished for general shipment. Many sections are waiting for rain before disposing of any of their stock, the farmers not caring to take a chance on being without feed should a dry season prevail.

Alfalfa is in good demand, especially in the country districts, with prices well maintained. Stock hay is extremely scarce and sells without difficulty. Large quantities of rice straw are being offered but owing to lack of transportation it is not interesting.

We quote today wholesale prices in carload lots as appear from dealers' transfers upon the hay market. For prices to consumers charges of cartage, commission and handling must be added according to conditions.

Fancy Wheat Hay, (light 5 wire bale) .....	\$28.00@29.00
No. 1 Wheat or Wheat and Oat Hay .....	24.00@26.00
No. 2 Wheat or Wheat and Oat Hay .....	21.00@23.00
Choice Tame Oat Hay .....	26.00@27.00
Other Tame Oat Hay .....	22.00@24.00
Wild Oat Hay .....	21.00@24.00
Barley Hay .....	21.00@24.00
Alfalfa .....	21.00@25.00
Stock Hay .....	18.00@20.00
No. 1 Barley Straw .....	60@90

GRAIN

Grain Exchange prices, etc.	
Corn—Egyptian .....	2.10@2.12½
Barley, Feed & Brewing, cwt. ..	2.50@2.52½
Oats, Red Seed, 2.80@2.90; Feed, 2.60@2.70	
New Black .....	3.25@3.50
White .....	2.80@2.85

FEEDSTUFF

Wholesale prices per ton:	
Bran .....	41.00@42.00
Cornmeal .....	85.00@87.00
Cracked Corn .....	85.00@87.00
Middlings .....	50.00@55.00
Alfalfa Meal .....	29.00@31.00
Cocoonut Meal .....	40.00@41.00
Rollod Barley .....	50.00@51.00
Shorts .....	43.00@44.00

SEEDS

Prices in round lots, lb.:	
Millet, re-cleaned .....	4½@5
Alfalfa .....	20@21
Flax .....	6@6½
Rape .....	2½@3

Citrus Fruit Market

Los Angeles, Nov. 27, 1917.

Central California is shipping some of the first Navel of the season, the first out of Lemon Cove going on Wednesday the 21st. That car netted the shippers \$2500, which is the highest price ever received at that particular packing house for a car of fruit. Care is being used in sending out the first Navels, and as a matter of fact compared with other years but very few are being sent. Shipments of Valencia's will continue for some time, though there are less than 200 cars in the state to go.

Shipments

Shipments of citrus fruits since November 1, 1917: from Southern California, oranges 1563, lemons 222, total 1785; to same date last season, oranges 626, lemons 421, total 1047. Central California, this season, oranges 23, lemons 23, total 46; last season to same date, oranges 388, lemons 80, total 468. Northern California, this season, oranges 2; last season to same date, oranges 259.

AT THE AUCTIONS

November 21	
New York: 17 Val., 1 Lem. Val. \$1.60-\$6.10, Lem. \$6.10-\$7.20.	
Pittsburgh: 7 cars. Val. \$1.70-\$3.40, Lem. \$3.35-\$4.55.	
Boston: 7 Val., 1 Lem. Val. \$2.40-\$5.90, Lem. \$3.65-\$4.90.	
St. Louis: 4 Val., 1 Lem. Val. \$2.80-\$3.90, Lem. \$2.75-\$3.70.	
November 22	
New York: 12 Val., 1 Lem. Val. \$1.55-\$5.25, Lem. \$3.40-\$6.15.	
Philadelphia: 5 cars. Val. \$1.35-\$4.85, Lem. \$2.15-\$5.10.	
Boston: 6 cars. Val. \$2.90-\$4.35.	
November 23	
New York: 13 Val., 1 Lem. Val. \$1.45-\$6.80, Lem. \$5.60-\$6.50.	
Cincinnati: 3 cars. Val. \$1.40-\$3.50.	
St. Louis: 6 cars. Val. \$2.65-\$5.25.	
Cleveland: 3 Val., 1 Lem. Val. \$1.65-\$4.15, Lem. \$6.05.	
Boston: 6 cars. Val. \$2.30-\$4.25.	
November 26	
New York: 20 cars. Val. \$2.00-\$5.25, Lem. \$7.00.	
Boston: 14 cars. Val. \$1.65-\$4.40, Lem. \$5.45-\$7.35.	
St. Louis: 8 cars. Val. \$2.55-\$3.95, Lem. \$3.55-\$4.20.	
Cleveland: 3 cars. Val. \$1.10-\$4.00, Lem. \$3.15-\$5.30.	
Philadelphia: 6 Val., 1 Lem. Val. \$1.45-\$4.10, Lem. \$5.50.	

O the Kaiser went forth to conquer the West and the East and the North and the South as well. The soul of his people he bound in chains and tossed the elasp to the Imps of Hell. But the day is coming—and coming fast—when the Kaiser will hear a sudden "Right About! Quick March! to—Where You Belong."—If We Work and Pray—and FIGHT.

WEATHER CONDITION

San Francisco, Cal., Nov. 24, 1917.

	Wk.	Season.	Norm.	Max.	Min.
Bureka .....	.00	3.67	8.05	64	38
Red Bluff .....	.00	1.74	4.78	74	38
Sacramento .....	.00	.89	3.03	72	40
San Francisco .....	.00	.39	3.42	72	52
San Jose .....	.00	.51	2.65	76	36
Fresno .....	.00	.34	1.82	74	40
San Luis Obispo .....	.00	.56	3.12	88	42
Los Angeles .....	.00	.34	1.94	88	58
San Diego .....	.00	.23	1.17	86	52

WHEAT LANDS

The University of California is issuing a leaflet "Utilization of Idle Lands" For Wheat," in which is report of lands in various counties of the state, which are available for wheat production. San Luis Obispo County shows greatest acreage, 90,320; Modoc County, away up at the extreme northeast corner of the state, has 40,000; Santa Barbara County, 28,500; Yuba, 28,800; Glenn, 20,640; Madera, 23,000. Other counties all fall below 10,000.

The effort of the leaflet is particularly to call attention to these lands and secure culture for wheat if possible. The booklet says 200 persons have already made application for these lands. There are certainly enough of these lands so that the 90,000 acres increase asked for should be easily secured. Most of these lands can be leased on very easy terms though some are for sale at reasonable prices.

APPLY LIME

The use of lime agriculturally is increasing perhaps more slowly in California than in Eastern states. Many of our soils are supplied with lime, more perhaps would be benefited by its use. Illinois is the greatest producer, leading with 203,000 tons, Virginia is second with 146,000 tons, New York third with 102,000 tons. Other states using liberally are Pennsylvania 73,000 tons, Tennessee 66,000 tons, North Carolina 53,000 tons, West Virginia 47,000, Ohio 55,000 and Vermont 27,000. Since the figures of production were first compiled in 1911, the industry has steadily increased, and the output for 1916 is 1,066,376 short tons, valued at \$1,146,582, representing a gain of 512 per cent in quantity and 460 per cent in value for the six years. The increase for 1916 compared with 1915 was about 32 per cent in quantity and 28 in value.

In these times of high priced fertilizer it is well to consider the value of lime as an agent which will make available unavailable plant foods in the soil.

"T. B."

The department of agriculture is mailing a leaflet "Keep Costly 'T. B.' Out of Your Hog Lot," and in it is this statement; "Hog tuberculosis last year sent over 25,000,000 pounds of meat to the soap and fertilizer tanks." This is a lot of meat when people are hungry. Statement is then made that hogs contract tuberculosis chiefly from dairy cows.

See that all milk, especially all skim milk from the creamery, is pasteurized or cooked before it is fed to the hogs.

Keep your hogs from following dairy cattle unless the cattle are tuberculin tested. Keep them out of cow lots and barns and keep dairy drainage out of hog lots. Hogs can follow steers without much danger.

Give your healthy hogs a chance to keep healthy. Give them clean, well drained lots and plenty of fresh air, sunlight and clean water. Shelter them in well lighted and ventilated, sanitary hog houses. Keep the houses clean and use plenty of whitewash and disinfectants.

If there was tuberculosis in your swine last year it is safest to get rid of that herd, especially the breeding animals, and raise clean hogs from fresh stock.

As to sterilizing the old time open kettle or caldron may be used, and if buttermilk is secured from creameries the only safe course is that of boiling. It costs time and money, but the price of a car of hogs known to be largely tubercular is cut so severely that every effort should be made to save that loss as well as the direct loss of the diseased animals.

DON'T BURN THEM

The smoke of many a small fire is observed these fall days. It usually comes from the leaves which, instead of going to the mulch pile, are raked to the most convenient place and burned. This is actual waste that should be stopped. They are valuable in increasing soil mulch. Pile them with poultry manure, weeds, and all other refuse of the place, using some soil in addition, keep wet for a few weeks, and exceptionally fine potting soil or mulch is produced.

DRIVE MORE SLOWLY

Nearly a thousand people were either killed or seriously injured in the city of Los Angeles during the first ten months of 1917 in automobile accidents. By serious injury is meant injuries which result fatally or in loss of limb or at least in partial permanent disability. Besides this thousand, tens of thousands of others were injured in minor accidents. To be more exact the number of people killed was 118; the number seriously injured, 811. September proved the month of the greatest number of deaths, 18 being killed in that one month. July was second with 17 killed. These figures are secured from police records of the city, which give exact dates of every accident. For instance, during the month of January: On the first six were seriously injured, one killed; the second, ten injured, two killed; the third, six seriously injured; fourth, two, etc. Every day of the month had its accidents. In February four days escaped without any accidents whatever. They were the 13th, 18th, 22nd and 26th. Other months were about the same.

We have seen no total of the number of Americans killed since the beginning of the war in 1914, but we think this one city makes nearly as strong showing in ten months as all America in the more than three years of war.

We believe every one of those accidents has been investigated and so far as we have seen all drivers were blameless. We presume this record is not exceptional, other than that perhaps a greater number of automobiles are owned in Los Angeles than in any other city of similar size.

No one seems to have a suggestion as to how the number of accidents may be lessened, but it certainly appears that there is room for "a council of defense" amongst automobile owners and pedestrians. We should be protected from ourselves.

THE LARGEST HERD OF JERSEY CATTLE IN THE WORLD

Since Texas has the honor of being the largest state in the Union it is fitting that her industries should be in keeping with that reputation. She is a state of wonderful diversification, but probably her widest reputation has been made in the size of her cattle ranches and the number on her ranges and plains. It has been but a few years since dairying has been followed in Texas and in a comparatively short space of time she has forged to the front very rapidly.

Down in the Corpus Christi country near the Gulf there is a Jersey farm which has sprung into world fame, and so far as we know there is nothing like it anywhere. We refer to the Falfurrias Jersey Dairy Company, of Falfurrias, Texas, owned by Ed C. Lasater, one of the most prominent men in Texas and just now Hoover's man "Friday" in the national campaign for food conservation. Primarily Mr. Lasater is a beef cattle man, but he was the owner of enormous tracts of Texas land, much of which was too valuable for range purposes and which was valued at about \$20 per acre a few years ago, and a drug on the market. Being a farsighted business man Mr. Lasater saw the possibilities of his section of the country in the development of the dairy industry. With this in mind he invested hundreds of thousands of dollars in the establishment of what was to be the biggest thing of its kind in the world. After he had demonstrated the value of dairying the demand for farm lands grew rapidly until today it is one of the principal dairy centers of the state and land values have almost doubled.

When the reader is advised that the Falfurrias herd of Jerseys numbers 2900 registered animals and the grade herd 2000 head, that 10,000 tons of corn silage was stored in 50 silos this year, that 1400 pounds of the famous

Falfurrias Jersey butter is shipped daily and that hundreds of men are employed year in and year out, a faint idea of the magnitude of this concern can be had. There are 200 Register of Merit cows in this herd. Their yearly butter record averages 502 pounds to the cow. Twenty-five head average 770 pounds, and the highest record cow made 863 pounds of 85 per cent butter in one year. Falfurrias Jersey Dairy maintains a wonderful string of show yard Jerseys under the efficient management of B. R. Parrish, acknowledged as one of the three greatest showmen of dairy animals in the country.

We have seen and talked with a number of Jersey enthusiasts, but it is worth anyone's time to listen to this chap Parrish discuss Jersey pedigrees or watch him in the show ring. He has won so many championships at the principal American shows, including the National Dairy Show and the Waterloo Congress, that he cannot keep track of them. Before going with Mr. Lasater he showed F. J. Bannister's Lacina herd with great success. Falfurrias sends two or three different show herds out over the circuits every year. The expense is enormous but the advertising is valuable. The most remarkable feature about this herd of Jerseys and its owner is that prize winning males and females with high production records on both sides of their pedigrees, style, finish, etc., are priced at ridiculously low figures just to enable the ordinary farmer with limited means to secure this kind of stock.

This herd of Jerseys was the biggest sensation of the Arizona state fair this year. Of course it captured the bulk of the premiums as the stock was not only the best to be had but was in prime condition and exhibited by one of the best showmen in the country, it was a combination hard to beat. They uncovered a wonderful aged bull in Nobles Eminent Lad. He is well known to American breeders, having won grand champion at every show in 1913 as a two year old and sweepstakes the same year over every breed. Next year it is altogether probable that the Falfurrias herd will make the Coast circuit and give fairgoers here an opportunity to see this great herd.

AT THE GUARANTY SALE

Eight of the best individuals in the great Holstein herd of the Palo Alto Stock Farm at Palo Alto were selected by the committee of the California Breeders' Sale and Pedigree Company for the first guaranty sale, which is to be held at Sacramento December 5. With equally good selections from the herds of the other breeders consigning to the Sacramento sale it is destined to be an epoch marking event in the West.

An exceptional family offering is being made by the Palo Alto Stock Farm by sending Jennie Terzool Hicks 4th with her daughter, Alta Jennie, and her son, Palo Terzool Korndyke. Jennie Terzool Hicks 4th is a great producer of proven progeny with a record of 32.71 pounds of butter from 600 pounds of milk in seven days. For her ten months she will go over 21,000 pounds of milk and about 1000 pounds of butter. She has been in calf since May 22. Alta Jennie will be two years old in February and, like her dam, is in calf to King Pontiac Segis Korndyke. Palo Terzool Korndyke is by Rag Apple Imperial Korndyke, a son of Rag Apple Korndyke, who is the sire of the \$25,000 bull, Rag Apple Korndyke 8th, the sire of the \$53,000 calf.

A 35 pound bull is also being consigned from the Palo Alto Stock Farm. He is Funderne Soldene Pontiac Valdessa, born February 23, 1917. He was sired by King Valdessa, the highest record bull of the breed. The dam, Funderne Soldene Hengerveld, at three years made 486.6 pounds of milk and 35.33 pounds of butter in seven days and 2251 pounds of milk and 136.82 pounds of butter in 30 days—both world's records for heifer with first calf.

Other great individuals are Springdale Ononis Vale, 31.2 pound butter; Mousie De Kol Lady 2d, 24.48 pounds of butter; her daughter, Mousie De Kol Imperial, and Rosabel Korndyke, who has a record of 23.15.

BOOSTING DEPENDABLE IMPLEMENTS

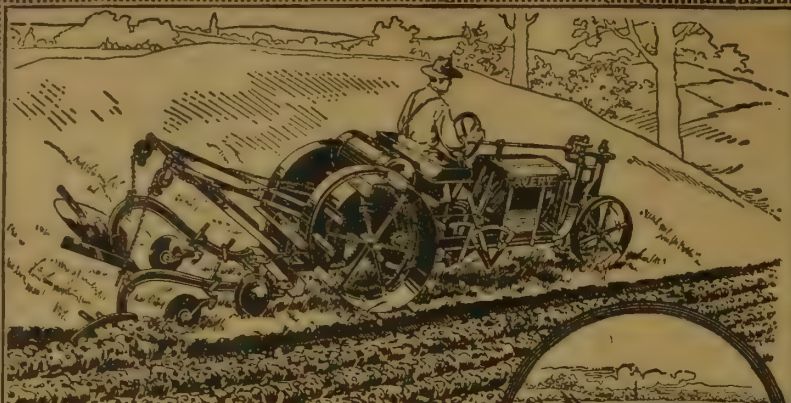
The Arizona state fair stimulated the sale of California made farm machinery. One firm, Whyman Machinery Company of Phoenix, has sold since the fair, nine eight-foot double disks, three subsoil plows, and six heavy chisel cultivators made by Killefer Manufacturing Company of Los Angeles.

ALFALFA LAND FOR DAIRYING

Leveled, checked and in stand of Alfalfa. Also first-class Orchard, Bean and Sugar Beet land, with plenty of water for irrigation. For sale in tracts of 20 acres and up.

Sixty Three Miles from San Francisco in Contra Costa County. For Prices and Descriptive Matter Address  
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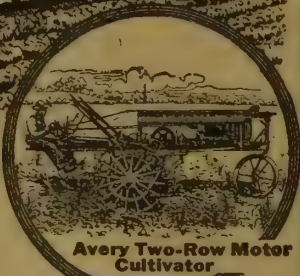
## A New Idea in a Small Tractor Plow Outfit

**Y**ou can now get a small Avery 5-10 h.p. Tractor with a special hitch and lifting device and use your old horse plow.

Attach your plow to the drawbar and connect the lifting chain and you have a complete tractor plow outfit. If you have hilly ground and want to use both right and left hand plows, attach them as shown here. You can raise and lower the plow without getting off the tractor. With the plow raised you can back up in short spaces easier than with horses.

This tractor is just the size for doing all the work on small farms or for light work on larger farms. The price is the lowest of any tractor built.

There is a size Avery Tractor to fit every size farm. Six sizes in all—from this small 5-10 h.p. up to a large 40-80 h.p. There is also an Avery Tractor Plow in light and heavy styles to fit every size tractor.



Avery Two-Row Motor Cultivator



Avery "Yellow Kid" Thresher

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Do your cultivating with motor power. The Avery Two-Row Motor Cultivator makes it possible for one man to tend 100 acres of corn. It will also cultivate cotton and other row crops. By getting a special planter attachment you can plant your crops with the same machine. You can use it too for many other kinds of light field and belt work.

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raise them. Here is an ideal Motor Farming Equipment—an Avery Tractor and Plow to prepare your seed bed and plant and harvest grain crops—an Avery Two-Row Motor Cultivator to plant and cultivate your row crops—and an Avery Thresher to thresh your grain crops.

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## MORE CROPS

will be raised in America this year than ever before. Make every acre you own or rent, produce to the limit. Fertilize your land—the increase in yield and price of crops will more than pay all the fertilizer expense—it will enable you to farm with profit. Don't spend your time working worn out land. Make it pay—Fertilize with Hauser's Organic Fertilizer.

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Ground Limestone.....\$2.00 per ton

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Riverside Portland Cement Co.  
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## Farmers in the Salt River Valley of Arizona

are producing six to eight tons of alfalfa hay in a season, selling now for \$25 and \$30 a ton.

### Long Staple Egyptian Cotton

is yielding from a half bale to a bale an acre selling for 80 cents a pound. For particulars about the Salt River Valley and the opportunities for dairy farmers and others write to

## Immigration Commissioner, Phoenix, Ariz. Care Chamber of Commerce

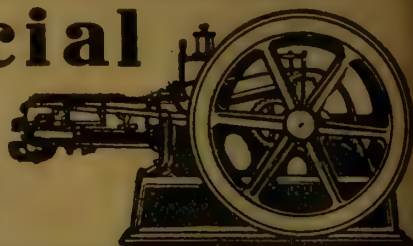
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## The Garden Beautiful IN CALIFORNIA

by Ernest Braunton

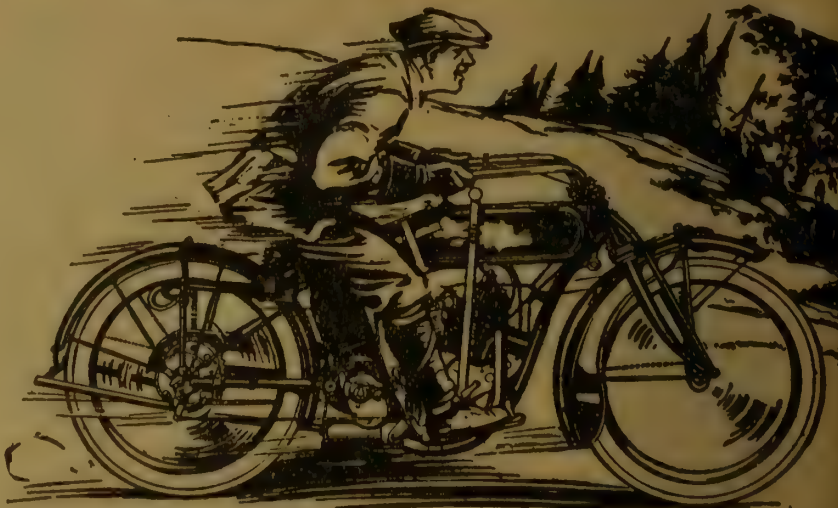
is a thorough treatise on soil preparation and cultivation and general care of flowers, plants, ornamental trees and shrubbery. Its 14 chapters with half tone and line illustrations and binding in silk make it a work that every home should possess.

\$1.00 Postpaid  
\$1.75 with Cal. Cultivator one year, Cultivator Pub. Co., 115 No. Broadway, Los Angeles, Cal.

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If you wish to make a very appropriate Christmas gift to some California friend interested in California's greatest industries—fruit growing, farming, dairying, stock raising, etc., why not send the California Cultivator for one year, 52 big interesting numbers? It will be a gift read and appreciated many times after most other Christmas gifts of equal cost are laid aside and any number will bring new inspiration and helpful suggestions to anyone you remember. The subscription price is \$1.00 per year. If requested we will send an appropriate Christmas card just previous to Christmas to whoever you may designate, giving the name of the sender and the date to which the subscription is paid ahead. Send all orders and make remittances payable to CALIFORNIA CULTIVATOR, 115-117 NORTH BROADWAY, LOS ANGELES, CAL.

## Boys! Will You Work for a \$290 Motorcycle?



We are going to give away a \$290 Thor Motorcycle, a \$125 Miami and many other valuable prizes including Cash Pay, December 31, 1917, to those who answer this advertisement and do a little work for us that will be easy to do. Eleven motorcycles have been given away that were easily and quickly secured by our easy plan. This is the easiest way to get one. You do not have to pay any money or obligate yourself to do anything. Fill in the blank below and we will write and tell you all about it.

California Cultivator,  
115-117 North Broadway, Los Angeles.

Please tell me about the \$290 Thor Motorcycle and other prizes you will give away.

My Name .....

My Address .....



# CALIFORNIA CULTIVATOR

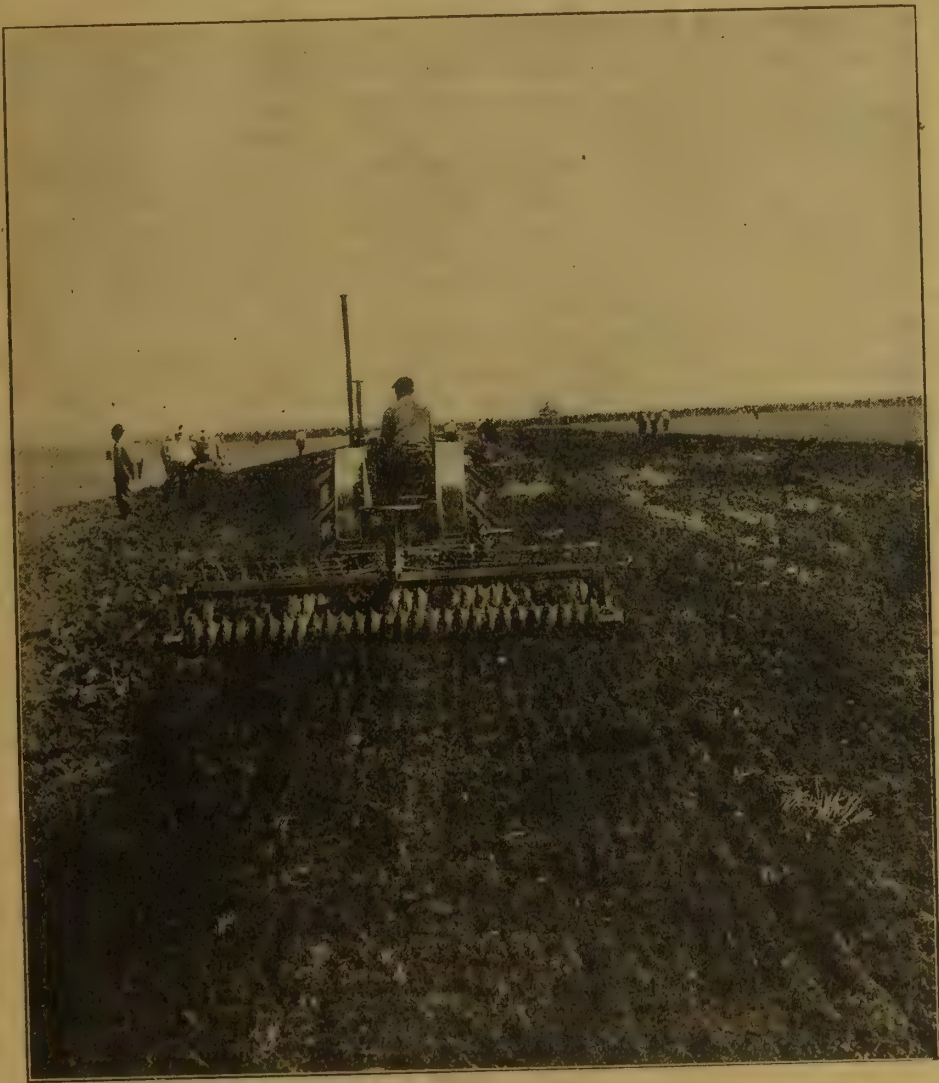
**THE LIVESTOCK** *Combined* **CALIFORNIA**  
*and DAIRY JOURNAL* *with* **CULTIVATOR**

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

December 8, 1917

SAN FRANCISCO



Preparing for Sugar Beets



# REO

## The GOLD STANDARD OF VALUES

### Salient Features of The Reo Six

50 HORSE POWER, Six cylinder motor cast in threes.

REO DESIGNED, Reo made—as are also all other units including body and top.

126 INCH Wheel Base.

CANTILEVER rear springs—Semi-elliptic front springs.

FULL FLOATING rear axle.

TIMKEN BEARINGS throughout.

NOISELESS spiral-bevel driving gears.

REO ONE-ROD centre control.

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BOTH BRAKES operated by foot levers and provided with ratchet locks. Extra large and both operating on rear hubs. No hand brake.

CLUTCH AND SERVICE brake are interconnected.

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ONE PIECE drop forged front axle.

PERFECT LUBRICATION system at every moving point.

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MOTOR BEARINGS—even main crank-shaft bearings—adjustable from the outside.

50 PER CENT OVERSIZE in all vital parts—crank-shaft, axles, driving shafts, gears, frame, wheels, tires.

PRICE IS F. O. B. LANSING AND THE SPECIAL FEDERAL TAX MUST BE ADDED.

## But The Final Answer Is—Upkeep

IT'S ALL RIGHT to exploit the speed possibilities of a car.

IT'S PERMISSIBLE to extol its wonderful "pick-up" and acceleration.

IT'S PERFECTLY PROPER to prove by any kind of stunt you choose that it will climb a hill, though nobody doubted its ability in any one of these directions.

DEMONSTRATIONS of power and of prowess; feats of endurance; and spectacular performances of a momentary nature are legitimate.

BUT AFTER ALL what do such freak tests prove as to the actual staying qualities of the car?

AND ABOVE ALL, what do they prove on the very subject in which you are most interested—cost of upkeep over a long period of years?

WE COULD AN' IF WE would, write a volume—yes a library—on the subject of performance of this Reo Six in all phases of automobile activity.

WE COULD TELL YOU, not of one, but of scores of Reo Sixes that have crossed the continent, with all the feats of mountain climbing, and trail following as well as of speed and mud plugging that trip entails.

BUT WE DON'T consider that important. To a Reo it is about as difficult as is your daily journey to the barn.

WHAT WOULD IT PROVE? Nothing.

BUT WHEN OWNERS say that this Reo Six costs less, year in and year out, for upkeep—repairs and replacements as well as gasoline and oil and tires—than any other six of equal size and power with which they have had experience—that does prove something.

IT SHOULD INDICATE to you that a Six so built must be capable of any feat or test that any sane owner would ever call upon his car to perform.

AND THAT IS THE FACT—ask any Reo Six owner.

YOUR ORDER should be placed at once if you would secure a Reo Six of present quality and at the present price.

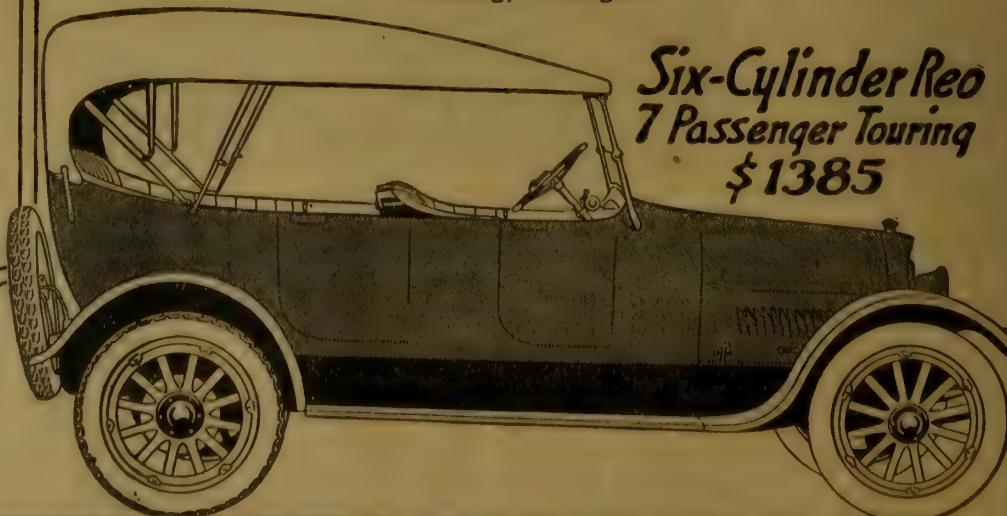
JANUARY FIRST there will be a substantial increase in price of this Reo Six—increased cost of materials and of manufacture render it impossible longer to make this car at this price.

SO ONLY ORDERS for delivery prior to and including December 31st will be filled at the present price.

SEE YOUR REO dealer at once. Place your order and obtain what is veritably a gold dollar for ninety cents.

### Reo Motor Car Company

Lansing, Michigan



*Six-Cylinder Reo  
7 Passenger Touring  
\$1385*



## Pruning of Prune Trees

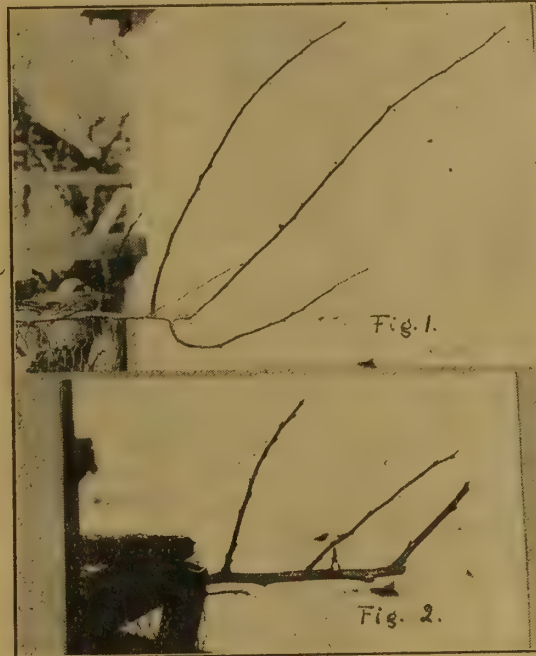
Prof. Leroy Anderson Tells of the Taylor Method, Which is Followed in Many of the Santa Clara Valley Prune Orchards

**I**T is often said that there are as many ways to prune as there are pruners. Each grower has an idea as to the manner he would like his trees pruned in order to bring the most fruit, and although there may be many such ideas yet the results obtained in the appearance of the trees do not vary greatly. What variation noticed consists chiefly in a greater or less thinning of the branches. In the Santa Clara valley the predominant form is the long willowy branch bearing as many side branches as the grower has thought best to leave on. The number and proximity of main branches will permit to live. Since the vast majority of prune growers follow this method one would reason that it must be the best method for producing fruit.

However, there is another method used for several years by Mr. Amos Taylor of Cupertino. Mr. Taylor swears by his system as being the best, i. e., he would if he were a pruning man—which he is not. My object in penning this little story is to describe his system as relating to the renewal of life in mature trees, for it is in that line that the system has come under my observation. The essence of it consists in end clipping or clipping the new growth in such a way as to induce a marked increase in growth.

Let us assume a tree that has made little new growth and has a "sick look"—some branches even showing a dying tendency. The weaker branches are removed entirely, cutting them back to the body of the tree or to the next healthy branch. Then the end clipping begins. Cut each leading end branch to a strong side branch, preferably one that has made a little new growth. Then cut off the new growth on the side branch—if the main branch is very weak, leaving only one or two buds of new growth. This branch probably has several other laterals, and if so the tip of each one is also cut. The principle is, the weaker the branch or the tree the more end branches are clipped, for thus will a greater flow of sap and greater growth be induced. The whole tree is gone over in this way, the weaker branches getting the more clipping and the stronger branches the less. Small hand clippers are the best shears to use, in fact, in this kind of pruning there is little call for the long handled shears. The time of pruning is laid down by Mr. Taylor as between October 20 and February 20, with a preference for the earlier season, or as soon as the leaves have fallen. End clipping is slow work at the best and if the leaves are not fallen it is impossible to make any speed. With practice a pruner becomes proficient and can clip very rapidly, especially if he is able to make quick decisions and has eyes good enough to see where the live buds are. The clipping should be done to a leaf bud.

The following season a marked



Detail as to Cutting

Figure 1—a branch in 1917 showing where it was cut in 1916 and the growth it made in 1917.  
Figure 2—The same branch as in Figure 1 after being clipped. The lower branch was removed, the one at the right cut back to three or four buds, the one to the left of it removed entirely leaving a fruit spur which it hid in Figure 1. The two short laterals were not cut.



Appearance of Trees

Figure 3—A typical Taylor pruned tree. Note its density and the absence of the usual long willowy branches. Photographed November 10, 1917.  
Figure 4—Another Taylor pruned tree. Not so dense as Figure 3, but still having an abundance of new growth. Photographed November 10, 1917. These illustrations are used by courtesy of Eaton & Company, publishers of a book on the Taylor system of pruning.

change is usually seen in trees thus clipped; the new growth shoots out at the ends of all the clipped branches and continues vigorous during the

growing season. To insure the vigor of the tree it is well to clip again the next fall. Possibly only half as many ends will need to be clipped as on the

previous year. Some parts of the tree will have become too thick and will need a little thinning. In thinning be consistent; cut the branch back to its major limb instead of cutting it in half. If cut only partly back, be sure to clip the end of the laterals still remaining and by this means keep life in the branch. The third season no clipping may be necessary, only a little thinning. However, this system permits a thicker growth than the usual method of pruning. So long as there is life and vigor the branches may be rather close. See Fig. 3.

It is evident that the Taylor system is renewing the life of the tree continuously. Some growers renew the tree periodically by means of "suckers" which are nursed along in the center of the tree, or out on a main branch, and when the sucker is big enough the old branch is cut off and the "sucker" tries to take its place. In the system here described there is no place for "suckers" except a rare one that may be coaxed into bearing fruit spurs. The main branches are kept full of life by always having them carry vigorously growing branches. The apricot affords an illustration of the effect of end clipping when carried to an extreme. Each year a tremendous new growth follows the severe pruning. Clipping on the prunes is mild in comparison, yet bears results in proportion.

Since prunes are borne on two year old wood, there is no fruit on the ends of the branches in this system as in the willowy system. A tree may have a big load of fruit and scarcely any of it visible from the outside, for beyond the fruit is two years of new growth. This would seem to be better than having it on the ends of the branches in the sun, especially if the mercury runs up above 100 degrees in the shade.

A portion of my orchard has been pruned by this system for two seasons, in the fall of 1915 and in 1916. Results have been marked in the tree growth. The trees suffered much in the dry season of 1912-13, and this pruning has helped bring into new life those which were not strong enough to come otherwise. As to fruitage, there is as yet no positive evidence. One block of trees, mostly young, about one and a half acres, has been pruned by this system and yielded as follows during the four years I have had the place. The weight is in green fruit as picked: 1914, 3619 pounds; 1915, 2708 pounds; 1916, 6828 pounds; 1917, 6223 pounds.

A block of 20 acres which bore in 1916, 135,147 pounds, bore only 61,286 in 1917. About one-fourth of this block had been pruned by the system in 1915, the 20 acres had less than half as much fruit as in 1916, while the one and a half acres had about 10 per cent less. The reader may say it was the pruning. I am not ready to say so, but I am convinced that the system is a good one to put new life into trees. Its use would be scarcely required under ample irrigation or heavy fertilization, or both.

## Beet Sugar Production May Decrease

Serious Situation in California, Which Some Predict Will Mean Less Than Fifty Per Cent of Last Year's Output Unless Justice is Done the Growers

**S**OUTHERN California has been the scene, during the past two weeks, of one of the fiercest battles of the food campaign. Owing to the shortage of labor, to a season which was not one of the best, and to the price paid for beets during the sugar run just closed, many a sugar beet producer is facing ruin.

Some have asserted that this is because of his own ill management. It

may be in certain cases, but as a general thing it has been almost impossible for even the careful grower to get his money back. These growers have fully decided to raise beans, cabbage or other crops another year. Meanwhile the nation is clamoring for sweets. The growers have appealed for relief.

District Attorney Woolwine of Los Angeles, one of the larger beet producers, has appealed for relief.

Continued on Page 578



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Established 1888

## Wholesale Growers of High-Grade Nursery Stock

DECIDUOUS AND CITRUS FRUITS  
OLIVES AND GRAPE VINES  
SHADE AND ORNAMENTAL TREES

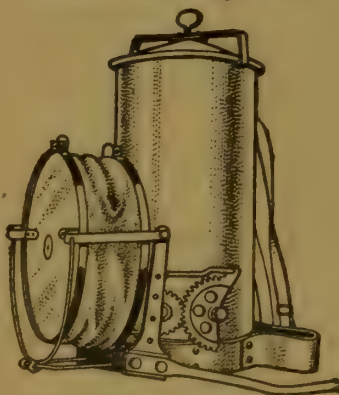
Twenty-nine years of continuous and consistent service to the Western fruit growers.

There is a shortage of trees this year. To make sure of getting just what you want, place your order now.

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or we will send it to you for  
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Junior Size ..... \$13.50  
The California Sprayer Co.  
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New Catalogue is now ready. It will pay you to send for it. Our stock is unsurpassed.

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# The Food-Value of Oranges



SUCH a fruit as the orange, no matter how highly esteemed, is not generally regarded as valuable for its nutritive qualities. This point of view, we are told by Dr. J. H. Kellogg in Good Health and quoted in Literary Digest, is a mistaken one. Orange juice is a good food and will bear comparison, bulk for bulk, with many others whose nutritional value is undoubted. For instance, Dr. Kellogg tells us, a pint of buttermilk has a food value 25 per cent less than a pint of orange juice, and a pint of oysters falls short in about the same degree. Even full milk is not much more nutritious, a pint of orange juice having about the same number of food units as three-fourths of a pint of milk. When we consider that, besides this actual food value, orange juice has much else to commend it, we see that oranges on the bill of fare are worthy of all respect. Writes Dr. Kellogg, in substance:

"It is a surprise to discover how universal is the craving for fruits. Even the carnivorous Eskimos, who of necessity subsist chiefly upon animal foods, do not neglect to improve the opportunity afforded by their short summer season to gather and feast upon cranberries and other small juicy fruits which manage to survive the bleakness of the polar region.

"We who live in a more favored clime find in the orange and other citrus fruits an abundant supply of the most delicate and wholesome of all food acids. The sugar of the orange, like its acid, has the advantage that it is prepared for immediate assimilation and requires no digestion. It does not need to pass through the digestive organs except for the purpose of dilution. It is to the sugar which it contains that the orange owes its chief value as a source of nutriment, although it contains, in addition to the sugars of soluble carbohydrates, nearly one per cent of protein. The combined value of its food constituents amounts to 240 calories, or food units, per pound—a value which will be best appreciated by comparison with other similar foodstuffs.

"Thus, while the orange is always a grateful addition to any ordinary bill of fare, it also has nourishment qualities to highly commend it."

In addition, Dr. Kellogg goes on to say, the orange has great value as a food adapted to certain grave conditions of disease, although its virtues in this respect are little appreciated by the public and far less often utilized by medical men than they deserve. Here are a few of its medical uses, as set forth by the author:

"As a food in fever cases, nothing could be more perfectly suited to requirements of the patient's condition. The fever patient needs water to carry off poisons which are burning him up and against which his cells and organs are struggling. Four to six quarts of water are needed daily to quench the fever's fires and aid elimination through the skin and kidneys.

"Orange juice supplies the finest sort of pure, distilled water, absolutely free from germs or foreign matters of any sort. The grateful acids furnish aid in satisfying thirst, and the agreeable flavor makes it possible for the patient to swallow the amount needed. The intense toxemia from which the fever patient suffers coats

his tongue and often destroys his thirst for water as well as his desire for food. The agreeable flavor of orange juice aids greatly in overcoming this obstacle.

"Another special and valuable property of orange juice is the small amount of protein or albuminous matter which it contains. Fever patients have little gastric juice and very small digestive power, and so need to take food which is ready for absorption and immediate use. Foods poor in albumen are also needful in fevers, because they do not leave residues to undergo putrefaction in the colon, as do meat, eggs, and numerous other foods.

"Another class of cases in which orange juice is almost indispensable is found in those most unfortunate and suffering of mortals—the bottle fed babies. Usually fed on pasteurized or sterilized milk, these unhappy little ones seldom fail to show marked evidence of malnutrition. They are, indeed, not infrequently victims of scurvy, rickets, or pellagra. The investigations of Funk, McCollum, and many others have shown that the em-

aciation, weakness, arrest of growth, and general malnutrition in such cases are due to absence from their food of the essential 'vitamines.'

"A few years ago the fortunate discovery was made that orange juice contains elements needed to supplement the bottle fed baby's dietary, resulting in immediate resumption of growth and a speedy return to health. This remarkable transformation may occur, not only in human infants, but in young animals upon whom the orange juice feeding experiment has been oft repeated.

"The diet of the average man, made up chiefly of white bread, meat, and potatoes, is decidedly deficient in 'vitamines.' Orange juice is needed to supplement these defective dietaries and might, with the greatest advantage, find a place on every table at least once a day.

"The acid of orange juice and the sugars it contains aid digestion by stimulating the gastric glands to increased activity. It is also an appetizer of the first quality.

"A glassful of orange juice before breakfast has a decided laxative effect with many persons. Sometimes it is advantageous to take a glassful of orange juice at bedtime as well as in the morning."

## Mottle Leaf

I have read Mr. Myer's idea of mottle leaf, and I agree with him in regard to its prevention, except that he did not give his method of cultivation.

Being an owner of an orange orchard for nine years I have come to the following conclusions in regard to care of an orchard in this vicinity, Hemet. I sow vetch about the 15th of August, irrigating it every two or three weeks as it demands it. I then add 800 cubic feet barnyard manure to the acre. About June (according to growth of vetch) I take a plow in and plow my orchard (when I say plow, I mean plow, not scratching the ground) close to the trees. I plow about five inches deep. After the third round I let "her" down and plow as near a foot deep as I can, then level it when the vetch is decayed and proceed with my irrigations as the ground needs it.

Results: Along last August, six weeks after I had irrigated, on an 18-inch test the dirt could be mudded by

working it in your hand. A visiting soil chemist said that I was holding too much water in my orchard, but am I? My orchard lies surrounded by orchards where shallow cultivation is practiced. These orchards are full of mottle leaf; they won't grow a cover crop because they won't allow a plow in there to plow, while my orchard shows practically no mottle leaf at all. One of these shallow cultivators asked me if I was to go to his house for dinner where would I expect to get it, at the house or the barn? I said it made no difference as long as it was brought to me. Just so my experience and observation is, bring the fertilizer down to the roots, watch your evaporation, harrow, harrow, and then harrow again, give it 50 pounds nitrate to the acre a year. You won't have to use a mulch to keep out mottle leaf.

Some say, "O, don't break those surface roots off." That in my opinion is the secret of the whole affair; drive the roots down and carry the fertilizer down to them.—C. R. McAdams.

## Calol Fuel Oil for Orchard Heating

The prevention of injury by frost is now a recognized insurance for orchardists. The principle of frost prevention is to raise the temperature of the atmosphere surrounding the trees to just such a degree that the water contents of the fruit shall not freeze and expand, breaking the minute cells of the fruit, and rendering it unfit for marketing.

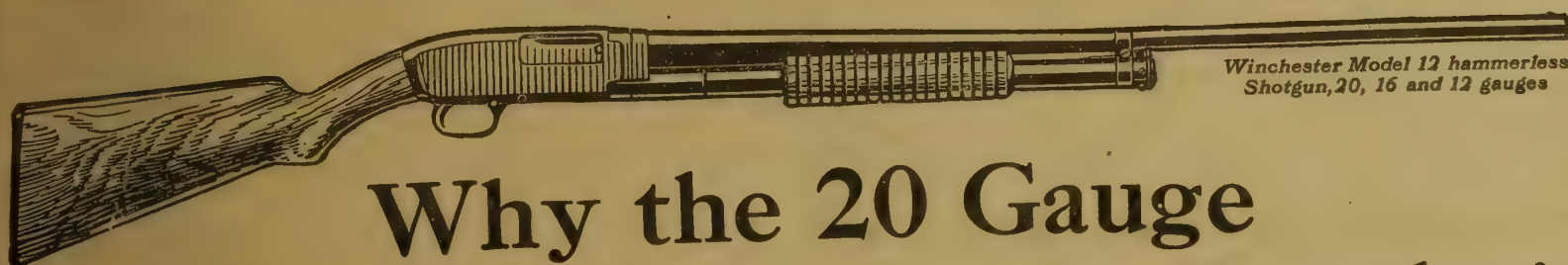
One of the commonest methods, and perhaps the only successfully practical method that has been used up to the present time, is by the use of oil in orchard heaters. The oil to be used in this work is one that will be fluid and readily handled at freezing temperature. For economical use the oil should contain the greatest number of heat units per gallon or per barrel compatible with the above conditions. Calol fuel oil is fluid at freezing temperature, and is readily handled. It has been standardized for this purpose.

An orchard heater should be designed to use the fuel oils that are

standardized in the market at the present time, and should not seek to impose a special specification for the particular heater in use, as this would logically mean a separate specification for each particular heater. It should also burn the oil practically smokelessly and should be able to burn all the oil and not only a portion of it.

A fertile soil must be sweet, not acid, and well supplied with organic matter and humus. It must have a suitable texture and tilth—a favorable environment for the plant roots. The necessary bacteria which have to do with soil activities must be present and conditions favorable for their growth and multiplication. The soil must be properly aerated and have a sufficient supply of soil moisture which includes proper tillage, irrigation and drainage. All of these factors and others must be associated in a careful systematic plan of soil management in order that the land may be fertile and produce large crops.





Winchester Model 12 hammerless  
Shotgun, 20, 16 and 12 gauges

## Why the 20 Gauge is Gaining in Popularity

Back in the '90s the 10 gauge was the weapon that had the call among American sportsmen.

But as the game became scarcer, there came a better sense of sportsmanship. The 10 gauge yielded to the 12 gauge.

Today, hunters who are in it for "Sport's Sake" are taking to the light 20 and 16 gauges—the true sportsman's guns.

When you carry a 20 gauge, you're *playing the game* and you *earn* every bird you bring down.

### Quicker action and better pattern with the 20 gauge

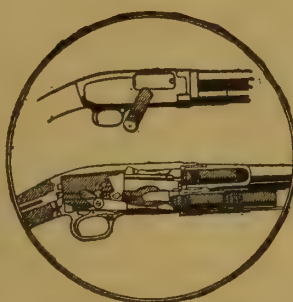
In the hands of a good shot, the 20 gauge has proved almost as effective a field gun as the 12 gauge. This is because in the first place, being lighter, it permits of quicker handling; you get onto your game faster.

Then, too, if you're quick, most of your shots at quail, snipe and prairie chicken will be at from 15 to 25 yards; at these distances the properly bored 20 gauge makes its best pattern, while the 12 gauge does not open up so as to give the shooter the full benefit of its larger load of shot until close to 40 yards.

The 20 gauge then can give you as good a bag as a 12 gauge if you handle it fast and get onto your game quickly. It's a sportier gun to work with.

A gun that few sportsmen can resist

The nicely balanced Model 12, Winchester 20 gauge with its slim, graceful barrel is a beautiful weapon and has a fascination about it few sportsmen can resist.



Quick feeder, sure ejector.  
Throws empty shell to the  
side out of your way.



Dense, even, hard hitting,  
quick opening pattern of  
the Winchester 20 gauge.

It works smoothly in whatever position it is held.

A man who has used this Model 12, 20 gauge Winchester; or its duplicate in the Model 97, 16 gauge—for those who prefer a hammer action gun—for a few days of shooting, finds it hard to go back to his heavier 12 gauge.

### The barrel is the gun

Men who know guns realize that the accuracy and durability of a gun lie in the barrel. On the quality of the barrel depends the quality of the gun. There is absolutely no difference in the standard of quality of the barrels on the highest or lowest priced Winchester guns. With Winchester the barrel is the gun and the single standard of quality has been attained only by the most unremitting attention to the boring, finishing and testing of the barrel.

### The Winchester barrel

The barrels of the Winchester Models 12 and 97 have been scientifically bored to micrometer measurements for the pattern they are meant to make. The degree of choke exactly offsets the tendency of the shot to spread. Until the pattern proves up to Winchester standard, the guns cannot leave the factory.

The Nickel Steel construction preserves the original accuracy forever. The Bennett Process, used exclusively by Winchester, gives the Winchester barrel a distinctive blue finish that, with proper care, will last a lifetime.

What  means

This mark on the barrel means *Viewed and Proved Winchester*. This stamp stands for Winchester's guarantee of quality, with fifty years of the best gun-making reputation behind it.

Every gun that bears the name "Winchester" and that is marked with the Winchester Viewed and Proved stamp has been fired many times for smooth action and accuracy, and with excess loads for strength. At every stage of Winchester manufacture machine production is supplemented by human craftsmanship. It is a *test and adjustment process*.

It is this care in manufacturing that has produced in these two light gauge models, guns that have won the admiration of all true sportsmen who follow *Sport for Sport's Sake*.

### Write for details of Winchester shotguns, rifles and ammunition

The Winchester catalog is an encyclopedia on shotguns, rifles and ammunition. Every hunter should have one. It gives detailed specifications of the Model 12 and describes at length the principles on which every one of the world-famous Winchester rifles and shotguns is built. Write today. We will mail you a copy free, postpaid.

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### Home Defense Leagues!

We have a Winchester for County and Home Defense Leagues which is meeting with universal approval. Many Home Defense Leagues throughout the United States have already been equipped with this gun.



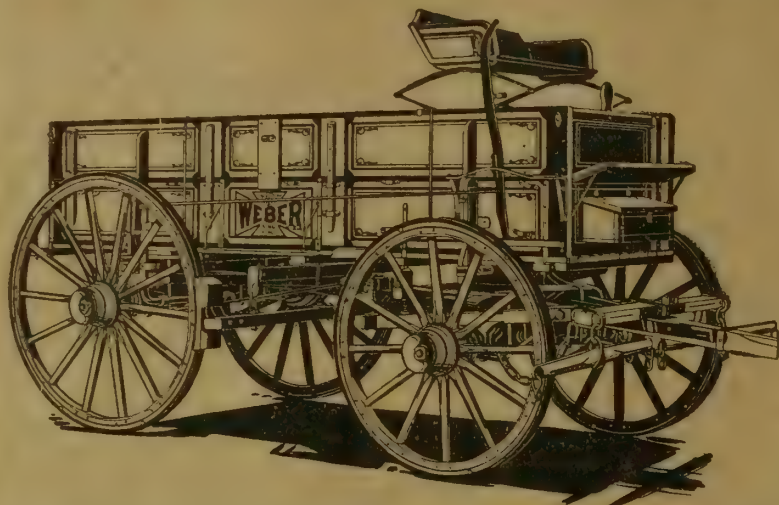
Winchester Model 97 Hammer Shotgun  
Take-down Repeating Shotgun. Made in  
12 gauge, weight about 7½ lbs.; in 16  
gauge, weight about 7½ lbs. The favorite  
with shooters who prefer a slide fore-  
arm repeating shotgun with a hammer.

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World Standard Guns and Ammunition



## Why Weber Wagons Last Longest



A farm wagon is used oftener and expected to stand more downright abuse than almost any other article of farm equipment. It is out in the weather most of the time and receives little if any care and attention. At the same time, it is expected to be in good condition when wanted.

To withstand treatment of this kind, and to give satisfactory service, a farm wagon must be properly made of the right material. Material and workmanship determine the service a wagon gives, and service not price determines its value to the user.

The wheels, gears, and boxes of Weber wagons are made from selected, properly seasoned A-grade material, well ironed, braced, and properly painted. The International fifth wheel is a new exclusive feature. It has proved to be one of the best improvements ever made on farm wagons because it overcomes bending or breaking of the king bolt and circle iron by effectively distributing the strain of the load.

So far as material and general appearance go, all farm wagons look more or less alike unless studied carefully. The dealer handling Weber wagons in your locality will be glad to show you the points wherein the Weber is superior. If your dealer cannot show you a Weber wagon, drop us a line.

## International Harvester Company of America

(Incorporated)

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Portland, Ore. San Francisco, Cal. Spokane, Wash. Salt Lake City, Utah

## For a Fruitful Crop —

See that your dormant spraying is done properly. Remember—it takes a long time to grow your crop. A little care now will mean better fruit and bigger profits. Right now you need a general clean-up spray that will not only kill the insects but will tone up your trees. In other words, you need—

### Crude Oil Emulsion

No matter what Universal Spray you order you can be sure that it is dependable—uniform in quality—and made under the direction of trained laboratory and field men.

Here are some of the other sprays manufactured or distributed by us: Dormant Soluble Oil; Lime Sulphur Solution; Bordeaux Mixture; Arsenate of Lead; "Triumph" for Citrus Trees; Miscible Oil No. 1 for Olives; Miscible Oil No. 2 for Thrips.

Don't hesitate to write our Service Department—in charge of Paul R. Jones, Entomologist—for expert advice. This service costs you nothing.

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10 Inch.....\$ 9.00 per 1000	18 Inch.....\$12.50 per 1000
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14 " ..... 10.50 " " "	24 " ..... 17.50 " "
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## Income Tax

Written for California Cultivator



FOR several weeks we have referred to the income tax and the necessity for the farmer to keep his accounts with an idea of securing justice for himself and for the government in making out his Return. However, this week we will confine the discussion to what income is and give a quotation from the Weekly Eagle of Wichita, Kansas, on this particular point. The discussion another week will be along the line of "Just What Are Expenses." Under this we will discuss "Losses as They Affect the Net Income."

First however we will make

### Correction

That is, regarding statement we made as to war stamp tax, and this correction may involve the saving of a cent now and then. We stated last week that it was necessary to put a war stamp on every package, even where less than 25 cents postage was required. This should have read "Parcel-post packages: Upon every parcel or package transported from one point in the United States to another by parcel post on which the postage amounts to 25 cents or more, a tax of one cent for each 25 cents or fractional part thereof charged for such transportation, to be paid by the consignor. No such parcel or package shall be transported until a stamp or stamps representing the tax due shall have been affixed thereto." In other words, under 25 cents it is not necessary to attach an internal revenue stamp. Bear in mind however if it is above 25 cents and the war stamp is to be attached, it must be the special internal revenue war stamp.

### What is Income?

Income is defined by the government as gains, profits, salaries, wages, commissions, money or its equivalent from professions, vocations, business, trade, commerce, rents, sales or dealings in property, both personal and real, and interest, except interest from bonds or obligations of the United States or any political sub-division thereof; also dividends, profits or income for services as trustees, guardians, executors, administrators and receivers; also partnership gains or profits, bonuses, patents, franchises, pensions and royalties on oil or gas wells; and income from all sources whatsoever.

It will be noted that this last phrase, "Income from all sources

whatsoever," as well as from the specific sources of income named in this paragraph above just about covers every possible bit of worldly goods that a citizen of the United States can get, and that is just the intention of the government. The farmer will find that some one or more of these words or phrases will cover just about everything that he has taken in during the year. All products of the farm sold, traded or exchanged for cash or the equivalent of cash must be accounted for as income, such as milk, butter, eggs, chickens, horses, cattle, hogs, sheep, grain, hay, fruit, vegetables, wood, timber, pasture, rent, etc. Products traded or exchanged for other products, such as groceries, or dry goods, must be returned as income for the value received. Groceries used in family and living expenses, therefore, cannot be deducted. Any thing sold, that has been purchased, is accounted for as profit or loss by deducting the price paid from the price received. If real estate is sold, the farmer must report as profit or loss the difference between the price paid (less amount of deferred payments) from the selling price. If purchased before the beginning of the income tax law, March 1, 1913, then subtract the fair market value of the property on March 1, 1913, from the selling price. The difference will be the profit, income, or loss for the year in which sold.

### Things Equivalent to Cash

Insurance received for damage or loss of anything raised, or produced on the farm must be reported as income. It is income, for the reason that it was converted into cash to the amount of the insurance received. The farmer sold his produce for the amount of the insurance. Rents, or partnership shares for rents, paid in products of the farm instead of cash, must be reported as income for the amount of the value of the products at the time paid. When grain, or any other product of the farm is held over from another year, like holding wheat over for a better market, when it is sold, it must be accounted for, as income in the year sold, and for the full amount of the price sold or exchanged. The farmer cannot deduct in this year's report any cost or expense incurred whatever in producing the grain, or other product produced in a former year, as all expenses and costs incidental thereto belong only to the former year or years producing same, and not to the year in which it was sold.

## Thrift Savings---Savings Certificates

Written for California Cultivator



THRIFT stamps and the war savings certificates are out and may be purchased at post offices and banks. Many stores are also keeping stamps for sale.

The thrift stamps are true to name in that they are an inspiration to every one who buys one to get others to add to it. When you buy a thrift stamp you will want a "United States Thrift Card." This card is issued by the treasury department and has place provided on it for 16 twenty-five cent stamps. When filled, the card, with 12 cents, during the month of January may be exchanged for one \$5.00 war savings certificate. That is, during the month of January it is worth

\$4.12; during February, \$4.13, and so on until January 1, 1923, when it will be redeemed for its full face value, \$5.00.

On the face of each stamp is: "Thrift Stamp Twenty-five Cents. Good in payment, toward U. S. War Savings Certificate," with the signature of W. G. McAdoo. On the thrift card in the 16 places for the stamps are various sentiments such as: "Your second stamp here"; "If you want to succeed, save"; "A penny saved is a penny gained"; "All fortunes have their foundations laid in thrift."

As noted, these 16 stamps, plus 12 cents, during the month of January, and one cent additional for each



month thereafter until December, 1918, may be exchanged for a United States War Savings Certificate which has place for 20 of the five dollar certificate stamps. This, if kept until January 1, 1923, becomes worth \$100, providing every space is filled. It is not necessary, however, to have all spaces filled in order to validate a certificate.

The "cash surrender value" month through the five years is given on the face of the certificate, and while not so profitable if surrendered before the completion of the five years it is a great convenience where one wishes to secure immediate funds. The interest paid amounts to about four per cent where the certificate is carried to maturity. No one person may have to exceed \$1000 in these certificates.

Of course one may buy the war savings certificates without purchasing stamps. However, get a thrift card and form the habit.

#### LEAGUE ENDORSED

The following resolution, passed by the 50th Fruit Growers' Convention at Sacramento, speaks for itself:

Sacramento, Cal., Nov. 22, 1917.

Whereas: The necessities and stress of this time of war call upon all classes of the nation's producers for most effective and mutual support; and,

Whereas: The classes comprising the rural industries of the state are furnishing to their utmost such support in the production of foodstuffs, hampered by many unavoidable conditions which must be borne, but by others which may be ameliorated by corrective legislation; and,

Whereas: It is apparent to us that the securing of these corrections can be accomplished only by cooperative action of our producers and producers' associations, organized into a separate body for that work alone; it is hereby

Resolved: That this 50th State Fruit Growers' Convention voice its appreciation of the work of this character accomplished during the past year in the protection of rural interests through legislative activity, by the Farmers' Protective League of California, and that this convention hereby pledges moral and material support to further similar activities of that body.

#### "TREE VACCINATION"

The writer recalls that a third of a century ago when engaged in spraying recently planted citrus trees in eastern Los Angeles County, for black scale, an exceptionally prepossessing young man presented a "new" discovery practically amounting to vaccinating the tree to kill all insects and cure the tree of any disease. The treatment consisted in boring a hole to the heart of the tree and filling with a certain black colored powder which would be sold for the nominal sum of, as we remember it, about ten cents per tree. We did not bite, but some of the neighbors did, and they or some other neighbors have been biting on that same thing since. A few years ago an instructor connected with Stanford University took up the matter of plugging the tree with cyanide of potassium. For a time it was thought that certain advantages were to be had from the use of this deadly poison. This was touched upon at some length in the columns of the Cultivator, as have been all of these efforts to control insects by "poisoning the sap." As one subscriber of the Cultivator pungently remarked at that time: "It might be sure death to lice on a fellow's head if he should take a big enough dose of poison, but for myself I don't care to be the subject for the first 'inoculation'" and now comes the department of agriculture

with a warning against tree vaccination which it describes as worthless for scale insects. It announces that makers of a certain scale treatment have been fined \$100 in the federal court. These people furnished their treatment in capsules "containing potassium cyanide and other substances." This treatment originated in Pennsylvania, and we have not heard of any effort to distribute it in California.

#### LOS ANGELES FARM BUREAU

Los Angeles County farmers, or producers whether they are farmers, orchardists, horticulturists, or agriculturists, if members of the farm bureau, are asked to meet at Blanchard Hall, 233 South Broadway, Los Angeles at 10 a. m. Tuesday, December 11. This for the purpose of forming a county farm bureau. Dr. H. J. Webber of the University Citrus Experi-

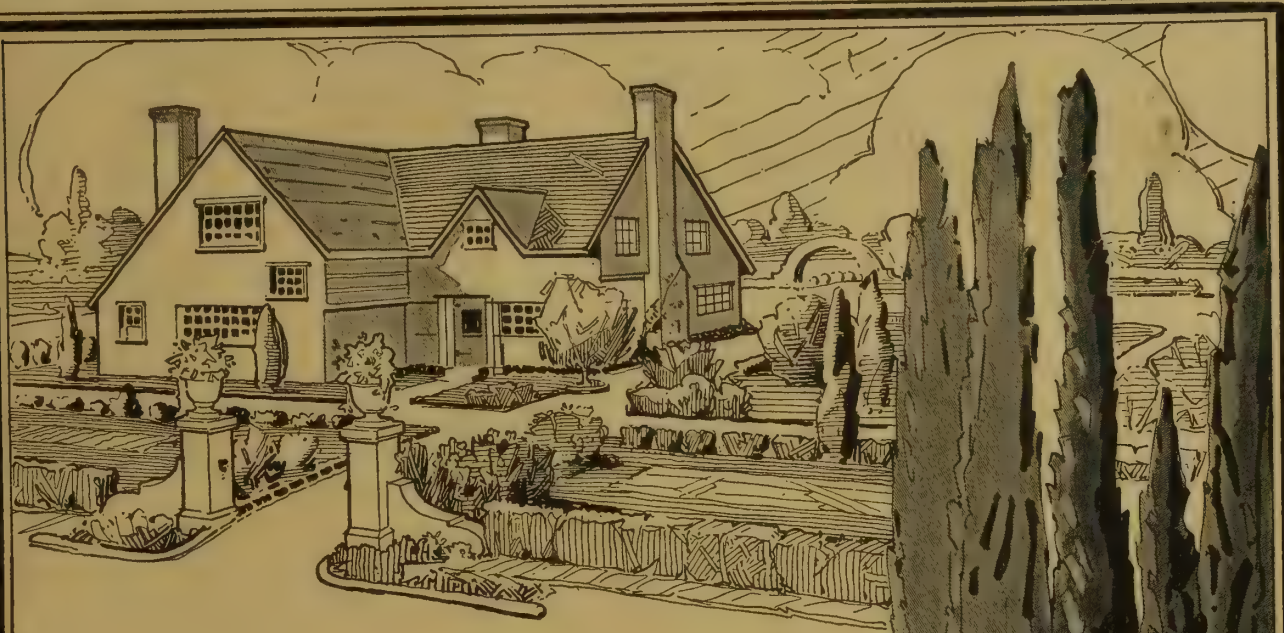
ment Station at Riverside and the temporary organization committee elected some weeks ago have been holding meetings in all sections of the county. Hundreds have signed the membership list and paid their dollar dues, and these, together with those who will become members before the meeting of the 11th, will gather and elect permanent officers. The officers of the temporary organization are: President, Senator Cogswell; first vice-president, Volney Craig; second vice-president, C. A. Griffith; secretary, W. S. Rosencranz; treasurer, Ralph McNees.

It requires 1600 members to secure the government appropriation to pay the salary of a farm adviser for Los Angeles County which is one of the largest counties in the United States as to the number of farmers. It is also the greatest county in the United

States in the production of crops. Lancaster County, Pennsylvania formerly held this honor, but since the last census, Los Angeles County is in the lead. The need for still greater production is realized at this time, and the farm bureau and the county farm agent are recognized as necessities to that end. In addition to the agent or adviser, five assistants will be appointed. Dr. Webber of the university has done some magnificent work in this county.

Cantaloupe producers of Imperial Valley are perfecting an organization which will handle most of the next season's output, it is hoped with greater satisfaction of producers.

It is not the mistakes we make that retard us, but our inability or unwillingness to learn the lessons that these mistakes teach us.



## A Real Landscape Service For Garden Lovers

Ornamental trees properly placed will improve the value of your property, and make it easier to sell it. Many people who have places to improve are often at a loss as to the best plan to follow in laying out their grounds, and also in the selection of their trees, plants, shrubs, vines and roses.

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# The December Vegetable Garden in Northern California

Written for California Cultivator By A. R. Gould



PERATIONS in the garden generally are somewhat curtailed this month owing to weather conditions. However, there are times when we can get out and make war on the weeds and make a slight provision by sowing a few items for the coming season. When possible have a general clean-up and destroy any fungous disease which may be lurking in the garden. A few hours on a wet day may be profitably spent cleaning tools and making a survey of the seed catalog, etc. Garden stakes should be tied up in bundles and put away neatly for the coming year. It will also be a good idea to look over the root-crops which were stored away in heaps between dry soil or sand, and if any are showing signs of the least symptom of decay then remove these promptly or they will cause trouble. The rainfall throughout November was rather small hence we were able to continue operations for getting our plots into shape for next year's crops.

### Seed Cleaning

Those subjects such as beans, peas, etc., which we were able to save seed from will provide us with work for a rainy day. The seeds should be carefully cleaned and kept true to name ready for next season's sowing. If the beans need a little more drying they can be laid out on flat wooden trays, and if they are slightly mixed one can generally tell them by the color. The finest fruit of tomatoes and peppers should be selected and the seeds extracted and dried and put away for sowing in the spring. The seeds of the finest squash, vegetable marrow and pumpkin should also be saved.

### Digging, Plowing, etc.

Whenever possible all spare plots should be thoroughly plowed or spaded to a good depth and limed or manured to put the ground into shape for the coming spring. Where the plots are not required for use for a few months it is a good plan to leave soil rough and bumpy, exposed to the beneficial influence of rain, air and frost.

By so doing it will be sweetened and many insect pests will be destroyed. Adobe soil which is plowed should be left up rough, and the rain will break and soften the large lumps. It will be easier to disk or harrow afterwards.

### Broad Beans

We advised sowing the Windsor variety of these last month, but if for any reason you were unable to sow them you should lose no time in sowing now, and those that have them through the ground should draw the soil up towards the rows. They are subject to attacks of the black fly or aphids later on in the season and careful watch must be kept. A good spraying with black leaf 40 solution will control them.

### Peas

Make successional sowings of Little Marvel, Alaska and American Wonder. Hoe or cultivate frequently between the lines of those that are already through the ground. Dust occasionally with soot as a fertilizer and fork or rake in to the surface.

### Onions

Lack of rain has no doubt held up the sowing of this valuable crop, but we hope to be favored with suitable conditions this month to make our sowings of the varieties as mentioned in our notes last month. Onion sets or miniature onion bulbs may be planted in rows 18 inches apart and two to three inches between sets.

### Strawberries

Plants of these may still be put out and during the rains the plants will become well established. See last month's notes for best varieties to grow.

### Horseradish

The root of this plant is used as a condiment. A few roots planted in deeply trenched soil, 18 inches deep, will rapidly increase. The soil should be liberally manured. The best sticks or roots will be secured from those grown quickly, and should be long and straight.

# The December Ornamental Garden in Northern California

Written for California Cultivator By A. R. Gould



LACK of rain prevented us carrying out our planting program on a large scale last month, and we await the first real opportunity. However, we were able to continue the good work of cleaning up the flower beds and borders, cutting back the perennials and removing the annuals which have done good service. If you still have neglected to clean up in this way get to work at once to clear away these withered stems and burn them, but put the remaining ashes back again into the soil; they contain lots of potash. Do not fail to first collect seed from your favorite flowers, and there should be lots of it from the dahlias, petunias, zinnias, marigolds, French and African, gaillardias, coreopsis, salvia, sunflowers and ageratum. This can be cleaned and put in packets or cardboard boxes ready for next season's sowing.

Leaves should be swept together and put into a heap to rot and will

provide excellent leaf soil for digging in the garden. They are more than valuable.

### Taking Slips or Cuttings

This is generally known as propagating, and many of our readers are anxious to increase their stock of geraniums, carnations, etc. If you can fix up a frame or large box and fill it with sandy soil and insert your cuttings in this, covering them with glass, laths or muslin during severe weather, you may be fortunate enough to root a considerable number. You must be careful not to over water them, just keep them moderately moist, and on damp dull days withhold water. You may be troubled with a few damping off which is due to damp conditions and a fungous disease known to science as Pythium de baryanum. This attacks the cutting at the stem just above the ground. As soon as it is observed remove all infected cuttings and be careful with the watering.

### Covering for Frost Protection

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## Questions and Answers

THE EDITOR AND STAFF

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

### Dipping Wheat

Dipped my wheat in a 40 per cent solution of formaldehyde, dried and sowed in dust about two weeks before rain. Got only half stand. Tried also by neighbor with worse results. What was wrong?—Subscriber, Terra Bella.

Plainly too strong a dip was used. Use 16 ounces of 40 per cent formaldehyde in 40 gallons of water. See article "Produce More" on Page 402 of the Cultivator of October 20, this year.

### Cabbage Lice or Aphis

What may I use for the lice affecting my cabbage?—Subscriber, Anaheim.

The simplest remedy is tobacco spray which may be made from stems from cigar factories, but far more simple and not much more expensive in first cost is the black leaf 40 or some nicotine carrying spray. Full directions on container.

### Prunings Added to Soil

What value if any will grapevine prunings add to the soil in a lemon grove?—Subscriber, Etiwanda.

They will be beneficial but it will take such a long time for ripened wood to decay and be added to the soil that it is possibly a question as to the profitableness of it. It however secures disposal of the prunings.

### Making the Will

We recently gave a bit of homely advice as to the manner of one's writing his own will. A subscriber calls our attention to the saying "He who is his own lawyer has a fool for a client," and we are willing to admit this is often the case. A thoroughly good attorney may save much litigation and loss. However, the attorney is not always available nor even infallible. If we could put our attorneys, as the Chinese do their doctors, on the basis of payment as long as the patient is well and no payment during sickness, it might prove satisfactory as to attorneys. However, the disposal of one's property as he may wish it done is an important matter. There has been one case in California in which a will written on the side of a soap box, duly dated and signed, was probated and property distributed according to the wish expressed. If the courts are able to discover the true intent of a will, it is the principal factor, also it should be written entirely in the hand of the testator.

### Lime on Alfalfa

Will you please tell me how much lime alfalfa, or any land for that matter, needs for a first liming? Is there a special kind of lime or is it merely ordinary lime air-slacked? Is gypsum better than ordinary lime? Would nitrate be better for alfalfa land that has a poor stand?—Subscriber, Dos Palos.

The amount of lime to apply depends entirely upon the condition of the soil. If sour and fine grained soil is to be dealt with a ton to the acre may be applied, from that down to 500 pounds may be effective. Be sure the lime has been thoroughly air-slacked. Where one can secure the finely ground lime rock which has not been burned it proves excellent and there is no danger whatever from burning or

injuring the soil. Gypsum does not take the place of lime in "sweetening" soils. If soil is deficient in humus nitrate would be beneficial.

### BEET SUGAR PRODUCTION

Continued from Page 571

ducing counties, presented the matter to the grand jury. The grand jury succeeded in gathering a fund of information as to the cost of production and the present labor situation. As to the cost of producing sugar from the beets no very definite information was secured. It was asserted, however, by many of the producers that where the grower received in some cases \$7.00 per ton for his beets, on which he performed months of labor and ran chances of losses from weather or other conditions, the factory received, as net profit on each ton of beets, three times that amount.

The growers assert that they will not take these chances, even in answer to the call of their country, when the factories stand in the position they do of demanding such enormous profits. Some who have grown beets for years assert they will not grow them the coming year even should the factories pay nine or ten dollars per ton. One grower testified before the grand jury:

"The acreage of planted and growing sugar beets in the state of California at the present time is approximately 200,000 acres. The acreage in Southern California and within the district represented by the association will equal approximately 100,000 acres, although the owners and growers of a portion of that acreage are not members of the association. One-fourth of the acreage in Southern California can not, and in past years has not been planted to any other successful and profitable crop. And to make it profitable in the future for growing sugar beets it is necessary that a fair return to the farmer upon the raw beet crop be obtained. The sugar beet can be profitably planted if the grower is given a higher price. And that will mean perhaps approximately 50,000 additional acres can and will be planted and developed that are not now cultivated."

The Associated Beet Growers have been factors in the investigation. They are now working through the grand jury of Orange County, the largest sugar producing section of the state.

As to the profits claimed for the sugar factories we quote from a telegram sent by District Attorney Woolwine to the president:

"Sugar beet situation in Southern California extremely serious. Farmers refuse to plant beets under terms offered by refineries. Sugar production in this district threatened. Refineries firm in refusal to pay more. No relief in sight. Investigation by grand jury of Los Angeles County, under state anti-trust laws, discloses by great volume of evidence beyond doubt that price to beet growers for beets as fixed in printed contracts of refineries not sufficient generally to pay cost of growing beets. The price for sugar approved by the government guarantees excessive and unreasonable profits to the refineries. On this account farmers refuse to plant vast acreage. Under less favorable conditions when sugar sold at lower prices, one refinery, representing investment of \$1,250,000, made net profit last year

Continued on next page

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between \$900,000 and \$1,000,000. Other refinery, representing investment of \$500,000, made net profit last year of about \$900,000. Experts assert profit will be proportionately greater to refineries coming season under present prices, although production seriously curtailed by refusal of farmers to plant. Combination of refineries to control price of beets possibly unjust to farmers. No remedy except by action of federal government. Situation critical as beets must be planted at early day. Grand jury testimony fully sustains foregoing. Am willing to produce transcript of grand jury testimony and appear personally in Washington before proper authorities. Respectfully suggest matter be acted upon immediately to remedy grave situation."

Mr. Woolwine's telegram which went forward Friday resulted in a call from Hoover to come to Washington. Mr. Hoover wired:

"Your wire of the 30th received. suggest you come to Washington, together with Andrew Cook, F. D. Plann, Frank Merkle, E. Thomas, I. Law and V. E. Wire. Also that you invite two representatives of beet sugar companies who are familiar with other side of question, in order that further discussion of the situation may be had. Be in Washington December 8, when our Mr. Polph will be there."

Before it was possible to obey Mr. Hoover's request to come to Washington the whole fight was transferred to San Francisco before Ralph P. Merritt, representative of the food administration in California.

What the outcome will be even the brewdest are only guessing. That the government can take a hand and assist that the factories be run so as to give justice to the men who are taking the greatest risks, goes without saying. Whether it is wise that should be questioned by many. Some have called attention to the fact that some of the closest advisers of the food administration are men with large interests in the sugar industry. In times such as these it is presumed that such men will subdue their own interests to the general welfare.

District Attorney Woolwine is one of the kind who loves a scrap and he is out for justice for producer and consumer. He issues the following statement:

"It is an error to assume that any conference has been called before Mr. Merritt, and Mr. Hoover has evidently been misinformed. No representative of the Growers' Association, so far as have been able to learn, has had any notice of any conference. Although I was in consultation with Mr. Merritt in San Francisco on November 26 and informed him as to the proceedings before the grand jury here, and told him of the volume of testimony taken before that body, and although he promised to keep me informed as to any action he might take in the sugar beet situation, I myself have received no notice of such meeting, or any intimation that any such conference has been called. I understand that Henry C. Lee, one of the refiners, has gone to San Francisco to confer with Dr. Merritt today.

Asks Full Hearing

"It is plain that this matter cannot be settled by a one-sided hearing, and all in the world that the beet growers desire is a full and complete hearing of this matter, so that the claims that they make can be proven, before the proper authorities. Nothing could be fairer than this, and it seems that ev-

ery effort is being made to circumvent and suppress any such hearing. I do not wish to charge any particular person or interest with conspiring to prevent these matters coming to light, because I do not know where the influence comes from, but one thing is certain, it now appears to be well-nigh impossible to force a simple hearing of the facts.

"The people may rest assured, however, that I shall myself, on behalf of the grand jury of Los Angeles County, and the people at large, do everything in my power to get action in the premises.

"It is, to say the least, disappointing that Mr. Hoover should fix a date for a hearing in Washington and request the district attorney, together with a number of persons named by him in his telegram, to be present in Washington on a certain day, and then, after the parties had made all arrangements to go and bought their railroad tickets, to receive a wire from Mr. Hoover, stating that a conference had been called by Merritt, when, as a matter of fact, no one outside of the refiners ever heard of this conference, and have had no notice thereof. Such conference can have no effectual result, inasmuch as only one side is represented there."

#### DISTILLATE FOR SQUIRRELS

Chas. G. Hawley, Elk Grove, refers to a remedy which has been spoken of in a former Cultivator, but it has proved so effective that we pass on the suggestion as he gives it: "I have fruit and nuts on my ranch and am bothered more or less with the pest and have tried about every thing which the government and state authorities have recommended but have one that is cheaper and better than any I have so far seen advertised and at the same time very simple. It is nothing more than distillate. Take a rag or an old sack cut up in such a way that when rolled up it will go into the hole, soak with distillate, cover hole with loose earth and pack and Mr. Squirrel goes to the hotter land. I do this in all seasons as they are coming in from other ranches for the nuts and fruit. One gallon of distillate is good for at least a dozen holes. I have never had a squirrel come out after the hole was stopped in this way."

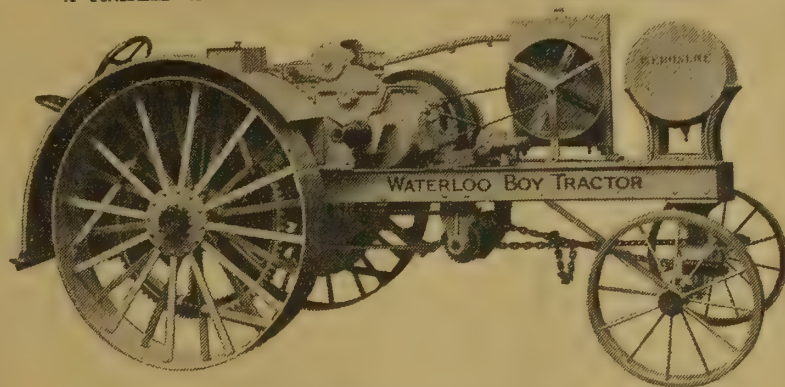
In addition we may call attention to the fact that the automobile is a good squirrel remover. Attach to the exhaust a hose which will conduct the fumes from the running engine. Having filled around the hose as it is placed in the squirrel hole surrounded with dirt, then after pulling out the hose, tamp the hole tight shut. However, it should be borne in mind that Kilmol, carbon bisulphide and many other of the gas treatments are sure death to these pests. Rather better results may be had after the rains fill the ground so that the gas is held in the holes longer.

"HE ALSO FIGHTS, WHO HELPS A FIGHTER FIGHT"

A SURE WINNER

## The Waterloo Boy One-Man Tractor

A FINISHED AND STANDARDIZED MACHINE OF PROVEN EFFICIENCY



DO YOUR BUYING NOW

Demand Exceeds Supply. By Placing Orders Early a Sure Delivery May be Had

Read what John E. Cox, of Calipatria, says:

"I own and operate three of your Waterloo Boy tractors, that I have had in service since the early part of this year.

These tractors are practically working every day, doing heavy work, each of them with a load equal to a liberal ten-horse pull, and they are giving me splendid satisfaction. Each tractor practically earns me \$150.00 per week of its operation, and my upkeep costs for repairs, during all of the time I have been using them, has not averaged \$25.00 per machine.

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I operate several tractors of different makes, but, I get more service with less cost, from the Waterloo Boy tractors, than from any of the rest."

W. L. Cleveland Company

State Distributor

210 No. Los Angeles St.

Los Angeles

Write for Catalog and Prices



We Are Headquarters for Fruit Bearing Trees

We have an exceptionally fine stock this year — trees are thrifty and well-rooted — grown under ideal conditions. Demand this season promises to be heavy. Get your orders in early.

Fresno Nursery Co.

Address Dept. A FRESNO, CAL.

## Tree Protectors for Winter Use

PREVENT Moderate Freezing

Sunburn, rabbits, squirrels, barking by sand storms and cultivation.

Easy to put on and cheaper than gunny sacks.

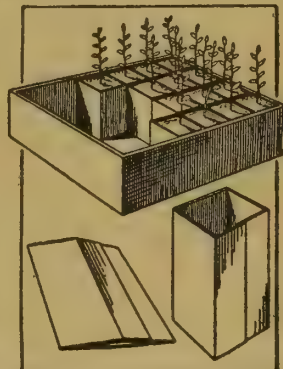
COLLAPSIBLE PLANTING POTS

Why not raise your early Tomatoes, cabbage, chili and egg plants for home use or for market. Do you know that you can start

Cucumbers, cantaloupes, melons of all kinds in these pots in flats until they have three and four leaves then plant pot and all, have melons two or three weeks earlier for market. Just the thing for DATE propagating.

Write for samples and prices of both Pots and Protectors. State which you are interested in.

THE EXPAN CO., 935 E. Central Ave., Redlands, Cal.



# -MANURE-

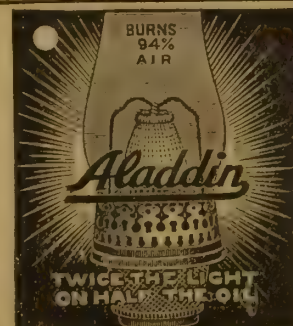
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## New KEROSENE Light Beats Electric or Gasoline

10 Days FREE—Send No Money

We don't ask you to pay us a cent until you have used this wonderful modern white light in your own home ten days, then you may return it at our expense if not perfectly satisfied. We want to prove to you that it makes an ordinary oil lamp look like a candle; beats electric, gasoline or acetylene. Passed by Insurance Underwriters. Children handle easily. Tests by U. S. Government and 25 leading Universities show that the new ALADDIN

BURNS 50 HOURS ON ONE GALLON

common kerosene (coal oil), no odor, smoke or noise, simple, clean, won't explode. Over three million people already enjoying this powerful, white, steady light, nearest to sunlight. Won Gold Medal at Panama Exposition. Greatest invention of the age. Guaranteed. To that person who has a special introductory offer to make, under which one

Aladdin in every way (details of offer given in our circular). We want one user in each locality to whom we can refer customers. To that person we

Yours FREE Offer and learn how to get one free, all charges prepaid. Write quick for our 10-Day Free Trial Offer and learn how to get one free, all charges prepaid. MANTLE LAMP COMPANY, 101 Aladdin Bldg., PORTLAND, ORE.

Largest Kerosene (Coal Oil) Mantle Lamp House in the World

Men With Rigs or Autos Make \$100 to \$300 Per Month

Our trial delivery plan makes it easy. No previous experience necessary. Practically every farm home and small town home will buy after trying. One farmer who had never sold anything in his life before writes: "I sold 61 the first seven days." Christensen, Wis., says: "Have never seen an article that sells so easily." Norring, Ia., says: "2% of homes visited bought." Phillips, O., says: "Every customer becomes a friend and booster." Kemmerling, Minn., says: "No flowery talk necessary. Sells itself." Thousands who are coming money endorse the ALADDIN just as strongly. NO MONEY REQUIRED. We furnish stock to get started. Sample sent prepaid for 10 days' free trial and given absolutely without cost when you become a distributor. Ask for our distributor's plan. State occupation, age, whether you have rig or auto; whether you can work spare time or steady; when can start; townships most convenient for you to work in.



## Caring for the Inner Tube

One of the foremost automobile tire dealers in the United States is authority for the statement that more than half of the inner tubes returned for adjustment are nothing more or less than victims of abuse, and are not defective, as claimed by the purchasers, says Albert Marple, writing in the current issue of American Motorist. This is rather a sweeping statement, and, if true, it appears as though the tire user in general might, with profit to himself and the tire companies, be enlightened as to the proper care of the automobile inner tube.

Says Mr. Marple:

"There are a number of things which absolutely must be done if the tube is to give its best service. In the first place, it must be realized that the tube is made of rubber, and that rubber has a number of natural enemies. Among these are sunlight, oil, grease, acid, water and the very atmosphere itself. One of the worst of these is sunlight, which has an effect of drying up the rubber, whereupon it becomes brittle and loses its elasticity, when it is known as 'macaroni' (brittle) rubber.

"If the tube is permitted to come in contact with grease or with rags covered or saturated with grease or oil, the rubber in the places touched will quickly deteriorate unless the tube is soon cleaned.

"The method of carrying the spare tube is also important. It should never be carried loose in the tool box, for if carried this way it cannot help becoming injured. If folded and carried unprotected there is danger of the tube becoming chafed at the points where the folds occur, then, when these chafed places are put under pressure, there is great danger of their proving unable to stand the strain.

"Never should the tube be carried anywhere near the battery box of the car, as the acid of the battery means certain death to the tube, and no one can say just when the battery is going to spring a leak and splash over everything in sight.

"Placing undersized tubes in oversized casings is another common fault of car owners. This practice will ruin a tube within a short time."

## Transportation Problems

Cars are short. Transportation problems will increase during the next few months. Every shipper and every receiver should use every effort to aid at this time. The state council of defense recommends that:

Receivers of freight should purchase in the nearest market and be prepared to quickly store the full contents of every carload they receive.

Receivers and shippers should bunch their orders so as to make full carload lots.

Cars should be unloaded with the utmost promptness. Shippers may help by adopting these methods: Load all heavy commodities up to ten per cent in excess of the marked carrying capacity on each car. Load light

weight or bulky freight to the full cubical capacity of each car. Always have shipment ready for immediate loading upon receipt of cars. Arrange freight in car so as to permit quick unloading at destination. Use drays or motor trucks instead of "trap car service" and avoid use of freight cars for moving food from one point to another within the same city. Furnish billing agent full instructions, permitting weigh bill being made up before loading is completed and time loading to suit schedule of departing trains. Consign shipment to final destination wherever possible and discourage shipments that require changing destination in transit. Do not bill shipment by circuitous route in order to avoid the effect of embargoes.

## Valuable Bulletins

The United States department of agriculture is mailing a series of bulletins of particular interest to the Pacific Coast. We believe these are mailed free by addressing the Division of Publicity, Washington, D. C.

Farmers Bulletin No. 843 touches upon pecan insects and their control. It is written by John B. Gill.

Farmers Bulletin No. 864 contains practical information for beginners in irrigation by Samuel Fortier, chief of irrigation investigations. This bulletin is filled with illustrations of irrigation appliances and methods of work.

Farmers Bulletin No. 866 deals with irrigation in the semiarid West by P. E. Fuller, irrigation engineer.

Farmers Bulletin No. 869, "The Musk Rat as a Fur Bearer," by David E. Lantz.

Farmers Bulletin No. 882, "Irrigation of Orchards," touches upon the selection of lands for orchards, clearing and grading, locating rows, methods of irrigation of orchards, and under this division are many types of flumes, ditches and pipe conductors, basins in orchard irrigation, losses of water, removal of waste and discussion of many other irrigation problems.

Besides the above bulletins, Circular 83, Office of the Secretary, Department of Agriculture, deals with swine judging and gives suggestions to pig club members.

## Importance of Oiling

More damage can be done to a machine in half an hour through lack of oil or grease on some bearings than by a whole season's exposure to the weather, the specialists declare. For this sort of neglect there can be no excuse. Operating a machine without lubrication, especially when the bearings are slightly rusty, will quickly result in the wearing away of the metal, often to a considerable depth, in a very few minutes. Expensive breakages, as well as serious delays, also may be caused by operating ma-

chines on which nuts have worked loose or have come off entirely, allowing bolts to loosen or drop out.

All practicable steps should be taken to preserve machinery now on hand. Needless exposure to the weather should be avoided, and in cases where it is not practicable to house machinery when idle, all bearings should receive a thorough application of heavy oil or grease to keep out moisture and prevent rust. It is believed that on many farms machinery could be more adequately shelter-

ed in the buildings available by exercising care in placing them so as to economize space.

## WILL THE TRACTOR MAKE EACH FARM FEED FOUR FAMILIES?

A century ago nine-tenths of the people were engaged in the occupation of farming. In those days only a small surplus, over the needs of one family was produced on each farm. In fact, crude farming methods made it impossible to produce much more.

But today with fully two-thirds of the population engaged in other pursuits, each farm must produce enough to support three families in America, and war conditions now make it necessary to export great volumes of food stuffs, so that in reality each farm must now support four families.

What has been the result? Prices of food stuffs have soared beyond figures ever before known. The demand has been so far beyond the supply that a problem has presented itself to the people of America as serious as it is difficult to solve.

The tractor may not solve the problem but from a quantity production standpoint, economy of labor standpoint and many others, the tractor offers a great help. However, orders must be placed a long distance ahead.

## TRACTOR EFFICIENCY

It is not so very many years ago that a tractor was quite a curiosity. Perhaps there was one in your community. If the wind was just right you could hear it at work a mile away, the gears howling and grinding and the engine coughing in a sort of tubercular desperation. A bevy of amateur mechanics hovered around it, ready at any time to right the last trouble or administer the last rites for tractors died young and hard in those days.

Today there are many tractors in every prosperous community. The exhaust has a business-like hum with a suggestion of steady power. It doesn't take an expert mechanic to keep them in repair. The tractor has "arrived."

The farmer of today is a manufacturer. From his land, with the aid of labor and machinery, he produces foodstuffs. A tractor is a large part of modern farm equipment, and if it isn't efficient, the cost of production is too high and profits diminish accordingly.

## FARM MACHINERY SHOULD BE CONSERVED

Orders for new equipment and repair parts should be placed as soon as possible.

To produce maximum results with a minimum of labor, new and modern machinery in large sizes should be used wherever possible.

Serviceable equipment, not needed, should be sold or made available to others.


Useless machinery should be returned to the channels of trade as junk.

Thorough lubrication and proper care when in use will materially lengthen the period of service of farm equipment.

More care should be given to protecting farm implements from the weather.

## GET A TRACTOR

When our president said, "Upon the farmers of this country, in a large measure, rests the fate of the nation," and said that every means at the command of the farmer should be employed to increase production, it seems as if he said, almost plainer than words, "Get a tractor."



Easy to Pull Around From Job to Job

GAS

WATER COOLING TANK

Hand Truck Outfit

Same Engine Used on Binder

### 4 HP-190 lbs.

The 4 H. P. Cushman Handy Truck is the most useful outfit ever built for farm work. Engine weighs only 190 lbs., and entire outfit only 375 lbs.

Besides doing all farm and household jobs, this 4 H. P. Cushman may be lifted from truck and hung on rear of binder during harvest to save a team. In wet weather it saves the crop.

### Light Weight Cushman Engines

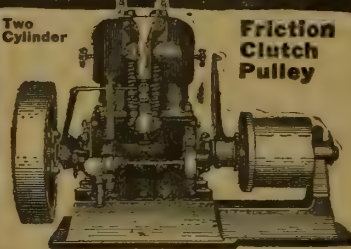
Built for farmers who need an engine to do many jobs in many places instead of one job in one place. Throttle Governed, with Schebler Carburetor. Run very quietly and steadily—not with violent explosions and fast and slow speeds like old-style heavy-weights. Engine Book free.

**CUSHMAN MOTOR WORKS**  
804 N. 21st Street — Lincoln, Nebraska

### 8 HP-320 lbs.

Two Cylinder

Friction Clutch Pulley



### Your own right arm



on the lever of a "K" Stump Puller easily rips out any stump that can be pulled by any horse power machine. Develops a 48 ton pull—all an inch-steel cable will hold.

## K Stump Puller


HAND POWER

Works by leverage—easy as rowing a boat. One man alone can pull from 50 to 100 stumps per day. Works equally well on hillsides or marsh land. Made of Krupp steel—weighs only 171 lbs. Guaranteed against breakage.



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### "The 'Acme' Way to Crops That Pay"

is the title of our free book that points the way to increased yields. Shows how to secure deep, firm, moist seed beds without waste of time or labor. Fully describes the "Acme" Tillage Line and explains "Why the Coulters Do the Work" in field, orchard and garden better than it can be done in any other way. Gives the findings of State Experiment Stations in every part of the country.

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National monthly covering all phases of all kinds of Nut Culture, discussed by experts. Official Journal. Highly endorsed. \$1.25 a year; 3 years \$3. Sample copy 10c. 29 State St., Rochester, N. Y.



# My Father's Help To The Farmer!



In a little settlement of pioneers, called Maria Stein, Ohio many years ago, Joseph Oppenheim, my father, was the

teacher. Studious and quiet, he yet had a personality that appealed, for he was helpful to all. Farming then wasn't so profitable as now, and the women and children had to work in the fields.

The Settlers who came to this country generations back were frugal people. They had to be. Yet they were far-sighted, too. They knew that land could be exhausted—they knew it must be fed if it was to continue feeding them. So they wasted little fertilizer. Barnyard manure was their reliance—as it is yet.

Hence it was scattered on the fields with great care. My father made a hand in this labor occasionally. The children from his school bent weary backs over the task. Their drudgery appealed to his heart. He knew what it meant in aching muscles, neglected schooling and dwarfed opportunity. He knew that such machines as were available neither shredded the manure nor spread it fine and wide.

So he set out to build a machine that would do this and save the hard work. It wasn't easy. Money was scarcer than this generation understands. In his little school house he worked out the idea he had—to make a machine that would help keep his boys and girls in school, and ease the labor of their parents.

It's a long story of how the village teacher saved a nickel here and a dime there, worked early mornings and late nights and eventually built a spreader that carried the principles that make the Nisco the leader today.

So much better was it than the old method of wagon tail distribution that the sturdy farmers called it "Oppenheim's New Idea." After a while, when the work had been brought to a practical stage, we called ourselves the New Idea Spreader Company and from this we get "Nisco."

Working out this idea to perfection in the midst of poverty cost great sacrifice and much toil, but ever uppermost in the mind of the inventor was the need of his people. The small shed shown above was built and work started on six machines. They were so practical that he protected the child of his brain by patents, patents that have revolutionized the spreader industry.

How this small plant has grown until ten acres are covered by the present plant, which sold over two million dollars' worth

of spreaders last year, is a story my father could hardly believe if he were alive today to hear it.

But his big heart would swell with pride that he had made so great a contribution to American agriculture—that his efforts had brought prosperity and ease not only to his little circle of friends, but to many thousands more.

He lived only to see the business begun. At his death it fell to me—a boy of fifteen—to carry out his plans. My mother put every cent of her little insurance into making it go—and the Nisco was so valuable to the farmer that today he recognizes the Nisco Spreader as the greatest aid to permanent fertility of his fields.

Because this business is an inheritance of the brave effort of my father to contribute something worth while, it is equally dear to me. And because of his ideal, this machine never will be less than the best we can build.

Our catalog tells of its superiority better than we can here and our free book "Helping Mother Nature" gives some new and valuable information on the use of manure. Send the coupon for them today and see how Joseph Oppenheim made the most notable contribution of his generation to the American farmer. See the machine at the Nisco dealer's in your vicinity. If you don't know him we'll send you his name.

B. C. OPPENHEIM, Mgr.

## NEW IDEA SPREADER CO

"Spreader Specialists"

MAIN OFFICE AND FACTORY:—COLDWATER, OHIO

California Jobbers Selling  
Our Spreaders are:

DIXON & GRISWOLD, LOS ANGELES.  
PACIFIC IMPLEMENT CO., SAN FRANCISCO  
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These Books  
FREE

NEW IDEA SPREADER CO.,  
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Please send me without obligation your Nisco Catalog and  
FREE BOOK—"Helping Mother Nature."

Name.....

P. O. ....

County .....

State .....



Established 1877 Forty-first Year

**The California Cultivator**

A Journal of Horticulture, Agriculture and Live Stock

Rural Californian, Established 1877  
 Combined with California Cultivator 1914.  
 Livestock and Dairy Journal, Established 1901, Combined with California Cultivator 1916

Published By  
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Saturday, Dec. 8, 1917

## OUR ADVERTISERS RELIABLE

We guarantee our subscribers against loss through dishonesty of any advertiser in the Cultivator. We do not attempt, however, to adjust trifling differences between subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within 30 days from date of the transaction, and the subscriber must have mentioned the Cultivator when writing the advertiser.

## THIS WEEK'S COVER

The busy scene on the cover this week should be one of thousands in California sugar beet fields at the present moment, but unfortunately it is not as common as it should be and not as common as it has been in past years, owing to the present agitation as to cost of production. In any case the tractor is being brought into action to aid in as cheap cultivation as possible.

This particular tractor is made by the J. I. Case Mfg. Co.

## PUT OUT THE FIRE

Stop the fires and win the war. It is reported that from May 1 to October 16 enough food has gone up in smoke within the limits of the United States to feed 136 American soldiers one day for each minute of that time, or, expressing it in dollars, \$12,274,050 worth. This is the known and recorded loss. It is thought that all losses would easily double this figure. The monthly cost of small fires started in grain elevators, grain fields, feed and hay warehouses, food warehouses, packing plants, etc., are for May, \$1,899,800; June, \$2,213,750; July, \$1,505,350; August, \$2,071,150; September, \$1,104,000; 16 days of October, over \$3,480,000.

## THE SUGAR BEET SITUATION

Sugar beet people are discussing the possibilities of producing beets at prices which sugar manufacturers are willing to pay. They have done their best in the matter of economizing in implements and tools, but owing to the labor shortage and consequent indifferent crop, and further to the fact that the manufacturer has often refused to take their beets when they were at their best, they are dis-

couraged. They are willing to make greater investment in tractors and labor saving implements, but wish returns to justify this added risk. These should be given them.

One change which should be made, if the beet producer is to get just returns, is the testing of the sugar content of the beets by a chemist selected by neither factory nor producer but by the state university or some other disinterested party. It is freely charged by the beet producers that grave errors have been made in sugar tests. If this charge is unfounded it will certainly be to the interests of the manufacturers that they may prove their tests correct by one other than their own chemist.

The present agitation will certainly

versity. He has given us the information which appeared in the first article of that issue.

Black mold of onions is a serious pest and one of the newer in the United States, and so far as we know this is the first occurrence of it discovered west of the Rockies. We hope the information given by Mr. Van Pelt in the article will aid us in controlling it in this state.

Bring your troubles to the Cultivator.

## QUALITY

In making his report before the California State Association of Nurserymen Chairman Frank T. Swett of the committee on viticulture referred to the conditions which at one time

## POINTS FROM THE PRESIDENT'S MESSAGE

An immediate declaration of war against Austria-Hungary.

That America wants a peace based on "generosity and justice" that that no other kind can be entertained or accepted.

That Germany must first be shown the "utter futility of its claim to power or leadership of the modern world."

That "our present and immediate task is to win the war."

That "nothing be permitted to turn us aside until this object is accomplished."

That we can "regard the war won only when the German people say to us, through their accredited representatives, that they are ready to agree to a settlement based on justice and the reparation of the wrongs their rulers have done."

"I do not doubt that the American people know what the war is about and what sort of an outcome they will regard as a realization of their purpose in it. As a nation we are united in spirit and intention. I pay little heed to those who tell me otherwise. I hear the voices of dissent—who does not? I hear the criticism and the clamor of the noisy, thoughtless and troublesome. I also see men here and there fling themselves in impotent disloyalty against the calm, indomitable power of the nation.

"I hear men debate peace who understand neither its nature nor the way in which we obtain it, with uplifted eyes and unbroken spirits. But I know that none of these speaks for the nation. They do not touch the heart of anything. They may safely be left to strut their uneasy hour and be forgotten."

result in some good to the producer and we hope in a greater production of sugar in California.

## USE THE STRAW

It is not often now that one sees the burning straw piles of former years. However, we are still careless in saving every one of the straws. At a time of high feed straw is baled and sold in cities as a supplementary feed, but from the farmer's standpoint the cost of baling and transportation should prevent any such use of straw; it is worth more on the farm. With silage or other succulents it may be fed; otherwise it may be used as bedding; but in any case carry it back on the soil. California's semi-arid conditions have caused deficiency of humus in its soils, especially is there deficiency of nitrogenous matter, and we must have more nitrogen to produce greater crops.

Save the straw.

## WATCH FOR THE PESTS

From youth up we have been taught that the work of the little foxes was sometimes more disastrous than that of the older and more experienced. The work of the tiny insects or of the almost invisible fungus may be still more destructive than whole troops of little foxes.

Unfortunately, we are finding new proofs of this nearly every day. In the Cultivator of November 17 we referred to an onion pest, entirely new to California, which had been discovered by one of the Cultivator's subscribers. Mr. Starr was having trouble with his onions. Specimens were submitted to several, and finally to the Cultivator. The Cultivator sent them to Washington, and from one department they were passed to another and finally sent to a specialist connected with the Ohio state uni-

went from California to the Eastern consumer and to its quality today under standardization, and said that if the present rate of improvement was continued it would be but a short time until Cal-i-for-nia would spell quality.

California has long been granted first place in fruit production. This position will be still more advanced, we believe, under the operation of the present act, and the best feature connected with it is that the producers are entering heartily into the spirit of its enforcement.

## COOLIE LABOR

California has surprised herself and the remainder of the United States by the unanimous adoption of the labor resolution in the recent state fruit growers and farmers' convention at Sacramento.

The needs of the farmers of this state are greater than it is possible to make Eastern congressmen realize, and without that realization it will be hard to convince congress of the necessity of going against the wishes of the labor unions and giving to California producers the help they demand.

Here is the gist of the resolution:

"The farmers of California desire to do their full patriotic duty to their country and its Allies, and,

"Whereas: They ask that they have access to the dependable man power to use in that food production which is the chief element in the prosecution of the war to success, therefore,

"Resolved: That we ask our government, as a war measure, to permit the introduction of sufficient Chinese or other farm labor to so increase our food production as to assist the United States in discharging its obligation to feed our Allies and their armies, and prevent them from being starved into surrender. . . .

"The convention instructs the appointment of its chairman, the state commissioner of horticulture, of a committee of nine to represent this State Fruit Growers' Convention, and instructs the committee to use its best endeavors to bring about a material alleviation of the present shortage of labor, and that the committee be further instructed to take up the subject matter of the above with the proper government authorities."

## This Week's War News

Villa's last uprising in Mexico has been practically subdued.

The last colony of Germany has been taken from her in German East Africa. This colony has an area of 380,000 square miles.

The drive has begun for \$2,000,000,000 to be raised by thrift stamps and war savings certificates. The sale of these began on Monday morning, December 3.

A scientifically made bomb delivered to the police commission of Milwaukee, after having been left in a church, exploded while being examined and killed ten men.

The kings of Norway, Sweden and Denmark have been holding conference in Christiania. No announcement is made as to the cause of the conference or the result.

The president has appealed to labor unions to leave settlement of labor disputes until after the war. The only union to be recognized at the present time is E. Pluribus.

The Hauser meat packing establishment in Los Angeles was set on fire, but fortunately saved. That packing plant has contracts with the government for thousands of tons of meat.

General Greene, commandant of the cantonment at Camp Lewis, has issued orders that no soldier on leave of absence shall visit the city of Seattle, this because of vice conditions there.

In the Holy Land the English are within three miles of Jerusalem. The Turks have thrown reinforcements into the field and it is presumed there will be some hard fighting before Jerusalem falls.

No new reports as to submarine warfare, but the losses are continually growing lighter. The submarine is still a factor in the war, but experts declare from now on it will be easily reckoned with.

The Bolsheviks are still in control of the Russian situation, but the impression prevails that loyal troops are exerting a strong influence in all sections save Petrograd. The German propaganda is being extended by every means within their command.

On the Italian line the Germans have announced that owing to weather conditions the fighting there has been materially slackened. The Italians are holding firmly and are even in better position than a week ago. So far as known British and French soldiers are still aiding the Italians.

The Germans on the west front have instituted a terrific counter drive on General Byng's men; also on the French at the Verdun front. The Germans discarded all strategy and returned to the old method of driving in solid formation. The slaughter by the British tanks and machine guns has been fearful. The British line has been maintained almost entire. No report is yet made as to British losses, but it is feared they are great.

## CULTIVATOR CHISEL POINTS

Commenting on the high resolve pictured in the faces of our American soldiers, a London writer says: "This is no longer a war; it has become a crusade." When we went into the war we said it was to "make the world safe for democracy." Our vision has broadened since then; we see the task before us as a much greater and more vital thing; it is to make the world safe for humanity.

Sing a song of Hoover, who never seems to tire,  
 Ninety-nine—and then some—Irons in the fire,  
 Jumping forty ways at once, eyes on every one,  
 Pops 'em out and uses 'em the minute they are done.

If sugar beets aren't planted now—  
 As they had ought to be—  
 Whatever are we going to do  
 For sugar in our tea?

If farmers won't plant them just for fun—  
 As they had ought to do—  
 But talk right up to the factory men,  
 I reckon they'll have to come through.

Do your Christmas shopping early; buy thrift stamps.

The brains of big business, the savings of the slender purse, the heart and soul of our manhood and womanhood are fused in one high endeavor which shall make the mighty army of freedom against which no super-savagery can prevail.

Taxes are paid, thank goodness. Next!



# Agricultural News Notes of the Pacific Coast

## Northern California

Gridley's farm bureau center is now fully organized.

The sugar factory at Hamilton is closed for the season.

Amador County is planting large foothill sections to grain.

Vacaville has a new fruit packing house being erected. It will cost about \$200,000.

Yolo County is organizing infantry and artillery for an attack on ground squirrels.

Lodi, San Joaquin County, estimates its returns from grapes this year in excess of \$4,189,000.

Placerville, Eldorado County, has been shipping prunes to San Jose—"Coals to Newcastle."

California Marvel is bringing as much good publicity to the university as did California Favorite last year.

Auburn, Placer County, has been exhibiting some exceptionally fine Tokay, Malaga and Red Emperor grapes.

Colusa County is organizing farm centers. The work is being aided by Farm Adviser Heileman of Glenn County.

Soil specialists of the department of agriculture have been investigating soils of Grass Valley, Nevada County.

Amador County conducted a bean growing contest during the past season and prizes were awarded on December 6.

Placer County orchardists are making double money by planting cover crops, then pasturing the orchards to live stock.

The state's biggest rice harvest has just closed. The output of the Sacramento Valley will aggregate in value nearly \$15,000,000.

Fruit growers in convention at Sacramento appealed for the closing of saloons of California so as to encourage more efficient help on the farms.

Dairymen of Yolo County have taken over the A. W. Morris Pasteurized Milk Company of Woodland, and the output will be handled cooperatively.

The objections of the citrus growers of Butte County to the "color question" promise to be satisfactorily settled by Deputy State Commissioner Weldon.

Water grass, a serious pest of the rice fields, will be reduced so far as possible. The state horticultural commissioner's assistance will be had in the campaign.

Pear growers gathered at the state fruit growers' convention at Sacramento started a movement for the marketing of pears by the growers. This for the 1918 crop.

Fruit growers of Fortuna, Humboldt County, have installed a fruit dryer which is handling many of the surplus apples of that section. The dryer has a capacity of seven tons daily.

Eureka, Humboldt County, reports that two sheep will graze in that county in 1918 where one grazed in 1917. The increase is largely because of dairymen adding a few sheep to their dairies as side lines.

The division of animal husbandry of the university farm school at Davis held a meeting last night at Willows and made an exhibit of hogs which had been used in important hog feeding experiments. Prof. True and other experts were present.

## Central California

Kings County is threshing rice.

San Joaquin County now has two assistant farm advisers.

C. N. Connor has been named as farm adviser for Tulare County.

Tulare County creameries have just paid to dairymen of that county \$248,952.

Farmers of Oakdale contemplate planting an increase of 15,000 acres in grain.

San Benito County live stock men are concerned at the appearance of anthrax.

Fresno County farm bureaus are discussing peach blight, hog cholera, and anthrax.

Forty-two hundred tons of Stanislaus County fruit were canned in one cannery at Modesto.

Santa Clara began the shipment of Christmas boxes of prunes to soldiers in France on November 15.

A creamery at Soledad, Monterey County, was recently fined \$40 for violation of the state dairy law.

The Morgan Hill Farmer's Union has voted to sell its packing house to the Prune and Apricot Grower's Association.

Dairymen of Visalia are asking for bids on their cream. The Producers' Association now has an output of about 3000 pounds daily.

Monterey County producers are canvassing amongst themselves for sufficient names to secure a farm adviser. Centers are being organized.

Farm bureau meetings of San Joaquin County: Lockeford, December 10; Linden, 12; Douglas, 13; Escalon, 17; Ripon, 20; Manteca, 21; Live Oak, 24.

Because of delay in Hetch-Hetchy work San Francisco contemplates taking the work away from the contractors and pushing the work on the great dam more rapidly.

Representatives of the Central California Wool and Sheepgrowers' Association will go to Washington and urge the opening of California national parks to sheep raisers.

Dairymen of Stanislaus County are figuring on present prices of feeds and present prices of butterfat, which, while high, still do not bring as much as the feed if it had been sold off the place.

Merced County farming districts have made heavier deposits in the banks than any preceding year in the history of the county. Heavy shipments from the county at the present moment are of sweet potatoes.

Irrigators of the Oakdale irrigation district are lining all canal banks with concrete. A cement "gun" is used in applying the cement. It is estimated that 20 per cent of the present waste will be saved by this improvement.

Councils of defense for Fresno, Kern, Stanislaus, Tulare, Merced, Madera, and Kings Counties recently met in Fresno and recommended that California and all other states should at once close all saloons. This as an efficiency or war measure.

A meeting of bean growers was held in Stockton. A committee of seven, representing different bean producing sections of the state, was appointed to make recommendations as to steps to take to stabilize the industry and encourage greater production.

## Southern California

Los Angeles has voted "dry."

California never had as large a holdover crop of Valencia oranges as this year.

One car of walnuts recently shipped from Santa Barbara County was valued at \$11,000.

Imperial Valley reports 225,000 pounds less of turkey available this year than last.

The east side of Imperial Valley will ship 140 carloads of sheep during the present season.

Practically all walnuts are shipped and packing houses are rapidly finishing the run on the culls.

An Imperial ostrich grower recommends substitution of roast ostrich for turkey and roast pork.

Fullerton, Orange County, estimates its loss to the walnut chop from the June hot spell at 500 tons.

Banning and Beaumont and other near-by districts of Riverside County are discussing a cooperative cannery.

California raised enough beans during 1917 to supply the needs of the American army for more than a year.

An Orange County lima bean grower harvested 30 sacks to the acre and received a return of about \$135 per acre.

The farm center at Murrietta, Riverside County, is discussing plowing under all straw. The idea is to save humus.

One car of frozen turkeys, totalling about 25,000 pounds, was shipped from Brawley to Los Angeles for the Thanksgiving trade.

Carpinteria, Santa Barbara County, is finishing the shipping of its largest walnut crop. It will bring the growers of that valley \$175,000.

The Placentia orange growers recently met in annual session. The association shipped 900 cars from the orchards of its 200 members.

Some embarrassment exists in the Imperial Valley pig contest because of the classes being so large and the number of available pigs so small.

Lemon shippers have been receiving some exceptionally fine returns for fall shipments. Chula Vista, San Diego County, reports this the best year since 1912.

Dairymen of Orange County are asking incorporated cities to pass ordinances making it a misdemeanor to use milk bottles for canning fruit or any other use than milk delivery.

The citrus experiment station at Riverside netted \$26.40 per acre above costs, for blackeyes and other intercrops grown in citrus orchards. The gross income per acre was \$46.19.

The Coachella Valley, Riverside County, shipped the first car of Southern California navel. The fruit was grown at Mecca on the edge of the Salton Sea and 200 feet below sea level.

An organization of water users of the Imperial Valley was recently perfected at El Centro, the idea of the organization being to give both financial and moral support to the Imperial Valley irrigation district.

Mr. Shamel of the department of agriculture thinks that Southern California has tobacco producing possibilities. The production of Turkish cigarette leaf in Central California has been almost entirely discontinued.

## The Coast and General

The United States produces 16,000,000 bushels of buckwheat.

Wenatchee Valley is shipping apples to Shanghai and Hongkong.

Last year's potato crop was the biggest ever, 440,000,000 bushels.

The production of castor beans is an important industry of the Philippines.

The Rivers and Harbors Congress convened in Washington, December 5-7.

The corn crop of the United States will total 3,191,083,000 bushels, the biggest ever.

Jobbing prices on fancy barreled apples in Chicago are running around \$5.00 to \$6.50.

Washington state irrigationists will meet in national convention at North Yakima, December 10-11.

Bean growers the United States over are asking for fixed prices or for some measure which will stabilize the market.

At a Farmer-Banker Convention at Pullman, Washington, recently, steps were taken by the bankers to give financial aid to pupils taking agricultural courses.

A slight decline has caused long staple cotton growers of the Salt River Valley some loss, though the drop was only a matter of two or three points off from 73½ cents.

Apple growers of the United States are appealed to to contribute 100 carloads of apples for soldiers in the trenches. They will be distributed through Y. M. C. A. bureaus.

Honey producers of Payette Valley, Idaho, have shipped eight cars of extracted honey this season. They received, it was reported, around 14 cents.

Growers of cocoanut in the Philippine Islands assert that unless concerted action is taken against insect pests the entire industry will be destroyed. The bureau of agriculture has made an appropriation of 2500 pesos to inaugurate a campaign.

Attendants at conventions at Washington are sleeping in cots in hotel corridors and private residences. Each of the larger hotels is turning away two to three hundred every day and many are compelled to go to Baltimore for hotel accommodation.

There is contention between the hay growers and the stock men of Idaho as to hay prices. The stock men, especially sheep people, maintain they cannot keep stock and pay today's prices, and the department of agriculture is appealed to settle the question.

The reclamation service reports that on the Salt River project, under the Roosevelt Dam, there are 67,000 acres of alfalfa, 25,000 acres of sorghum grains, 9000 acres of barley, 4000 acres of wheat, 23,000 acres of long staple cotton, over 1000 acres of citrus fruits and 53,000 acres of pasture.

In some Eastern states where good highways prevail highway freight trains, tractors with trailers, are a regular feature. Regular truck express service is also maintained between Akron, Ohio, and Boston, Massachusetts. Regular schedule is maintained for the round trip of 1510 miles, which is made in less than one week. This service was started last April.



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"we cannot speak too highly of  
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"Zerolene is our choice for  
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Angeles—"settled on Zero-  
lene after extensive tests."

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Heavy-Duty is espe-  
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## Production and Marketing of Farm Products

From Address by Stoddard Jess at Dedication of Hilgard Hall



IFE should be measured by  
achievement rather than by  
the passing of time. It is  
what a man does, what he  
accomplishes, that counts,  
and not how long he lives.

True life is service, and service is  
the only thing in life that is self-sat-  
isfying and abides. The satisfaction  
that comes from doing things that  
make for the welfare of others and for  
the betterment of the world brings us  
true happiness. A man who has added  
to the efficiency of mankind by unlock-  
ing the secrets of nature, even in  
small degree, has not lived in vain.  
Civilization itself represents the ac-  
cumulative results of the discoverer  
and the inventor.

It is fitting and proper that we  
should be gathered here today to dedi-  
cate this hall of learning to the great-  
est of all sciences, the science of ag-  
riculture, and in the name of one of  
its noblest and most consecrated  
workers, Professor E. W. Hilgard, a  
man who faithfully did his full share  
in laying the foundation for the intel-  
ligent development of the horticul-  
tural and agricultural resources of our  
great state of California.

The prosperity of the farmer is the  
chief cornerstone in the prosperity of  
the state. All industries in both peace  
and war rest upon it

Our greatest need is higher effi-  
ciency in making and marketing the  
products of the farm. With the great  
acreage of arable lands in California,  
put to its highest use and managed  
with proper efficiency, the state would  
not only produce practically every-  
thing needed for the consumption of  
its people but would receive for its  
surplus returns that would make it  
the most productive state in the Uni-  
on and the most productive section  
in the world. Lack of intelligent and  
properly organized effort is the only  
answer to the query—why California  
imports meat and meat products,  
flour and cereals, sugar and many oth-  
er products—that can be grown as  
well within the state as outside of it.

The success of the farmer requires  
a proper understanding of his mission  
as a farmer. He should know that his  
first duty is to produce everything  
that is needed for the support of his  
family, that he can produce on his  
farm, devoting the part of his land re-  
maining to the production of such  
crops as it may be best adapted to  
raise. The farmer who produces what  
his family consumes buys of himself  
and sells to himself, thus saving two  
profits, which he would otherwise have  
to pay to the middleman. The farmer  
who produces what his family con-  
sumes lives better, because he pro-  
duces many things that he would not  
feel justified in buying.

His success demands that he under-  
stand the desirability of the rotation  
of crops. His success depends in no  
small degree on the care and intelli-  
gence shown in the selection of seed.  
The success of the farmer engaged in  
dairying demands definite knowledge  
as to the butterfat producing quality  
of every cow in his stanchions. The  
success of the farmer engaged in pro-  
ducing pork demands that he under-  
stand the necessity of maturing his  
pigs for market before they are ten  
months old.

Another question of equal import-  
ance to the success of the farmer is

the disposition of his products. With-  
out a stable market, insuring fairly  
remunerative prices, there is no incen-  
tive to produce. California producers  
have probably suffered more from lack  
of satisfactory marketing conditions  
than the producers of any other sec-  
tion of the United States.

The producers of wheat and barley  
in California have never been offered  
a market that would allow them to  
drive up to a warehouse with a cer-  
tainty of receiving to within a certain  
number of cents per cental of the  
day's prices at seaports, as has al-  
ways been the case in all sections  
East of the Rocky Mountains. Thirty  
years ago the marketing of grain and  
hay in California was largely a mat-  
ter of barter between the pro-  
ducer and the man who was willing  
to buy, and it is so today in a large  
degree. The producer had to sell to  
secure funds to pay his current ex-  
penses. As the result of the barter,  
the producer got about 50 cents on  
the dollar of what the purchaser real-  
ized on the product, after it had pass-  
ed out of first hands, and this irre-  
spective of any change in the value  
of the commodity in the markets of  
the world. This condition was un-  
doubtedly due, in a large degree, to  
the fact that California was so far re-  
moved from other markets that it  
gave the middleman the opportunity  
of buying at a price determined by the  
price in the outside market, less the  
cost of transportation, and the oppor-  
tunity of selling at the price in the  
outside market, plus the cost of  
transportation, and the cost of trans-  
portation was very high. The same  
has been true of other crops.

Not only has the cooperative meth-  
od proven a panacea for the problems  
that confronted the growers of citrus  
fruits, but it has proven a decided ben-  
efit to the independent shipper. The  
method has resulted in stabilizing the  
market, so as to allow the independ-  
ent shipper to continue his business  
and make satisfactory returns to the  
grower who markets through him.

The advantages of cooperative mar-  
keting are: broader markets, increas-  
ed consumption, proper distribution,  
standardized quality of product and  
stability in market price. The success  
of our producers in all lines in which  
the principle can be applied may be  
said to be proportionate to their co-  
operation in marketing their products.

While the United States, with its  
large area of fertile lands, has been a  
great exporter of food products, it has  
for years been patent to thinking  
men that the time was not far distant  
when home consumption would equal  
home production, and necessitate  
larger production, through higher ef-  
ficiency, to meet the ever increasing  
need of a greater population. Condi-  
tions in connection with the great  
world war, in which we are engaged,  
have caused us to realize the neces-  
sity of increased production as we  
never have before. We are forced  
to realize that our responsibilities are  
not limited to our own needs. In  
times of peace and through the en-  
couragement of world wide transpor-  
tation facilities, countries become de-  
pendent on other countries for food  
supply, thus establishing responsibil-  
ities that should be recognized and met  
at all times. In this time of war it  
is our responsibility to feed our Allies



and to furnish food to the neutral countries of the world, to keep their people from starvation, when used for their own requirements, at the cost of the strictest economy and even discomfort on the part of our own people. We must encourage production to the utmost, that we may meet the needs of humanity crying for food. Wars may be won by bread supply rather than by bullets. In times of extreme need, man's humanity to man demands that the food of the world should be mobilized and used for the proper protection of all.

While the lack of such intensive cultivation as is common in European countries is undoubtedly due to the fact that with us land has been comparatively cheap, while labor has been dear, it is time for us to make a business of farming, to meet present needs and the increased demands that will surely develop, and no longer sit idly by and watch the farmer operate in the desultory manner in which many of them do, through ignorance of right methods, when advice from a state or county farm agent would make for greater efficiency. In some respects the American farmer is the best farmer in the world today. Through the use of the most improved machinery he probably produces more with the same amount of labor, but as our broad acres become more valuable, made so by an ever increasing consuming population, larger yields of product can only be secured by more intensive cultivation, at the expense of an increased cost of labor.

It is time for us to provide the opportunity for men to secure land to cultivate, and to provide in some way for financing their initial needs, under safe and proper restrictions and supervision. The best interests of California demand an increased number of small farms, small holdings with intensive cultivation, rather than large holdings poorly farmed.

I am glad to say that the bankers of the country are evidencing an ever increasing interest in promoting the welfare of the farmer. It is becoming recognized among bankers that the highest use money can be put to is to finance the needs of the farmer.

It is the responsibility of the state to foster agriculture, to encourage better methods of farming, and to secure higher efficiency in the production of farm products. Under the supervision of the department of agriculture of the state university, county or district agents should be employed and maintained to cover the entire state, whose duty it would be to furnish information, to supervise and cooperate in every way with the farmer, to the end that he may adopt better methods and manage his affairs more intelligently. What has been and is being accomplished by the department of agriculture of our national and state governments, by research into the remotest corners of the globe, to discover new products and new varieties adaptable to successful growth in our own country, is but little understood. What is needed now is to assist the farmer to make proper use of the knowledge so acquired.

The committee on statistics and standards of the chamber of commerce of the United States of America in a special bulletin recently published, says: "It is true that the fundamentals of agriculture, crop rotation, intensive farming, irrigating, dry farming methods, fertilization and the like, are the products of experience, and consequently as old as farming itself. Yet it is equally true that the agricultural colleges of the state universities

have not only sought to teach the often neglected observance of these elementary and necessary practices, but have likewise, by experimentation, laboratory tests, and investigation, brought farming to the high plane of scientific, intelligent pursuit, instead of the rule-of-thumb performance that it was often in the past."

There is no use to which the funds of the state can be put that will prove more profitable, or receive more hearty approval of the taxpayers, than a liberal support of our state university and its agricultural department.

#### SELECTING CORN

Circular 180 of the University of California at Berkeley calls attention to the selecting of seed corn. It is written by Prof. Ernest B. Babcock who calls attention to the increase in the production of corn in this state. In 1915 there were 64,000 acres, and the estimate is made that during 1917 nearly double that acreage was planted.

Many California growers have been using seed imported each year from the Middle West or else have planted

unselected seed from varieties which have become acclimated, such as the King Phillip variety. While the average yield per acre in California compares favorably with the average yield per acre in the corn belt states, it must be remembered that most of our corn is grown on deep soils and under irrigation. With proper seed selection, therefore, the average yield per acre in California should exceed the average yield in humid climates while the uniformity of our products should come to equal that of older corn growing regions.

#### USELESS HOLDING OF LOADED CARS

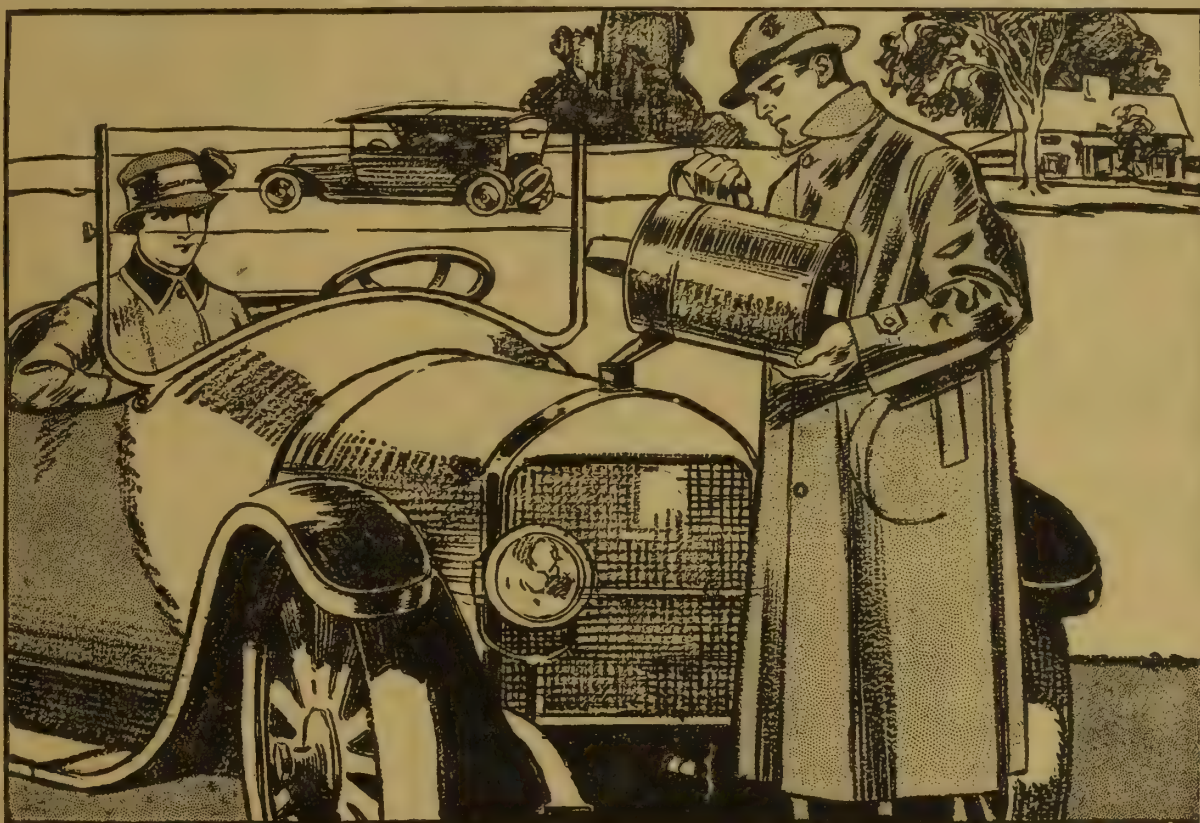
Shippers who hold loaded cars at yards while deciding on their final destination contribute importantly to the shortage in transportation according to the bureau of markets. Specialists who studied conditions at the Potomac Yards, Virginia, for 30 days last summer, found that 236 cars of perishable commodities were held on the average of 44 hours each by shippers or consignees, before issuing orders to move the cars. No car held for less than 24 hours was counted. A

car of cabbage was held for 78 hours; a car of watermelons, 84 hours; a car of cucumbers, 104 hours; a car of potatoes, 128 hours; and a car of tomatoes, 213 hours.

These facts make clear that shippers through these yards are abusing their diversion privilege and are wasting much car space by not keeping their cars moving. The remedy is to file diversion orders in advance of arrival.

Certain varieties of soil bacteria or micro-organisms, really a low order of unicellular plants, are associated with a number of necessary soil activities which have to do with the development of available plant food and the successful growth of crops. These include nitrogen-storing bacteria which live on the roots of legume plants and the bacteria which cause fermentation and the decay of organic matter and which are related to chemical changes in the soil by which the plant food is gradually made soluble and available to the plant roots.

One benefit of the war is that it has induced consumers to study foods and food values.



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Raynsters are thoroughbred storm-coats. Made to give man-size service. They are strong and durable.

You feel safe and secure inside this ideal storm-coat. You know the rain, with all its fury cannot drive its way through a Raynster.

Have you experienced such comfort? If not, visit your dealer's today and ask to see Raynsters.

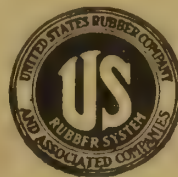
You'll find an array of storm-coats of wide variety. A variety among which no man, woman, boy or girl under the sun could fail to find a storm-coat to fit his purse, purpose or person.

You'll never do a wiser thing than buy a Raynster.

Write us for style book. It shows various Raynster models.

## United States Rubber Company

Clothing Division, New York and Boston





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## Breed Leaders

Every breed of livestock has its outstanding character the same as the human kind. A great dairy cow has proved her ability to produce anywhere up to 15 tons of milk annually; the trotting horse has secured his record around two minutes; the beefmaker has shown his ability to make the least amount of feed into the greatest amount of food; swine, sheep and others of the livestock family have shown themselves great characters. In addition—and here is where their worth is proven—these animals can transmit their productive power to their offspring.

Beginning with the issue of August 4 the Cultivator gave an account of Pieterje Bloom of the university farm dairy herd. Some things she has done and more that her daughters have done were chronicled. She was a most worthy leader in this series of articles. Others of her kind follow. More of the "handsome is as handsome does" type of animals will be given in the columns of the Cultivator during the next few months.

Written for California Cultivator

### ALTAMA INTEREST 98455

IN THE number of show yard winnings, including many championships and grand championships, in the high average of butterfat production, and in individual excellence, the Jersey herd owned by Guy Miller of Modesto is equalled by few and surpassed by none in California. A very considerable part of the honors won by the Miller Jerseys must be credited to his wonderful herd bull, Altama Interest, whose photograph appears on this page.

Mr. Miller bought him as a seven

list of his daughters together with their individual records which will give the reader a line on this great bull.

Gladys of Venadera made 515 pounds of butter at three years old; Signora of Venadera made 452 pounds butter as two year old; Altama's Goldie made 380 pounds at two years; Euzelia of Venadera, 405 pounds butter at two years; Yvonne of Venadera, 348 pounds butter at two years; Artis of Venadera, 323 pounds as a two year old; Lora of Venadera, Stella of Venadera, and Astrea of Venadera, three other two year old



Altama Interest

months old calf from the Marston Farm, Bay City, Michigan. His dam, Althea Altama, has a Register of Merit record of 637 pounds butter in one year. He is strongly bred along production lines on both sides of his pedigree, and he has been a consistent winner in show competition from junior bull calf to aged bull class. He was grand champion at Sacramento in 1912, 1913, and 1916, and reserve and senior champion at San Francisco world's fair, one of the biggest Jersey shows in coast history.

However, Altama's ability to win blue and purple ribbons represents but a portion of his value to his owner. Unless a sire is able to produce daughters of merit and transmit heavy production down through his get he is not worth much to either his owner or the breed. Altama Interest is just as strong, if not stronger, in his prepotency as in the show ring. We give a

daughters, all made records as large or larger than any of the above, but Mr. Miller did not have the records at hand when the writer interviewed him in San Francisco during the Land Show. Neither did he have a complete record of this bull's get owned by many other breeders. But enough has been written to show what a wonderfully valuable sire he has proven himself to be. Probably if he had been in other and less experienced hands than those of Mr. Miller he would not have done so well; probably he would as he is one in a thousand. The worth of a sire, an outstanding sire like Altama Interest, is difficult to estimate. His blood goes down through succeeding generations and branches out on both sides of the pedigree until the tabulation of some particularly high record offspring is red inked to the limit. Altama is one of the truly great California dairy sires—Jersey or any other breed.

## Western Berkshire Congress

The Western Berkshire Congress which covers the Pacific Coast and mountain states will meet in annual convention at University Farm, Davis, February 21-22. An outline of the program which has been sent us by the secretary, Homer Hewins, Calistoga, follows:

### February 21

10 a. m.—Informal meeting of breeders and examination of the animals consigned to the sale.

1:30 p. m. — Meeting in Assembly Hall. Addresses by Professor True, Prof. J. A. McLean, of the University of British Columbia, the recognized Berkshire authority of Canada, and

others. C. E. Barrows will also tell us how he did it.

7 p. m.—Banquet and election of officers.

### February 22

Sale of bred sows and gilts starts at 10:30 a. m. sharp.

We want each breeder who can, to consign two good bred sows or gilts, or a sow and a gilt to this sale.

First—They must be good. Second—Now is the time to breed them. Sows must be bred not later than December 25, 1917, so they can carry their own guarantee in the sale ring. Experience has shown that sows heavy with pig bring the best price.

Entries must be in the secretary's



hands not later than December 31, 1917. This means name and number of sow; pedigree showing three generations of ancestors; name and number of boar to whom sow is bred and date of breeding. Also, and don't forget this—weight of sow. Have her in good shape. The weights will be published in the catalogue and sows will be weighed at Davis to check up.

#### ERADICATING TUBERCULOSIS

From Address by F. F. Field before Holstein-Friesian Association at Worcester, Massachusetts

**F**IRST is cleanliness. Keep cobwebs swept from your stables and have them properly whitewashed as often as necessary to keep clean. Get all the sunlight into your stables that is possible. Have plenty of fresh air in your barn.

As long as there is plenty of it and it is fresh, that is all that is necessary. Treat the animals as human beings are treated for tuberculosis—give them the "fresh air" treatment.

Treat mangers, stanchions, feeding boxes and floors with disinfectant solution. Stable fittings and floors must be washed and kept clean and well saturated with germ killer as often as necessary to keep them clean, at least once a week. Modern stable fittings are more easily cleansed, but they are not necessary or essential in the work. Wood floors and fittings can be made clean and disinfected. Manure should be promptly removed from stables to eliminate any possible danger from this source.

As soon as the cow drops her calf, the calf should be taken away, never allowing the mother to even smell it, as the calf never should be allowed to have any of its mother's raw milk.

Feed the calf on pasteurized milk heated to 145 degrees and held there 30 minutes from the start. Feed no other. This milk should invariably be fed at blood heat or the same temperature as milk freshly drawn from the cow.

Never allow calves, from the time they are born, to mingle with any reacting animals, or any cattle, old or young, which you have assumed to be reactors. As they get older never allow them to drink water from the same trough or the same bucket that has been used for that purpose by the cattle assumed to be reactors. Water is a carrier of tuberculosis germs.

When they are old enough to turn to pasture, have a double line of fence, ten to 15 feet apart, between your reacting animals or the assumed to be tubercular ones, so that your reacting animals and your clean ones cannot get their noses together or in any way come in contact with each other.

Application of the tuberculin test at this period (say as yearlings) will determine the progress made in "cleaning up." Employ only a veterinarian of known integrity and skill; such a man will use only a standard preparation of tuberculin. The services of such a man cost no more than those of an ordinary one.

It is well to have your breeding cows tested at least once, by a competent veterinarian, with the tuberculin test; if reactions result, it does not follow that all reactors will by any means be "spreaders." Under this method unless a reactor proves to be a "spreader," she is not a source of danger, although she may at any time become so. If a "spreader" has been found, she should be removed from the herd. If not valuable, destroy her.

Now by carrying out this method, in a few years you will come to rea-

lize that you have turned what looked like a serious loss into a profit. In other words you have grown up a new, healthy herd, while at the same time you have preserved your tubercular breeding herd without any material loss, which herd can be maintained until age and condition indicate the time for their disposal.

Calves' navels should be kept disinfected until they are practically dried up. Calves' feeding pails and buckets should be kept clean and scalded. Have plenty of sunlight and fresh air where the calves are kept. Calves' bedding should be dried and not left wet for the calves to lie down in. In other words, treat them humanely, as you would your own babies.

"It's a common sense method—keep everlastingly at it."

#### NO STOCK ON HIGHWAYS

The last session of the California legislature passed a law which makes it a misdemeanor to use the public highway for a cattle range or for tethering cattle. The law provides that: No person owning, or controlling, the possession of any horse, cow, mule, ass, sheep, goat, hog or other live stock, shall voluntarily or negligently permit such animal to stray upon or remain unaccompanied upon the public highway, or shall permit the tether or any portion thereof to which such animal may be attached to lie across or upon any highway, and no person shall feed, pasture or camp any such livestock upon any highway between the hours of sunset and sunrise. The penalty for violating this may be \$500 fine and imprisonment for three months.

#### RED STAR

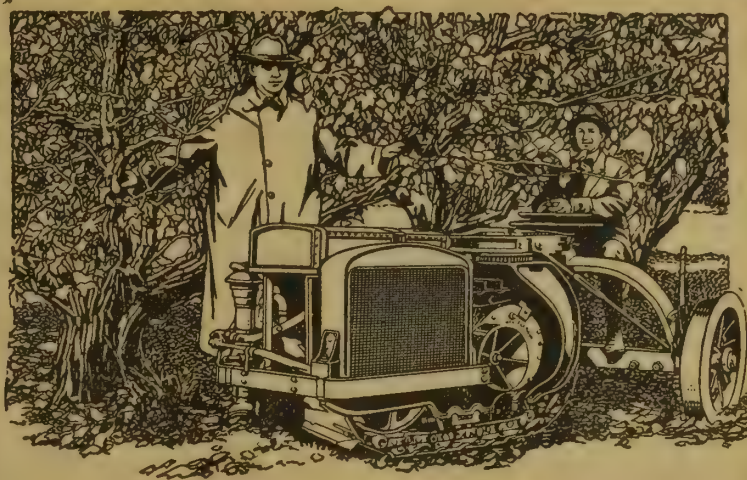
The soldiers' war wants are cared for by a number of agencies, chiefly the Red Cross; the animals, too, have a helping organization working along Red Cross lines, but known as the Red Star. The mission of the two is much the same; one benefits humans, the other benefits animals. What the Red Cross does for the soldier, the Red Star does for the war horse.

The Red Star movement came into existence at an international convention in Geneva in 1914, its objects being to bring about international cooperation in behalf of sick or wounded war animals and to secure the neutralization of those engaged in such work by international agreement.

#### Book Review MILK HYGIENE

"Principles and Practice of Milk Hygiene" by Louis A. Klein, V. M. D., Professor of Pharmacology and Veterinary Hygiene, University of Pennsylvania. Published by J. B. Lippincott Company of Philadelphia.

In this book an effort has been made to present systematically, in concise form, the facts and principles which are of importance in the practice of milk hygiene and to describe how they may be applied in the inspection of dairy farms and in the examination of milk. There are 330 pages given up to the nine chapters and appendix. There are several illustrations, both plates and drawings of appliances to aid in better milk production. As noted in its title it touches upon both principles and practice. The chapter headings are Physiology of Milk Secretion, Colostrum, Milk,—this chapter touches upon its chemical properties, constituents, variations, physical properties, color, odor and taste, biological properties, ferments and many other points,—Bacteria in Milk, Milk Defects, Influence of Disease upon Milk, Dairy Farm Inspection, Pasteurization, Methods of Examining Milk, and Appendix. Amongst other features given in the appendix are methods and standards for the production and distribution of certified milk. The book is true to name, in being both scientific and practical.



## Great Little Tractor

### For Orchards and Vineyards

Built by Long-Established Concern

Here is the tractor that the owners of orchards and vineyards have wanted to buy for years. It is built by the Bean Spray Pump Co., makers of the famous Bean Sprayers and Pumps. It does what no other tractor has ever done before. Its patented front-drive offers exclusive features, which sooner or later you will want in a tractor. Don't buy any tractor until you know all about it. Don't find out about this too late.

This means great pulling power with a very light tread. No other can work so well in light soil.

#### Handles Better Than Horses

This Tractor is handled more like horses than any other machine in existence. And it does what horses cannot do. It will pass under tree branches only 4 feet off the ground, plowing close up to the trunks. It works between 7-foot rows in vineyards, and cultivates right up to the vines without breaking off young shoots.

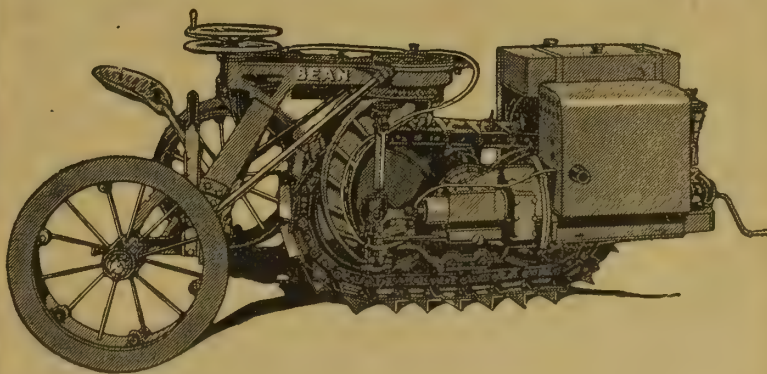
You can turn it all the way around inside a 10-foot circle (5-foot radius); and it pulls with its full power on these turns the same as on straight-aways.

When you hit soft spots or holes you simply "gee" or "haw" the track and pull out, as you would with a team.

#### Great Traction With Light Weight

This is the lowest-priced track-laying tractor manufactured. It weighs but 3100 lbs. and costs less to operate than wheel-type tractors of equal power. Note how the track grips the ground, and compare that contact with the wheel-type's.

## BEAN TrackPULL Tractor



#### Pays for Itself

The Bean TrackPULL Tractor pays for itself in what it saves its owner. It is simple and strong and durable. Every part is over-strength. The motor is an automobile type, so you know how to care for it. The Tractor is rated at 6 h. p. at drawbar, and 10 h. p. at the belt. On account of the patent front drive principle and simple transmission the fuel consumption is far less than other types doing the same amount of work.

#### Get Catalogue Today

Send the coupon for our new catalogue. Send it today, for the price of this Tractor may have to be raised without notice. The necessary cost of materials, due to the war makes a permanent price impossible.

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County ..... State .....

No of acres..... Crops grown .....



## Kings County Breeders' Directory

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Won Grand Champion Sow at State Fair  
Won Reserve Champion Boar at State Fair  
Won Grand Champion Sow at Hanford  
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HANFORD - CALIFORNIA

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Grand Champion Kings County Fair  
CHOICE BULLS FOR SALE  
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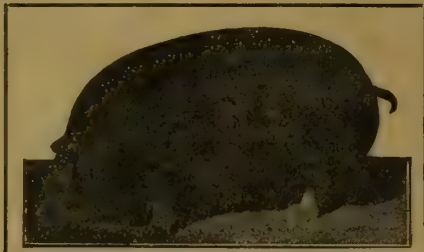
Kings of the soil and the products thereof,  
till the lands of rich Kings County

## Poland Chinas, Medium Type

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain. 12 firsts, Junior Champion and Reserve Grand Champion Boar. Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

**M. Bassett**

Hanford, Kings County, Cal.



## Santa Anita Rancho

Anoakia Breeding Farm



**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by imported Stallion Ibn Mahrus, head of our Arabian stud. Dams are the choicest thoroughbred mares on Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahrus, world renowned imported desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted Prince Gelsche Walker, and bulls from one World Record cow and two California State Record Cows. Write for details.

Correspondence Invited

**Anita M. Baldwin**

W. H. TAYLOR, Superintendent

Santa Anita, Cal.



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The farmer who wants a hog that puts on 200 lbs. of firm meat at six and a half months of age buys the Hampshire.



Boars, gilts, bred and open, for sale from the P. I. E. Champion Hampshire stock, just as nearly perfect as they make them.

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Will Keep Them in First Class Condition. Let Us Prove It Free  
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## California Shorthorns at the Pacific International

Written for California Cultivator



THE California Shorthorn breeders who ventured the long expensive trip to the big Portland show this year maintained the state's reputation as a certain winner at every American live stock show where the state has been represented.

T. T. Miller; Pacheco Cattle Company; Roselawn Stock Farm, and the University Farm, shipped one of the finest lots of Shorthorn show cattle north that has ever been sent out of the state. When it is considered that many of the classes had more than 20 different entries and the average number in a class was 12, the honor of winning many of the biggest prizes is no small one. Our correspondent writes that the Portland show this year was wonderful. Over \$5000 was offered for the Shorthorn classes

nia, Brandsbys' Jinny 18th, had won the senior championship and came up against the beautiful roan heifer, Topsy 4th, owned by Day and Rothrock. The judge placed the younger animal first, but a majority of the ringsiders favored the handsome red cow which carries such straight lines, smooth, mellow fleshing qualities, and who has produced a calf without losing any of her bloom or quality.

Frank Brown of Carleton, Oregon, captured grand championship on his great bull, Diamond Perfection, beating A. D. Dunn's junior, Escana Clipper. Mr. Miller's Diamond Choice was a strong competitor in the senior bull championship class and won first in the three year old and over competition.

As usual Pacheco Cattle Company won first in calf herd and get of sire.



Best Steer Ever

This is California Marvel, the steer bred and fitted at the University Farm at Davis, and exhibited at the Pacific International Live Stock Show at Portland, winning there grand championship. The judge said: "This is the best Shorthorn steer ever shown in this country. Prof. True and Alex. McDonald are to be congratulated.

alone, and the other beef breeds almost as much. He says the California exhibit was given much prominence by the display of a giant banner over 100 feet long on which was painted, "California Shorthorns."

Competing with Universities of Oregon, Washington, and several individual breeders the University of California won the grand championship in the fat steer classes, on California Marvel, a Shorthorn calf and a half brother to their grand champion at Chicago last year.

Wm. Hartnett, formerly noted beef cattle judge of the Argentine Republic, tied the ribbons, and his work was excellent. Collectively the California entries won more first premiums than any other state, and the Miller herd of only six head won more firsts than any single exhibitor.

The most tense moment of the judging in the Shorthorn classes was over the grand champion female. Miller's many time champion in Califor-

Old Truedale's get seem to be unbeatable as it has won consistently now for two years. Miller won second place on aged herd, Frank Brown getting first.

As the writer of this article was compelled to make a hurried departure for the International at Chicago the details of the big Portland Show could not be written, but in closing he says, "The Hereford show was high class; sheep and hogs, both in the breeding and fat classes demonstrated the wonderful progress the Northwest has made in the live stock business. Auction sales were held every day of the show and a large number of fine stock sold to men who wished to improve the standard of their herds."

This show is a great educational feature in the Northwest. It has grown from a mere infant in 1910 to the second largest in the country and will continue to grow. The people appreciate the power for good such a show can be and give it their unqualified support.

## Percherons



THE annual meeting of the stockholders of the Percheron Society of America will be held at 8 p. m., Monday, December 3, 1917 at Chicago.

Percheron judging at the International Exposition begins the following morning. There will be an extremely strong show.

Secretary Dinsmore writes: "As producers of Percherons we must never forget that our continued prosperity depends upon a prosperous condition in the trade for grade horses sold for

commercial purposes. The latest available figures for European countries, supplied by Food Commissioner Hoover, show an actual increase in the number of horses in Germany and Great Britain since the war began. France shows a decrease of 914,000 head between 1913 and 1916, and all other European countries having available data show decreases, except Sweden, where there has been a slight increase. Germany's increase is due to horses taken from Belgium, northern France and Russia; Great



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Use Sloan's Liniment; easily applied and quickly effective. It penetrates at once.

You will find many uses for this fine remedy in the home as well as in the barnyard. Always have it handy.

Buy it at your druggists. 25c 50c \$1.00

The 18 oz. \$1.00 bottle contains six times the 25c size.



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We offer for quick sale a mature registered bull for \$250 to first applicant.

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Registered young bulls from best families.

REGISTERED BERKSHIRE PIGS

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Careful attention given to mail orders

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WHITTIER, CALIFORNIA

Shorthorn Cattle and Berkshire Hogs

Shorthorn herd headed by Count Glory, #26982, grand champion at the California State Fair, 1916. Berkshire herd won Premier Exhibitor's banner at P. P. I. E.

513 Hearst Bldg., San Francisco  
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At the bottom of your letter to advertisers just say "California Cultivator" and prompt reply is assured.

Britain's to horses bought for war purposes. The decrease in France came during the first 11 months of the war—since then there has been a slight gain due to purchased war horses.

The United States had 21,195,000 horses January 1, 1915, and 21,126,000 on January 1, 1917—a very slight decrease, in spite of the fact that we exported 805,422 head during the 28 months ending January 1, 1917. Mules increased from 4,479,000 January, 1915, to 4,639,000 on January 1, 1917, although we exported 267,144 mules in the 28 months ending January 1, 1917. Exports have continued at a heavy rate so far in 1917 and will undoubtedly continue while war lasts.

"The outstanding fact, however, is that prices have not advanced on any but very heavy draft horses. Grain, cattle, hogs and sheep have doubled or trebled in value—horses have not advanced at all, save for the limited class mentioned. Automobiles and

light delivery trucks have displaced nearly all driving and delivery horses. There is no longer a general market for surplus horses under 1200 pounds weight. Those that will not do for military work sell very low, ranging from \$65 to \$115, and are hard to dispose of at that. Horses from 1200 to 1500 pounds are still used to a very limited extent in the cities, and are a popular kind for use on farms. They also have a wide outlet for artillery purposes, but the supply of these especially those under 1400 pounds, is more than equal to the demand.

"The supply of heavy horses is limited. The best informed men estimate that of our 21,000,000 head, less than 1,000,000 are real draft horses, weighing over 1600 pounds; and the demand for these efficient workers is such that they are holding their own in cities and increasing in popularity on farms. There is every reason to believe that the demand for drafters will continue to exceed the supply for at least 20 years yet."

San Joaquin County Cow Testing Association

By Ralph D. Robertson



THE following herds lead in milk production for the last testing period of 30 days, October 26 to November 25, 1917.

Owner	No. Cows	Lbs. Milk
Gottshall & Magruder	24	914
C. Holman	36	910
J. D. Sullivan & Son	15	885
County Farm	32	871
F. J. Kell	18	814

The following herds lead in butter-fat production for the last testing period of 30 days, October 26 to November 25, 1917:

Owner	No. Cows	Test	Lbs. B. F.
Bruml & Thorp	18	5.1	36.2
C. Holman	36	3.8	35.6
J. D. Sullivan & Son	15	4.3	33.0
County Farm	32	3.4	31.5
E. M. Thorp	9	3.7	29.9

Owner, Name of Cow	Breed	Lbs. of Milk	Test	Lbs. of B. F.
County Farm, 14	G. H.	1995	3.8	75.8
C. Holman, 13	G. H.	1758	4.2	73.8
Mrs. E. C. Clowes, 54	G. H.	1590	4.0	63.6
County Farm, 32	G. H.	1704	3.4	57.9
C. Holman, 10	G. H.	1860	3.0	55.8
County Farm, 127	G. H.	1524	3.6	54.8
J. V. Brown, Polly	G. H.	1230	4.4	54.2
N. H. Locke Company, 76	Jersey	1349	4.0	54.0
G. C. Joppini, 11	G. H.	1488	3.6	53.7
J. D. Sullivan & Son, 72	G. H.	1257	4.4	53.3
V. C. White, Lucile	G. H.	1363	3.9	53.2
N. H. Locke Company, 168	Jersey	1106	4.8	53.1
Gottshall & Magruder, Pontiac	Holstein	1437	3.7	53.1
Gottshall & Magruder, Josie	Holstein	1228	4.3	52.8
Bruml & Thorp, Bess	Jersey	965	5.4	52.1
V. C. White, Lucile	G. H.	1110	4.6	51.1
R. W. Fisher, 22	G. H.	1335	3.8	50.4
Gottshall & Magruder, Peiterji	Holstein	1253	4.0	49.9
C. Holman, Crooked Tail	G. H.	1554	3.2	49.7
Bruml & Thorp, Anomie	Jersey	1029	4.8	49.4
E. M. Thorp, Fern	G. H.	1410	3.5	49.4
E. M. Thorp, Nelly	G. H.	1020	4.8	48.9
C. Holman, Old Jersey	G. J.	1389	3.5	48.6
Gottshall & Magruder, Spring Farm	Holstein	1313	3.7	48.6
N. H. Locke Company, 232	Jersey	1058	4.6	48.4
N. H. Locke Company, 290	Jersey	589	8.2	48.3
C. Holman, 24	G. H.	1515	3.1	47.0
Bruml & Thorp, Miss B.	Jersey	959	4.9	47.0
J. D. Sullivan & Son, 71	G. H.	1251	3.7	46.3
Mrs. E. C. Clowes, 61	G. J.	1100	4.2	46.2
Oak Grove Dairy, Irish	G. J.	996	4.7	46.1
R. W. Fisher, 7	G. J.	765	6.0	45.9
Mrs. E. C. Clowes, 14	G. H.	1311	3.5	45.9
N. H. Locke Company, 393	Jersey	893	5.1	45.6
Mrs. E. C. Clowes, 10	G. H.	738	6.3	45.6
County Farm, 88	G. H.	1341	3.4	45.6
J. D. Sullivan & Son, Pet	G. H.	1137	4.0	45.5
O. Fowler, Jane	G. J.	810	5.6	45.4
N. H. Locke Company, 115	Jersey	794	5.7	45.4
V. C. White, Pansy	G. J.	837	5.4	45.2
N. H. Locke Company, 162	Jersey	1125	4.0	45.1

Three World's Records for Butter Production

When Aaggie Acme of Riverside 2nd completed her second yearly test for milk and butter production on November 10 she became the holder of three world's records for butter production, thus adding further renown to the great herd of registered Holsteins owned by A. W. Morris & Sons Corporation of Woodland.

On strictly official test Aaggie Acme of Riverside 2nd produced 1167.96 pounds of butter in 305 days and 1331.41 pounds in 365 days, both world's records, displacing the former title holder in both divisions, Keystone Beauty Plum Johanna. Also it gives Aaggie a total of 2426.51 pounds

butter in two consecutive years, another world's record.

The new champion is a daughter of King Mead of Riverside, whose daughters have become famous for their splendid individuality and ability to make large short time and yearly records of both milk and butter. As a group the daughters of this sire are unique in Holstein history, for of the seven that have completed yearly records the entire number made an average of over 4 percent butter fat test during their long time tests, and only one of the seven fell slightly below 4 percent on her individual record.

A comparison of the two yearly rec-



Don't wait till next spring to get your new

DE LAVAL

With butter prices soaring no cream producer can afford to go another month without a New De Laval Cream Separator.

This is true whether you have no separator, or an inferior or half-worn-out machine, or even an old style De Laval.

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See the nearest De Laval agent right away and let him show you what the De Laval will save for you. If you do not know the local De Laval agent, write direct for any desired information.

De Laval Dairy Supply Co.  
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Large Type Poland Chinas



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From my herd of 75 registered Holsteins, can spare ten yearling heifers and heifer calves splendidly bred, closely related to 30 and 40 pound cows.

One bull calf, whose eight tested nearest dams averaged 31 pounds weekly butter record.

One service bull from 29 pound dam. 102 pounds milk one day. His two nearest dams through sire yearly record average 21,000 pounds milk and 812 pounds butter.

Write me for low prices and further information.

Frank Reed Sanders, Mesa, Ariz.



Pure and Cross-Bred Rambouillet Range Sheep Also Breed Hampshires.

Mutton and Wool

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priced by a member of the firm.  
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is a positive antiseptic and ger-  
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To keep thoroughly posted subscribers should read  
every advertisement in the California Cultivator  
columns.

ords of Aaggie Acme of Riverside 2nd  
is interesting because of the fact that  
one large record was made under semi-  
official test while the world's records  
were made under strictly official test.  
Last year under semi-official test she  
produced 19,577.3 pounds milk con-  
taining 876.08 pounds fat, or an av-  
erage test of 4.47 percent butter fat.  
This year on strictly official test she  
produced 24,682.7 pounds milk con-  
taining 1065.12 pounds fat or an av-  
erage test of 4.31 percent butter fat.  
It will be noted that there was a very  
slight variation in the percent of fat  
in the two tests, and this might well  
be accounted for by the fact that on  
the slightly lower average of her last  
year's official work she produced over  
5000 pounds more milk than during  
her previous test.

Great records are developing with  
increasing frequency in the family of

Aaggie Acme of Riverside 2nd. Her  
sire is full brother to the dam of Miss  
Valley Mead De Kol Walker, 36.81  
pounds butter in seven days as a jun-  
ior three year old, the present high  
seven day cow in California and also  
the world's record holder in the eight  
months after calving division of the  
senior two year old class. Also the  
dam of Lady Hiske Walker, 34.25  
pounds butter in seven days as a jun-  
ior four year old, the California record  
in class, is a sister to both the sire  
and dam of Aaggie Acme of Riverside  
2nd, all three of them and the dam  
of the 36 pound heifer having been  
sired by Juliana King of Riverside,  
son of the former world's record two  
year old Juliana De Kol.

Two sisters of the new champion  
are now well along on yearly test and  
give high promise of exceeding 1100  
pounds butter and 1000 pounds butter,  
respectively.

## Field Notes from the Live Stock Men

Over 75 per cent of horses offered  
at sales are now being absorbed for  
war purposes.

Anyway the shortage of sugar will  
teach some folks how good many  
things taste without it.

At the Masterson sale of Herefords  
in Iowa in October Vernet Fairfax 5th,  
a three year old, sold for \$1610.

Five members of the Chicago Milk  
Producers' Association have been in-  
dicted for conspiracy in price fixing.

At the Crownover sale in Iowa late  
in October 53 head of Belgian horses  
sold for \$98,770, an average of \$1864.

Farceur, a champion show Belgian  
horse, sold at a recent auction of  
draft stallions for \$47,500. This is the  
highest price ever paid for a Belgian  
in this country.

The Virginia Hereford Breeders As-  
sociation has been organized. The  
board of directors will hold its first  
meeting at the International in Chi-  
cago.

At a public sale of Herefords at  
Amarillo, Texas, there were 59 bulls  
sold for \$25,815, or an average of  
\$437. Females—this includes young-  
sters—averaged \$364.

Pure bred Angus cattle recently  
sold at auction in Missouri at the av-  
erage of \$736. The top-notch went  
at \$2650. He was Blackcap 59th,  
calved in January, 1915.

Illinois Farmers and Grain Dealers'  
Association recently met and elected  
officers for the coming year. There  
were 351 farmers cooperative eleva-  
tors represented by 3000 delegates  
present.

A great showing of cattle, especially  
of Shorthorns and Herefords, was  
made at the Eastern States Exposition  
held at Springfield, Massachusetts, in  
October. Daily attendance at this  
show ran close around 30,000 people  
for the entire nine days.

The British government has releas-  
ed 95,000,000 pounds of Australian and  
East Indian wool for use in this coun-  
try. Much of this has already been  
shipped, and has had a tendency to  
weaken the wool market slightly. Un-  
washed Ohio wool is now quoted at  
68 cents and unwashed Delaine at 75  
cents.

Secretary Wayne Dinsmore of the  
Percheron Society of America re-  
ports that not 40 per cent of mares  
capable of breeding have been bred  
this year. He sounds the warning  
that breeders will make serious mis-  
take if this condition is not corrected.  
On the other hand it is asserted that

acute shortage of first class herdsmen  
in all lines of live stock breeding, and  
many wealthy owners of show herds  
have been scouring the country east  
and west to secure men to either fill  
places vacated by the war draft or  
places newly created by the owners  
themselves.

H. E. Vogel, Fresno County, has  
been building up a remarkable herd  
of Holstein cattle for years and is  
about ready to officially test and also  
to try the show game. He is an un-  
usually keen judge of a dairy animal  
as a visit to his ranch will prove. He  
is milking more than 80 head of reg-  
istered stock with machines and says  
they are giving the best of results. He  
is using three herd bulls, all of them  
good individuals and from heavy pro-  
ducing strains. One is a son of Segis  
Pontiac De Kol Burke, and the other  
out of a 29 pound dam. The best in-  
dividual on the ranch is the young son  
of Admiral Burke, and Mr. Vogel is  
anxious for his first daughters to  
freshen so he can put them on test.

W. J. Higdon, Tulare County Hol-  
stein breeder, has been fortunate  
enough to engage the services of H. L.  
Redd, formerly with Davis at Granger,  
Washington, to take charge of his test  
cows. Mr. Redd was with Davis over  
five years, in which time he made  
some fine records with the Davis cows.  
He is, not a college graduate but a  
man of practical experience and  
knows his business. When Mr. Hig-  
don bought the high priced string of  
Holsteins from Davis last year he  
tried to secure Redd at that time, but  
it was only a few weeks ago that his  
efforts were successful. With this ex-  
pert in charge of his best cows Mr.  
Higdon has reason to hope that he  
will add more 30 pound records to  
some of his best cows.

L. A. Denker, Los Angeles County,  
showed Hampshires at the state fair  
this year for the first time and cap-  
tured a long string of prizes. He has

## A "365" Day Liniment

**YOU ARE SAYING TO YOURSELF—**  
"If I only knew of something to stop  
that Backache—help my Rheumatism—cure my  
Neuralgia, I would send and get it at once."

**Get It.** Gombault's Caustic Balsam will give you immediate  
Relief. A Marvelous Human Flesh Healer and a never failing  
remedy for every known pain that can be relieved or cured by  
external applications. Thousands testify to the wonderful healing and  
curing powers of this great French Remedy. A Liniment that will  
soothe, heal and cure your every day pains, wounds and bruises.

## Gombault's Caustic Balsam The Great French Remedy Will Do It

**It Helps Nature to Heal and Cure.** Penetrates, acts quickly, yet is  
perfectly harmless. Kills all Germs and prevents Blood Poison. Nothing  
so good known as an application for Sores, Wounds, Felons, Exterior  
Cancers, Burns, Carbuncles and Swellings.

"I had a bad hand with four running sores on it. The more I doctored the  
worse it got. I used Caustic Balsam and never needed a doctor after that."  
—Ed. Rosenberg, St. Ansagt, Ia.

**Mrs. James McKenzie, Edina, Mo., says:** "Just ten applications of  
Caustic Balsam relieved me of gonorrhea. My husband also cured eczema with it,  
and we use it for corns, bunions, colds, sore throat and pain in the chest."

**A Safe, Reliable Remedy for Sore Throat, Chest Cold, Backache,  
Neuralgia, Sprains, Rheumatism and Stiff Joints.** Whenever and  
wherever a Liniment is needed Caustic Balsam has no Equal.

**Dr. Higley, Whitewater, Wis., writes:** "I have been using Caustic Balsam  
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A liniment that not only heals and cures Human Flesh, but for years  
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**THE LAWRENCE WILLIAMS CO., Cleveland, Ohio**



a splendid hog ranch a few miles from Los Angeles and reports unprecedented demand for Hampshires. He sold a spring gilt to E. M. Smith, San Bernardino County, for \$100; M. L. Mohan, Los Angeles County, two gilts at \$100 each; two gilts and young boar to a breeder in Santa Clara County, and two gilts to The Guadalupe Mining Company for \$450. Mr. Denker just received a young herd sire from the East for which he paid \$1000. His name is Director, and he is by Mose Messenger and he by Messenger Boy, the only boar of the breed who was never defeated in the show ring. He is one of the finest specimens of a Hampshire boar we have seen on the coast and if nothing happens he will be exhibited at next year's shows.

A. A. Hartshorn, eminent Holstein breeder who was a visitor to California recently, has just purchased a young herd bull from the Hardy Company, of Ontario, Canada, home of the

#### GRAZING FEES NOT INCREASED

No increase will be made in the grazing fees on the national forests for the present, was the announcement made recently by the secretary of the department of agriculture, D. F. Houston, in letters to the officials of the American Livestock and the National Wool Growers' association. The decision to defer action looking toward the increase of the grazing rates on the national forests was made because of present war conditions and the fact that the stockmen have been called upon to overcome many difficulties in order to keep up the country's supply of beef, mutton, hides and wool.

#### HOLDING THE MIRROR UP TO NATURE

Honest John, the farmer, was a rather pious but close-fisted old fellow. A custom of four families in his community was for each to kill a



Little Mesa

Blue ribbon winner and junior champion at recent state fair, Little Mesa, 92772, property of L. A. Denker, Los Angeles County.

famous May Echo Sylvia, holder of several world's records, including day's milk production of 152 pounds. Mr. Hartshorn says this cow will freshen again in December and will be put on test. Her owners expect her to break more records this time as it is the first time they have been able to dry her up. The calf Mr. Hartshorn bought is King Echo Sylvia Model, out of Belle Model Pietje 2nd, 22 pounds butter as two year old, daughter of Belle Model Pietje who has three records above 35 pounds. His sire is a son of May Echo Sylvia who made 1003 pounds milk and 41 pounds butter in seven days. As his seven nearest dams average 35 pounds butter in seven days, Mr. Hartshorn considers him the most valuable young sire of the breed.

Falfadale Farm of Perris has just purchased from Peters, Lamson & Walker of Devore, San Bernardino County, the highest priced pig ever sold in that section. This boar is a son of the 940 pound Iowa state fair grand champion, Great Wonder, and out of PLW's great brood sow, Model Lady 4th, the second prize sow at Iowa last year. This sow and her litter mate are the mothers of more high priced Golden Model boars than any other sows, having produced a number of boars selling at from \$800 to \$2500 in the last year. In this young sire, the Falfadale Farm has an ideal mingling of Golden Model and Ohio Chief blood which should produce them championship material when crossed on their Grand Model sows. The price on this pig was \$150 besides PLW's reserving the second choice of his 1918 pigs. Peters, Lamson & Walker are retaining a litter brother and two litter sisters in their herd. Both firms are members of the Southern California Duroc-Jersey Association.

pig and divide it up so that all might have fresh pork about once a month during the cold season.

When his fine pig was ready, John confided to one of his closest friends that pork was mighty high and he really needed it all for his own large family. And so it was planned that the pig should be butchered and hung out to cool and in the night taken down and put away for winter's use and John could truthfully claim that it was stolen. The trick worked, but the three neighbors feasted on fresh pork while John frantically explained to his friend that the pig was actually stolen. "That's right," the friend replied, "just stick to it." "But I tell you it was stolen." "Sure; my but you are some actor. They'll all believe it."—F. L. Kern.

#### REGULATING THE SEPARATOR

The variation of the speed of the separator bowl causes a difference of from one to 13 per cent in the test of cream. The amount of milk allowed to flow through the bowl from one-half to full capacity makes a difference of from one to six per cent. The amount of acid in the milk causes an irregular variation in the test of cream, depending upon the amount it contains. When it reaches a high point, three- to four-tenths per cent for instance, and the separator is used continuously for an hour or more, it will eventually clog the same as in the case of cold milk. The cream will then become thicker until the separator is entirely clogged. The extent of the clogging will depend on the amount of acid in the milk and the size of the machine. The higher the acidity and the smaller the machine the sooner the separator will clog.

Fly a flag on the farm and teach the children what it stands for.

# SHORTHORNS

## Paicines Ranch Company

Offers for Fall Delivery, both Registered and Unregistered

### Weanling Bulls and Heifer Calves

ENTIRE HERD TUBERCULIN TESTED

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## The Farmer's Concrete Mixer SHELDON Batch Mixer Price \$11.50 Up

The Sheldon was designed especially for the farm. Highly praised by users. Farmers everywhere call it the ideal mixer. Used today all over the United States. A big success. Small enough to be easily moved—big enough to keep 6 men busy. Low in price. Build your own silo, tanks, troughs, floors, foundations, buildings, etc., out of concrete with a Sheldon Batch Mixer.

#### Read What These Sheldon Owners Say

I and my hired man laid a feeding floor for my hogs, 24x24, in one day; also put floor in my cow barn. My neighbor liked it so well I am not able to keep it at home.—ANDREW CHRISTENSEN, Hancock, Minn., R. 1.

We have used the mixer during past year for putting in cement foundations for a complete set of farm buildings, including silo, and liked very much.—DANA WRIGHT, Jamestown, N. D.

Last year I bought a cement mixer from you with which I am well satisfied. It did not take long for it to pay for itself and I surely can recommend it to anyone needing a big mixer at a small price.—Wm. F. PARR, Martin's, Ill.

I am more than busy with my Sheldon Concrete Mixer. Have more work than I can do. Let \$10 a day when I work out.—JESSE L. WITKE, Wellsville, N. Y.

The machine works fine. Have already got the job of mixing concrete for the bridge in this township.—JOHN ROSE, Spartansburg, Pennsylvania.

Last spring we purchased of you a set of castings to make a concrete mixer. It was constructed per the plans furnished and it surely worked great.—D. M. BRUBAKER, Freeport, Ill.

## FREE PLANS

Make your own concrete mixer. You can do it at a cost so low you can not afford to mix concrete by the shovel method. Along with our iron parts we send Free Plans and permit for making your own machine. A good way to get a practical mixer at a small expense. Or, we will sell you the complete machine, ready built.

**Make Big Money at Concrete**  
If you buy a Sheldon Mixer for your own use, you can make many times its cost in a season by renting it to your neighbors. Or, if you want to go out with the mixer on contracts, you can easily earn \$5 to \$20 a day. Our customers are doing it right now. The jobs go to the man with a Sheldon Mixer every time.

**Write for Our New Free Catalog**  
Shows our full line of mixers which are sold direct to you on strong guarantee. Thirty days trial privilege. No other like it. Patented. Two styles, hand and power. Mixes 2-12 cubic feet a minute. One man can operate it, but it will keep 2, 3, 4, 5 or 6 men busy. Continuous chain drive. Tipping dump. Easily and quickly moved. All parts guaranteed. Does work equal to \$400 mixers—sure to rot the catalog. Write today.

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#### We Ship Direct from San Francisco

We have just warehoused a carload of Sheldon Mixers in San Francisco to save you freight and time—can deliver your Mixer in three days if necessary.

No Long Wait—Lowest Freight

The Sheldon will pay for itself on first small job. Takes the backache out of concrete. Makes possible those many small improvements that add so much to the value of your land.

## Try It 30 Days Free Don't Send Any Money

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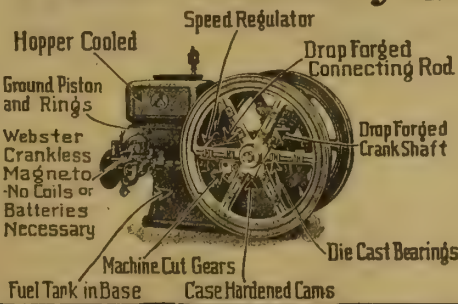
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operates on a wonderful leverage principle. One man alone handles and operates. Just a few pounds on the handle means tons on the stump. When stump starts to throw machine into high speed and out comes the biggest stump, roots and all. Positively no other machine like it. Send for most valuable Stump Puller Book ever published—pictures—prices—terms—all about our Special Agents' Proposition—all FREE. Write today.

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# PERFECTION MILKER

## The Labor Problem Solved



**ONE** man with a Perfection Milker can do the work of three men at milking time. In case of emergency your wife or your little boy or girl can do it.

The Perfection milks as the calf does—suction, downward squeeze, release. The Perfection is simple. It does not easily get out of order. No harness to bother with. The Perfection teat cup fits all sizes of teats. The pail is made of "Wear-Ever" aluminum, easy to clean and non-rusting.

L. C. Richards of Grand Forks, No. Dak., says:

"The Perfection Milker is doing fine. We milk 40 cows in an hour easily and the men like the work. With the present scarcity of help, I am afraid to think of what might happen if we did not have the Perfection."

C. E. Van Meter of Loveland, Col., says:

"The Perfection Milking Machine is giving entire satisfaction. We are saving one man's work with it on 20 cows, which will pay for the machine in 10 months."

Let the Perfection Milker relieve you of the labor problem and you will find that the world will seem much brighter.

Write for your free copy of our new illustrated catalog. You will find in it much valuable information.

**Perfection Manufacturing Company**

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**POWERFUL GASOLINE ENGINE**  
Special Cooler

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Buick Without Starters

Feed Grinders, Irrigation Pumps, Concrete Mixers, Corn Shellers, Pea and Bean Hullers, Hay Balers, Peanut and Bean Thrashers, Wood Saws And All Farm Machinery a Stationary Engine Will Run.

Only \$35.00 and guaranteed satisfactory or your money back. Order direct and get an equipment for your fall work. You run no chances.

Reference: Capital National Bank, of St. Paul

Big Illustrated Circular, but order now—the guarantee protects you.

**ONLY \$35**

**THE LAWRENCE AUTO POWER EQUIPMENT** turns your auto into a powerful gasoline engine. It is the most economical engine you can buy—1 to 14 H. P. at a cost lower than the smallest stationary engine. All the power you need whenever or wherever you want it in less than a minute's time. Power comes direct from auto engine and saves wear on the gears and differential—less strain and wear on your car than when driving on the road. The

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## Hollow-Hill Farm Guernseys

We are offering some bull calves from 4 to 8 months old out of imported and A. R. Cows and by

**KING OF HOLLOW-HILL 25876**

The sire is a son of Itchen Daisy's May King of Langwater, which was recently sold to a California breeder for the record price of \$8000, and of Caroline of Chilmark 24812 which has just finished an A. R. test with 15,185.9 pounds milk and 722.97 pounds butter fat.

King of Hollow-Hill combines the May Rose blood of Imp. Itchen Daisy III 15630 and Dolly Dimple 19144 with that of Imp. Mashers Galove 8572, Imp. Gora's Governor of Chilmark 8971 and Governor of the Chene 1297 P. S.

The prices on these calves are reasonable.

212 R. F. D. 1 **HOLLOW-HILL FARM** COLTON, CAL.

**10**  
**2 Year**  
**Old**  
**BULLS**

**SHORTHORNS**

**H. L. & E. H. Murphy**  
Perkins - - - California

**8**  
**BULL**  
**CALVES**

## Veterinary

Answers in this column by Dr. Wm. Petrie, 2714 South Harvard Blvd., Los Angeles, are without charge. For immediate mail answer remit \$1.00. In writing questions give full symptoms or particulars of injury of animal.

### Contagious Conjunctivitis

We have some young calves about three months old. They are fed skim-milk and alfalfa hay and run in the field during the daytime. They have sore eyes that are weak and watery. There is a white spot in the ball of the eyes. What is the cause and the remedy?—Subscriber, Linne.

It is due to a germ and is contagious. It usually affects most of the herd when once started. The light aggravates it very much, and the animals should be put in the stable and the windows darkened. In a week they will begin to improve and usually all recover their sight as good as before. It is well to bathe the eyes once a day with warm water that has some borax in it, three or four ounces to the gallon of water.

### Urinary Trouble in Hogs

Please advise me what is wrong with my hogs and what the remedy is for eliminating the trouble. They fall off rapidly and stand humped up, urinating continuously. It seems to affect only the barrows. As the cases continue they urinate blood. They all have been fed on alfalfa but some were fed grain to fatten them. Their quarters are clean? None have died yet.—Subscriber, Dyer, Nevada.

This is caused by too much lime in the water they drink. The lime causes a deposit in the sheath and nearly fills it up, making it sore, which causes the bloody urine. Turn the pig on his back and squeeze the lime out of the sheath and also wash it out with warm water. Use a large syringe and plenty of warm water with a little soap in it. The sows are not bothered because there is no place for the lime to accumulate but passes off freely with the urine. Give each a teaspoon of baking soda once a day in the feed; it will keep the

lime in solution and it will pass more freely.

### Paralysis

I have a five weeks old pig that drags his hind parts and seems to have no control of them. He is an orphan and has been fed new milk and a little rolled barley. What can I do for him?—Subscriber, Inyokern.

Give him warm, dry quarters to sleep in at night and get him out into the sunshine during the day. For treatment take several pieces of wire about the size of hay baling wire a foot or more long. Heat them red hot on one end and while still red take one at a time and puncture the skin and about half an inch into the fat beneath, along each side of the spine and over the hips. Make eight or ten punctures on each side. This will soon heal and the pig will probably walk all right again. This is the treatment recommended by the the United States department of agriculture.

### Cribbing

I have a horse that has the habit of taking hold of the fence with his upper teeth and then pulling back and in so doing letting the teeth slip off the fence and grunting. Can you tell me if this is a symptom of some disease and what to do for it?—Subscriber, Orange.

This is more of a habit than a disease. It is caused by idleness and may be accompanied by indigestion. It is almost impossible to stop it. While cribbing they usually suck some air into the stomach, which causes more indigestion. To prevent him doing it buckle a wide strap tight around the neck close to the head, but this must be loosened while he is eating or drinking. Some have been cured by cutting a muscle in each side of the neck just back of the jaw which deprives him of the power of drawing the head down and back. Only a veterinarian who knows the anatomy of the horse can do this. If you have such a man in your vicinity he may be able to do it for you.

## The Five 'G's of Poultry Feeding

Written for California Cultivator

By Jean A. Koethen



**E** SSENTIALS of poultry feeding, not only for eggs, but for meat and growth, were never more concisely stated than by the man who said

there are five g's that must enter into all feeding; grit, greens, grubs, grain and gumption. Here is the sum and substance of the balanced ration: grit for grinding; green stuff for ash and bulk and the mineral components which are necessary for regulating the liver and maintaining health; grubs for protein; grain for carbohydrates, that is, the fats and starches which make up the bulk of the body; gumption or common sense in the mixing and feeding of the ration. No matter how nourishing the ration or how perfectly balanced, it may still fail of the desired effect if it is not fed with regularity, with a careful eye for variety, and with continual regard for weather and the condition of the birds. It would be silly indeed to feed a fat hen as you would a thin one or an old hen past her best laying days as you would a pullet, and so we must place at the head of this list of g's the gumption which knows how to feed and when to feed, and which can, if necessary, take a very meager ration and feed it so wisely as to obtain ideal results. Wheat, except in its by-products, has already been stricken from our list of feeds; corn in any form is

out of the question save for those who raise it themselves; beef scrap will soon be as much out of the question as corn; fortunately we have always gumption left, and these gaps in the ration can and will be filled in by the ingenious feeder with other things nearly as good and perhaps quite as efficient in the end.

No one questions the importance of green feed for laying hens, and it is to green feed that we must look to a great extent for the filling of the gap left by lack of wheat and corn. Of all green feeds clover is the best, for it contains less water than alfalfa, considerably more sugar and starch, more ash and it has a slightly higher protein content. For some reason clover has never been largely grown in California. Probably there are some districts where it cannot be successfully grown, but there must be places where it could be grown as well as alfalfa. With a good field of clover to peck at, a flock of hens ought to be able to live and lay on a minimum supply of grain and meat.

The same thing is true of alfalfa, but in a more limited degree. A flock with unlimited alfalfa range would be almost independent of other food, for alfalfa contains protein, fat, carbohydrates and ash. Where the unlimited alfalfa range is to be found is another question, depending for its answer on



the number of hens to be fed. For a commercial poultry farm such range is absolutely out of the question; for the small farm flock it is quite possible. Most feeders cut their alfalfa and feed part of it in the moist mash when it is used, part of it alone, either in a vessel of water where it will be kept from wilting or in a trough or basket where it can be picked over and nibbled at will. Hens fed in this way never eat with the same enthusiasm that they show when allowed to forage for themselves, but it is the best that can be done and does very well if only the birds have all they want.

Next to alfalfa and clover I should put kale, because this is something of which so great a quantity can be grown on so small a patch of ground that it is within reach of every feeder, but the hens, alas! do not eat it as they do alfalfa and the more succulent greens, and it contains only about half as much protein. For this reason it is easy to see that kale, while answering the requirements of green feed, is not a substitute for grain or animal food.

Potatoes have been recommended as a substitute for grain, but they are not cheap enough in California to be seriously considered, except in the case of those which are too small to morning mash, small potatoes, potato parings, pumpkins, carrots and turnips, well cooked and thickened with middlings, ground oats or mixed mash, are ideal. Fed alone, and raw, they are unpalatable to most fowls. Just how far vegetables can be substituted for grain in supplying protein and carbohydrates is a question no one has answered yet. It remains for some enterprising investigator to put his hens on such a ration exclusively and note results.

It is not necessary to enlarge upon the importance of grit in the ration. In fairness to the hens it must be said that they are sometimes very clever in finding a substitute for grit. On soil containing considerable gravel or decomposed granite, grit is not necessary. The hens get all they need from the soil and from the clam or oyster shell which must always be before them to furnish lime.

It must always be remembered that the two fundamental needs of every animal are heat and material for building up the body. When all material for building new tissues, if the fowl is young, and for keeping the body warm, has been supplied, the hen

is ready to begin laying provided more material is given her. It is to meet these requirements that grains have been relied on. Grains are not strong in protein, but all contain some. What they contain, and what the hen needs just as much as she needs protein is starch and fat, both of which are absolutely necessary to the building up of the body. Young birds can use more starchy food than laying hens, because they have more growing to do, but they also require a good deal of protein for feathers and for the deeper tissues. A hen on a diet of hard grain alone, if she eats enough to supply protein for eggs, will soon be too fat to lay. For example, corn used to be and still is in some states the chief feed for poultry. Indian corn is about 10 per cent crude protein to 70 per cent starch and sugar. Wheat, the best of all grains, is from 12 to 17 per cent protein to 65 per cent starch and fat. Wheat is better than corn, but neither grain contains enough protein to make a properly balanced ration. For this, something else must be added.

Nobody has yet been able to exactly define protein or to isolate and examine it. It consists of various nitrogenous elements, yet we cannot call it nitrogen. White of egg and lean meat consist largely of protein. Hens that are insufficiently supplied with protein do not lay many eggs. Young chicks deprived of it neither grow nor feather as they should. Protein does the work of fats and starches when it must; nothing takes the place of protein.

Protein does not exist in sufficient quantities in grain so something containing it must be added to the ration. This something is animal food such as beef scrap or meat meal, or the cheaper fish meal. Since milk contains a large amount of protein, milk in any form—sour milk, sweet milk, buttermilk, dried milk or cottage cheese—may be used instead of the meat meal. It is easy to see how from 15 to 20 per cent of such a high protein feed added to such ground grains as corn meal or ground barley must raise the protein content of the whole. A balance of 1:4 to 4½, that is, one part protein to from four to five parts carbohydrates and fats, has been found most satisfactory for laying hens in this state. War economics requires that hens lay the year round and lay a good many eggs. For this the balanced ration is a necessity.

## 6th National Egg Laying Contest Closes

By C. T. Patterson, Director

**T**HE Egg Laying Contest at the Experiment Station of the University of Missouri has closed. Eighty-one hens produced 200 eggs or more each during the year. Eight pens produced 1000 or more eggs each during the year. One pen of five White Wyandottes produced 1226 eggs during the year.

All hens in the contest averaged 175.2 eggs each; all solid colored hens averaged 177 eggs; all parti-colored 173; black 179; white 183; black and white 172; black and red 164; birds with single combs, 173; birds with rose combs, 181; birds laying white eggs, 173; birds laying brown eggs,

176; birds with smooth shanks, 175; birds with feathered shanks, 171; Rhode Islands, 188; Wyandottes, 184; Leghorns, 178; Plymouth Rocks, 175; Anconas, 174; Sussex, 171; Langshans, 171; Orpingtons, 162; Russian Orloffs, 159; Buckeyes, 152; Fluffs, 151; Minorcas, 137; heaviest hen in each pen, 180; lightest hen in each pen, 173.

One hundred ninety-one hens which began laying during November, 1916, averaged 185.8 eggs; 47 which began laying during December, 1916, averaged 156.2; 42 which began laying during January, 1917, averaged 160.6; 5 which began laying during February, 1917, averaged 141.2; 5 which began laying during March, 1917, averaged 111.2.

Three hens which quit laying during June averaged 116 eggs; five which quit laying during July averaged 133.6; 32 which quit laying during August averaged 141.7; 79 which quit laying during September averaged,

162.8; 171 which quit laying during October averaged 188 eggs.


The following table gives the record of each variety for the year:

Variety	No. Hens	Pct. Broodiness	Pct. Mortality	Average Eggs	No. 200-egg Hens
Barred Rocks	15	85	15	173	3
White Rocks	20	170	0	195	11
Buff Rocks	10	290	0	152	1
Part. Rocks	10	330	10	164	1
S. C. Reds	15	275	0	192	7
R. C. Reds	25	280	0	177	8
S. C. R. I. Whites	10	270	0	193	4
R. C. R. I. Whites	5	20	20	226	5
White Orpingtons	15	400	15	154	2
Buff Orpingtons	10	530	10	161	0
Black Orpingtons	5	240	0	188	2
S. C. W. Leghorns	45	15	2	183	16
S. C. Buff Leghorns	5	60	0	168	0
S. C. Brown Leghorns	15	260	15	172	4
R. C. Brown Leghorns	5	0	0	166	0
White Wyandottes	20	100	10	190	7
Col. Wyandottes	5	420	0	162	1
Lt. Sussex	5	400	0	171	1
S. C. W. Minorcas	10	0	30	137	1
Anconas	20	20	15	174	3
Buckeyes	5	580	0	152	1
Black Lang.	5	380	0	171	1
Russian Orloffs	5	0	0	159	1
Mo. W. Fluffs	5	20	40	150	0

### High Record Hens

Pen 35, White Wyandottes owned by J. F. Jordan, of Crane, Missouri, won the \$50 cash and silver cup, by laying 1226 eggs, which is an average of 245 eggs each. This is the highest

average ever made by a pen at this place. Pen 49, White Plymouth Rocks owned by Otto Zimmerman of St. Louis, won second place with a record



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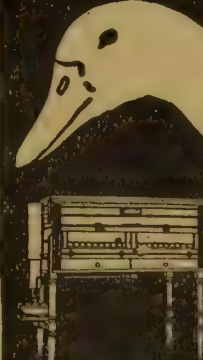
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Walking plows, \$4 to \$14; old style 2 gang 12-in. mouldboard will do work of \$125 plow, \$28; 2 gang Solid Comfort Syracuse, \$58; two mowers, \$28, \$35; 10-ft. rake, \$22; 5-foot Fresno, \$12 to \$14; two-wheel scrapers, bone grinders, lawn mowers, 150 new discs for plow, half price. Harrows, cultivators, ¾-in. cable 6c; belting, sundries. DEMMITT CO., downtown office, upstairs, 120 N. Main. Yards, 816 Yale, Los Angeles.

**Stocks and Dies** to cut pipe from ¼-in. to 2-in. pipe; pipe cutters and pipe vises and gasoline furnace all in good condition. No ranch should be without their tools. OTO F. STILLE, 1224 3rd Street, San Diego, Cal.

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**For Sale**—1914 Samson Tractor, size 6-12 with extension. Good condition, \$200. Oscar C. Harms, Duarte, Cal.

**Disk Plows**—Rolled Cold. Auto trailers built to order. J. O. Parrish, 359 South Garey Pomona, Cal. Phone 3132.

### LIVE STOCK

**For Sale**—Highly bred Kentucky jack. Black with white points, five years old this winter. Good height, weight and length. Bought of Ed Bradley, Trenton, Ky. Eligible to registration. He is by Silver Crown No. 2652, by King George No. 3189, by Silver Crown No. 79; first dam, Black Anna No. 3984, second dam, Rox Anes No. 149. J. C. Joplin, Santa Ana, Cal.

**Butte City Shorthorns, Shropshires, Berkshires and Ponies** Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

**Registered Shires**—Blackhawk Stock Ranch. Importers and Breeders. Easton & Ward, Burlingame, Cal.  
**For Sale**—Eleven weanling mules, Chas. Hubbard, Riverdale, Cal.

### FARM LANDS FOR SALE

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We have large and small ranches in different parts of the state, improved and unimproved, that we can sell without payment on the principal for from two to five years. Write us for particulars. Pacific Coast Land Company, 725 Hearst Building, San Francisco.

**Oregon, California Government Lands.** Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

**For Sale**—7 acres of citrus land in the beautiful Monte Vista Valley. For further particulars write to C. G. Joppin, Ripon, Cal., R. F. D. No. 2, Box 29.

**Free List of Monterey County bargains.** Bohannon Realty Co., King City, Cal.

### POULTRY

**Mission Hatchery Chicks**—January-February. R. I. Reds, Barred and White Rocks, Black Minorcas, Anconas, Brown, Buff, White Leghorns. First class utility stock, well mated; hatched right, in our large modern plant. 12,000 chicks weekly. Price and quality talk, see our free circular about them. MISSION HATCHERY, Box 17, Campbell, Cal.

**Baby Chicks**—From my thoroughbred and carefully selected flock of S. C. White Leghorns. Orders booked now for January and February delivery at \$12.00 per 100, \$110.00 per 1000. March delivery \$10.00 per 100, \$95.00 per 1000. Correspondence solicited. J. R. Heinrich Poultry Yards, Arroyo Grande, Cal.

**200-290 Egg Leghorn, Wvandottes, Anconas, Rocks, Reds, Minorcas, Orpingtons, Chicks, eggs, weekly.** Booking few large, small orders, January-April delivery. 25 per cent reduction. Breeders, pullets, cockerels, half-price, \$3-\$10 profit per hen last year. C. Beeson, Pasadena, Cal.

**Spring Chicks**—We are booking orders now. S. C. White Leghorns, only selected and fully matured stock that is bred to lay used in the breeding pens, which assures strong and vigorous chicks. \$12 per 100; \$100 per 1000. H. A. Schlotthauer, Exeter, Cal., Route A.

**For Sale**—Petaluma electric incubator. New. Also Black Breasted Red Game and White Frizzle Bantams. Pair Silver pheasants and one golden male pheasant reasonable. Mrs. C. W. Kellogg, East Bakersfield, Cal.

**Day Old Chix**—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Cal.

**Poultry Wanted**—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

**Fine Rhode Island Red Breeding Cockerels.** Get them now. They'll be scarce later. John Reed, Route C, Box 36, San Jose.

**Baby Chicks (White Leghorns)** shipped on approval before remitting. No weak ones charged for. Schellville Hatchery, Schellville, Cal.

**"Eastman's Bred to Lay"** Barred Plymouth Rocks. Choice Cockerels. Fairmead Poultry Farm, Fairmead, Cal.

**Official 200 Egg White Leghorns** in Washington Contest. Charles Hudson, Escondido, Cal.

**For Sale**—Pearl Guineas and Golden Seabright Bantams. E. A. McKinley, Ukiah, Cal.

**Special Prices**—Silver Campines, Barron White Leghorns. J. D. Brubaker, Hemet, Cal.

**Golden, Silver, Amherst and Ringneck** pheasants for sale at Rahlmans Pheasantry, Santa Ana, Cal.

**Buff Orpington, Buff Leghorns, Bourbon Red Turkeys**—Breeding stock. The Ferris Ranch, S. Reservoir, Pomona, Cal.

### MISCELLANEOUS

**Pasture for Rent**—Good pasture now and for all winter for 600 head of cattle at (75c) seventy-five cents per month at Dutton Station, Solano County. Address F. N. Chaplin, Dutton's Landing, Solano Co., Cal.

**Famous Hairy Peruvian Alfalfa Seed**—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.

**For Sale**—"Pony Rig" black and white mare, good driver, good saddle, nice buff harness, rubber tired buggy, with canopy top for sale cheap for cash. Address B. Care Cultivator.

**For Sale**—One thousand feet 8-inch slip joint galvanized iron pipe, practically new. 20c foot; also 300 feet 1-inch casing, no screws 7c foot. All or any part. A. W. Schorn, Willows, Cal.

**To Reduce the high cost of living**, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 113 Clay St., San Francisco.

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**Lumber**—Sash—Doors—Plumbing—Supplies—Building materials of all kinds. New and second hand. \*A. R. W. shingles 55 cents per bundle. Send list for estimate. Dan P. (Mission Street) Dolan, 1620-1680 Mission Street, San Francisco, Cal.



WANTED

Wanted—Working foreman for San Joaquin Valley alfalfa and grain ranch who understands soils, irrigation methods and pumping plants, and can get bigger crops than the other fellow. Want clean-cut, sober, dependable man, a hard worker and good manager of men. Knowledge of dairy cattle and hogs desirable. Must show successful California record. Excellent living conditions, fine equipment, good future. Give age, full experience and salary expected or no attention paid. Address North, care of Cultivator.

Wanted, by established California company, ten men with rigs preferred to solicit and collect in Central, Southern and Northern California, prefer resident agents who can work part or all time, good pay and several weeks work to right parties. Address J. H. Yetter, 115½ North Broadway, Los Angeles.

Wanted Position as Ranch Superintendent, development, alfalfa and grain a specialty. Years of experience. Best of references. Address Arnold Taylor, Box 78, Terra Bella, Cal.

Wanted—Second hand hog wire, 26 or 30 inches high of a mesh suitable also for turning rabbits. S. N. Kemp, Box 531, Willcox, Ariz.

WANTED

Wanted—The best USED A. C. 5 h. p. motor that can be procured for cash, also a good 2 horse road grader, "The Glider make preferred." These machines must be in perfect condition, ready for service. Address Box 27, Lakeside, Cal.

Wanted—Position as manager of breeding and beef herd by graduate veterinarian who knows how. Address Park, Care Cultivator.

Wanted to Lease — 200 to 400 acres of proven bean land. State locality and terms. Address Box 25, Cultivator.

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# Household Department

## YOUR HARNESS

Written for California Cultivator  
By Ida M. Blake

You fret at the harness you have to wear  
And kick at the rocky road;  
There's many a burden, many a care,  
'Tis a very heavy load.

Remember the harness is one you've made  
As you traveled from year to year;  
Yourself to blame, the price you paid  
For warnings you would not hear.

'Tis the harness of habit that binds you so,  
Fettered with sin as a chain;  
Then take thy burden, to the Lord now go,  
If vict'ry and peace you would gain.

Let God take your hand, let Him lead the way,  
Then help a brother in need.  
The harness you'll lose as night follows day,  
By doing some kindly deed.

## WHEN MARIGOLD HELPED

By Rebecca D. Moore in Youth's Companion

**C**OME, Merry Gold!" called father. "Breakfast is ready."  
"I don't like that name," Marigold said to herself. "I am tired of being just a streak of sunshine, as father says. I want to be useful. And I'm going to be, too. I'll begin this very day."

As Marigold went down-stairs to breakfast, she thought, "I must begin with father before he goes to business. I'll slip his newspaper into his coat pocket. He likes to have it rolled up neatly."

"Why, here's the morning paper," said her mother, after breakfast. "Your father must have forgotten it."

"Dear me," Marigold exclaimed, "I must have given him the wrong one! This isn't a very good beginning, but I'll not give up. What shall I do next?"

She turned, and caught sight of grandma knitting by the window; the bright sunlight was streaming into her eyes.

Marigold sprang forward to lower the shade.

Crash! Down came the roller, shade and all. Marigold had forgotten that this was the one that she had been told to touch gently. Mother had to use the step-ladder, the hammer, and the tacks before she could get the shade back into its place.

"I'm afraid I'm not being a help at all!" Marigold sighed. "I've tried twice, and so far I've been only a bother."

She wandered up-stairs. The door of Cousin Alice's room stood ajar. On the bed lay a pretty, thin muslin dress trimmed with narrow lace. Marigold noticed that a yard or so of the lace was hanging from the flounce.

"Cousin Alice must be getting this dress ready for a party," thought Marigold. "Wouldn't she be surprised to find it all mended when she gets home from school?"

So Marigold got the work-box and set to work sewing on the lace with as fine, neat stitches as she knew how to take. Cousin Alice found her there a little later.

"Why, Merry Gold, what are you doing?" she exclaimed. I was ripping the lace off that old dress to trim something else."

Marigold rushed out of the room to

hide her tears. She had sewed long and carefully to please her cousin, and again she had failed.

"It's no use. I'm not going to try anymore!" she sobbed. But Marigold was a determined little girl, and after a lively romp with Chum, her pet spaniel, she felt like her merry self.

"I will try again," she declared, "but this time I'll be sure to find something really useful to do."

Marigold looked into the kitchen, and saw yesterday's ironing still hanging on the rack.

"The very thing!" thought Marigold. "I've heard mother say again and again that she dislikes putting the clothes away more than any other part of the housework. I can't make a mistake here."

So Marigold separated the clothes into neat piles, and carried them up-stairs. All went well until she started with the last load; a little white dress of her own was on top. She did not know how it happened, but at the head of the stairs she discovered that the dress was gone. She found that it had slipped off into the coal-hod, and that it was quite hopelessly smudged with black.

"It will have to be done all over," said Marigold, sadly.

She was going up to her room to have a good cry over her failures, when grandma called to her, "Would a little girl who was very thoughtful of her grandmother's old eyes like to hear a story?"

Marigold's favorite story was drawing to a close when Cousin Alice came into the room and dropped something into her lap. It was an oddly shaped little needle-case that Marigold had often admired.

"Marigold takes such pretty stitches," said Cousin Alice, "she needs this more than I do."

"And so I can depend on my Merry Gold's having my paper ready every morning," father said, when he came home.

Marigold hung her head. "I'm sorry that it was the wrong one," she whispered.

"The wrong one!" father repeated, in a surprised tone. "I was too busy to open the paper at all. I only knew that little daughter put it into my pocket."

Bedtime was the first time that Marigold had a chance to tell mother about the soiled dress.

"But having my little girl trying to be helpful makes up for the accident," mother said, as she gave her an extra kiss.

"I thought that everything went wrong, and that I wasn't any help," Marigold murmured, "but after all I believe I'll keep on trying."

## HOUSEHOLD QUERIES

### Hominy

Please give me a recipe for making hominy. Can it be kept any length of time?—Subscriber, Ferris.

The following recipes give directions for making hominy with lye and with soda. The hominy will only keep a few days unless it is canned.

Lye Hominy—Select sound, white corn. To every gallon of corn use

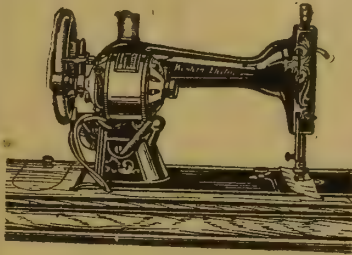
one tablespoon of concentrated lye. Cover the corn with water. Boil slowly until the skin comes off easily and the dark tips on the grains begin to come out. Wash thoroughly. Let soak (preferably over night) in cold water; drain; return to the kettle and boil in plenty of water until tender; put in a stone jar and set in a cool place and it will keep for several days. It may be canned and kept as long as desired.

Soda Hominy—Cover the corn with water. Add one tablespoon of baking soda for each cup of corn. Boil till hulls are softened and may be removed easily. Drain off the soda water and wash in cold water. Rub between the hands to remove any hulls. Wash repeatedly till all hulls are gone. Add boiling water to the corn and boil until thoroughly cooked.

## ADDRESS WANTED

The Cultivator would like to have complete address of B. L. Welch who wrote "Another Question" appearing in the household department of the issue of November 10. This contributor is entitled to one year's extension of subscription to this paper, but as we have not the address it is impossible to give it.

## Make it An Electrical Christmas



The Western Electric Sewing Machine, \$37.50. Will do the work of any machine three times its size. Is very handy—just the size to put away on a shelf in the closet. Complete with attachments and cover.



This cut shows the Lionel Boy, the trademark of quality in electric toys, complete sets in prices from \$5.00 to \$25.00. We have a large

stock of these goods, also Christmas tree strings, small toy motors, transformers, etc. Write for booklets.



We have on hand now a splendid assortment of table and reading lamps in various finished sizes, styles and prices, if you would be interested in these goods see them while the assortment is complete.



Electric portable heaters are especially practical if used to take the dampness and chill from a medium sized room or bath. They are economical and safe and make a most acceptable Christmas gift. This cut shows the Majestic at \$7.50.



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## More Ways to Use Dry Bread



CONTINUING suggestions made last week as to attractive means of utilizing scraps of dry bread, we give the following from our readers. Next week, ways of cooking beans.

Aside from the usual toasted, steamed and bread puddings, I cut into moderately sized pieces dry bread scraps, place in deep bowl over which pour scalded milk seasoned with salt and pepper to taste. A little butter improves the taste. Dish as for mush and milk. Diluted tinned milk is very good where fresh is unobtainable. I also grind through the food chopper crumbs which I use in connection with a little flour, for griddle cakes, or where there is no grinder soaking over night in milk or water is just as good. Crusts I often cube in small pieces and fry a limited amount in with the fried potatoes. Also when by ourselves I sometimes put pieces of stale bread over the top of potatoes or hominy. For biscuits I dampen with cold water, place in a covered bake pan and place in a moderately hot oven to thoroughly heat—just as good as fresh ones. By practice and thought one can soon learn to utilize every scrap. —Mrs. Chas. E. Dack, Fresno.

To quantity of stale bread crumbs add sufficient milk to soften, and a little salt. Just before using add an unbeaten egg and beat all thoroughly until very light. Fry as griddle cakes, and serve with maple syrup, or just with butter. —L. B., Orange

Of the various ways of utilizing dry bread scraps and crusts, I think using it as a dressing, is among the best.

Place all pieces to be used in a crock or pan, and if one has a soup or broth from chicken or meat, pour this over the bread, if not, then pour hot water over it. Soup or water must be hot. Cover and let steam till soft, then mash till all lumps disappear. Season with salt, pepper and butter or meat drippings to taste, add sage if liked; also a raw egg adds to the quality of it, but is not absolutely necessary. Be careful not to get too moist. Place in a well greased dripping pan, put in the oven and bake till browned on top and bottom. Serve with a good gravy, and you will find it almost takes the place of meat. If you are roasting a piece of meat or a chicken this mixture placed in the pan around it and baked will be fine.

In case you have no meat or gravy, here is a good substitute, for you must have gravy, with this dressing. Put in a frying pan some butter or lard, place pan over the fire. Stir in a large tablespoon of flour, keep stirring this until it is a nice brown, then add milk or water and milk and stir until it is thick. —Mrs. J. F. Delzell, Lindsay.

Pancakes — Grind crusts of bread soaked for a short time through food chopper. Take cup bread crumbs, one or two eggs, one cup sweet milk or cold water, one teaspoon salt, one teaspoon syrup or sugar, enough flour or meal to make a thin or thick batter, and baking powder, if one-half quart of flour is used take one heaping teaspoon, and I sometimes use a pinch of cream of tartar. Beat thoroughly. You can use more eggs if so desired but as eggs are high cream of tartar will take the place.

Croquettes — Grind bread crumbs and prepare any meats, (leftovers) for croquettes by also grinding through chopper and add one beaten egg (or more) to one-half quart meat, one-quarter teaspoon black pepper, one-half teaspoon salt, celery salt one-half teaspoon, butter one-half size of egg if desired, but good without, dip in the bread crumbs and fry in hot fat, after shaping round or oblong. You can use the bread crumbs in same way with mashed potatoes and leftover peas, by first rolling in flour, then in bread crumbs.

Other Uses — Let sliced egg plant stand all night in salt water, drain and wipe dry, dip in beaten egg and little milk, then in bread crumbs. Fry in hot fat, (not too much) to a light brown. You can use bread crumbs to stuff peppers or tomatoes and bake

same. —Mrs. Avis I. Leeper, Lancaster.

Bread Sauce — One-half cup fresh bread crumbs, one small onion, one-third teaspoon salt, one-quarter teaspoon pepper, two cloves, dash red pepper, one-half cup milk, one-half cup cream.

Stick cloves in onion, then cook it in the milk ten minutes; strain milk over bread crumbs and cream and seasoning, and simmer slowly for ten minutes, serve at once. This makes a nice sauce for roasted fowl.

Bread Omelet — One-half cup crumbs, one-half cup milk, four eggs, three-quarters teaspoon salt, one-eighth teaspoon pepper, one tablespoon butter, three tablespoons grated cheese.

Soak crumbs in milk 15 minutes, add salt, pepper, well beaten eggs and cheese. Have pan heated, melt the butter in it. Pour in the egg mixture and place on range where it will cook evenly. When brown underneath place pan in the oven to finish on top. When done fold and turn on hot platter. This makes an excellent dish for luncheon.

Brown Betty — Two cups bread crumbs, one cup sugar, one-half cup butter, two cups sliced apples, one-half cup raisins.

Put a layer of apples in buttered baking dish, sprinkle with sugar. Add a layer of crumbs, season with bits of butter and cinnamon. Repeat until dish is filled. Then pour over half cup of water. Cover and bake slowly for an hour, then uncover and brown. Serve with hard sauce or cream.

Bread Muffins — Three cups bread crumbs, 2½ cups milk, one cup flour, three eggs, one tablespoon melted butter, two teaspoons baking powder, one-quarter teaspoon salt.

Soak crumbs for 15 minutes. Beat and add beaten egg yolks, flour, and salt, baking powder, melted butter, fold in the beaten egg whites, bake in muffin pans in quick oven for 20 minutes. —Mrs. P. H. Miller, Soledad.

Apple Bread Pudding — Fill pudding pan with alternate layers of apples and bread that has been soaked in fruit juice or rinsings of jelly or jam dishes, put sugar and a sprinkling of cinnamon on each layer of apples, apples at bottom of pan, bread on top, dotted with bits of jam or jelly. Bake three-quarters of an hour or until a jelly-like consistency. Cover until nearly done, then remove cover and brown. To be eaten with cream or any pudding sauce.

Part graham or corn bread equally as good for fruit pudding, also can be made with any canned or stewed dry fruit or jam.

Dressing to take place of Meat Course — Make with dry bread moistened with rich gravy and bits of meat left from roast or stewed meats or chicken seasoned with onion, sage, celery salt, etc. Add one egg and bake slowly, about 20 minutes to half hour.

All dry bread not needed for immediate use can be ground in meat grinder and kept in tight cans until needed. These crumbs can be used for croquettes or for frying fish that has been dipped in beaten egg. Bread crumbs used in place of crackers for scalloped tomatoes and other scalloped dishes between the layers and on top with bits of butter or cheese are very good and brown nicely.

Bread soaked over night in sweet or sour milk makes lovely griddle cakes, adding when ready to bake one egg, soda or baking powder, salt and enough corn meal, graham or white flour to make right consistency to bake. —Mrs. T. E. Wilcox, Poway.

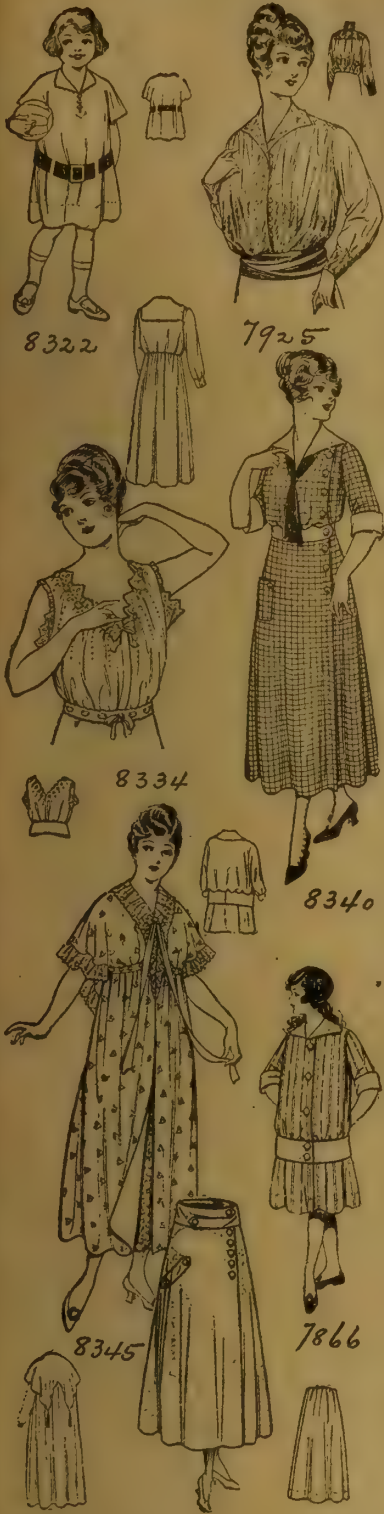
In making cookies I use one-third sifted bread crumbs and two-thirds flour as the recipe happens to call for. In all brown bread I use one cup of sifted crumbs to two of flour; also in dark cakes such as apple sauce cakes, fruit cake, ginger cake, etc.

I also cut it up or break it in very small pieces and dry it to a golden brown in oven and serve with a little sugar and cream or rich milk, which is good and children are very fond of it on account of the crispness. Here is a good recipe.

Brown Bread — One cup dried and sifted bread crumbs, one cup rye flour, three tablespoons molasses or fruit juice, three level teaspoons baking powder, one-half teaspoon soda, one



## The Cultivator Patterns



8322—Children's Dress. Cut in sizes 2 to 10 years. The dress is cut in one piece and slips on over the head.

7925—Ladies' Waist. Cut in sizes 36 to 44 inches bust measure. One or two materials can be used for this waist.

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tablespoon shortening, two cups of milk. Sift all dry ingredients together, then add melted shortening and milk, a little salt and raisins, nuts or any other desired fruit. Bake slowly one hour.—Mrs. W. M. Thomas, Oroville.

For Dressing — To one quart dry bread soaked in warm water until soft and squeezed out rather dry add one onion size of egg, chopped fine, teaspoon salt, one-half teaspoon each black pepper and sage. Bake with fowl or meat of any kind.

For Puddings — To one quart dry bread broken in small pieces make mixture of two eggs, 1½ pint sweet milk, one tablespoon sugar, dash of nutmeg. Pour over bread and bake in moderate oven 30 minutes.

For Betties—Dry bread in oven and grind fine. Take any kind of cooked fruit, one inch layer bread to one inch fruit until pan is full. Bake in oven 30 minutes. Serve with cream sauce or hard sauce made as follows: To one-half cup sugar mix one tablespoon flour, dash nutmeg, juice of one lemon. Pour over this one cup boiling water or cook till thickens like syrup for toast. Break bread in small pieces, toast in oven till quite crisp. Heat one quart milk to boiling point, season with tablespoon butter, pinch of salt dash of pepper, pour over toasted bread. If preferred a little thickening can be added to milk which makes it fine. Toast and grind bread as for betties and roll chops, steak, chicken, fish, in fact any kind of meat is made delicious by dipping in milk and rolled in bread crumbs, (omit egg this time of year!)

My bread can does not create half enough ends and pieces; I sometimes borrow from my neighbor. Dry bread crumbs can be used for thickening soups and gravies; also corn and tomatoes, etc. — Mrs. G. M. Dickerson, Orcutt.

\* \* \*

If Mrs. E. S. will take her loaf and knife and cut all bread at the table, there will not be much left. But if there are many leftovers put them in a paper sack and hang up to dry. Then put through the food chopper or roll with the rolling pin and use to bread fish, chops, meat patties or make a pudding. One cup sugar, one cup molasses, one cup chopped suet, two cups raisins, two cups milk, sweet or sour, (if sour two teaspoons soda, if sweet one), one-half teaspoon cloves, one teaspoon cinnamon, one teaspoon nutmeg, one teaspoon salt, four cups bread crumbs. If too dry, add a little more milk. Steam 1½ hours and eat with any kind of pudding sauce.

Can also make a dressing as for chicken. Form in a loaf in a pan and bake.

Another Bread Pudding — One pint bread, soaked in one quart of skim-milk, mashed up fine, two-thirds cup sugar, yolk of two eggs, juice of one-half lemon, beat well and bake until done, then spread top with jelly and stiffly beaten whites. Brown in oven. This is fine. — Mrs. A. J. Morey, Orland.

### KNITTED GOODS GREATLY NEEDED

So many rumors and "They say's" are rife concerning the value and uselessness of the knitting our American women are doing that we feel it wise to give much publicity to the official statement of the Red Cross published in the Official Bulletin of November 16, which is the organ printed daily by the Committee on Public Information of the United States government at Washington. This is authoritative. The statement of the war council of the American Red Cross follows:

"It is imperative that all of the sweaters, wristlets and socks that can possibly be made by the women of the country should be turned in to the supply department at the earliest possible date. With the cold weather coming on, the demand, for sweaters, especially, has been beyond the capacity of all our resources to supply."

### MADE TO ORDER

Biggs—Smawley claims to be a self-made man.

Diggs—Well, if you ever saw him when his wife is around, you would think he was made to order.

## The FOOD of The HOUR



is the food that proves its economy on a basis of food value—the greatest amount of nutriment at the least cost.

Ghirardelli's Ground Chocolate is an ideal blend of two ideal nutritious foods—cocoa and sugar.

By using Ghirardelli's Ground Chocolate freely and wisely—in place of other less nutritious and more expensive foods—you will save money and aid in food conservation.

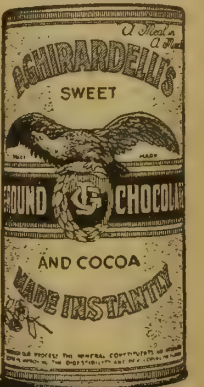
## Ghirardelli's Ground Chocolate

Comes in ½ lb., 1 lb. and 3 lb. cans.

D. GHIRARDELLI COMPANY

Since 1852

San Francisco



## For your bathroom

Chases the chills in a jiffy—you bathe or shave in comfort. Portable. Fuel consumed only when heat is needed—no waste. No smoke or odor.

STANDARD OIL COMPANY  
(CALIFORNIA)

HEAT WITH PEARL OIL



## PERFECTION OIL HEATER

When writing advertisers, mention The Cultivator.



## Los Angeles Market

Los Angeles, Dec. 5, 1917.

## BUTTER

Produce Exc. Quotations.  
Price to trade 4c higher.  
California extra creamery.....42  
Dairy Exch. prices past week.  
Nov. 28 29 30Dec.1 3 4  
'17 42 42 42 42 42  
Rets. wk. ending Dec. 4, 224,860 lbs.

## CHEESE

Brokers prices:  
California fresh, lb. ....26  
Eastern Daisies .....29  
Oregon Longhorn .....29  
Tillamook Trip .....27  
Domestic Swiss .....34

## EGGS

Exchange quotations. Prices include  
cases and fillers valued at 35c. Prices  
to retailers 4 cents above Exchange.  
Fresh extras .....51  
Case Count .....48  
Pullet .....45  
Dairy Exch. prices past week.  
Nov. 28 29 30Dec.1 3 4  
'17 53 52 52 52 51  
Rets. wk. ending Dec. 4, 387 cases.

## POULTRY

We quote to producers:  
Broilers .....34  
Fryers .....27@28  
Hens—Leghorns .....22@26  
Roasters, 3 lbs. and up .....27@28  
Ducks, lb. ....17@22  
Squab, doz. ....4.00@5.00  
Rooster, old .....15  
Turkeys .....26@28  
Geese, lb. ....17

## LIVE STOCK

We quote cwt. f. o. b. L. A.  
Corrected Wednesday morning Novem-  
ber 21, by the Cudahy Company.

Cattle—  
Beef steers, av. 1000 to 1100 lbs. 8.50@9.00  
Heifers, good .....6.00@6.50  
Cows, good .....5.50@6.00  
Canners .....4.50@5.00

HOGS—  
Av. 125 lbs. ....14.50  
Av. 150 lbs. ....15.50  
Av. 175-200 lbs. ....16.00  
Rough, docked 20 lbs.; piggy sows, 40  
lbs., stags, 40 per cent.  
Prime wethers .....9.50@10.00  
Ewes .....9.00@9.50  
Lambs .....14.00@14.50  
Yearlings .....10.50@11.00

**THE ORIGINAL CHEMICAL**  
**Indoor Closet**  
30,000 SOLD—FIFTH YEAR  
More Comfortable,  
Healthful, Convenient  
Eliminates the out-house,  
open vault and cess-pool,  
which are breeding places  
for germs. Have a warm,  
sanitary, odorless toilet right  
in your house. No going out  
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invalids. Endorsed by State  
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Put It Anywhere In The House  
The germs are killed by a chemical process in  
water in the container. Empty once a month.  
No more trouble to empty than ashes. Closet ab-  
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office of this publication. Ask for catalog and price  
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Running Water Without Plumbing

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and Adjoining States. Twenty-five  
Years' Experience  
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**ALFALFA LAND FOR DAIRYING**  
Leveled, checked and in stand of Alfalfa.  
Also first-class Orchard, Bean and Sugar Beet land, with plenty of water  
for irrigation. For sale in tracts of 20 acres and up.  
**BRENTWOOD IRRIGATED FARMS, Sixty Three Miles from San Francisco in Contra Costa  
County. For Prices and Descriptive Matter Address  
BALFOUR, GUTHRIE & CO., LAND DEPT., 350 California St., San Francisco**

## POTATOES

Wholesale selling price:  
Locals, cwt .....2.25  
Northern Burbank, cwt. ....2.10@2.15  
Russets .....2.10@2.15  
Sweet, cwt. ....2.60@3.00

## ONIONS

Wholesale selling price:  
Brown and White .....2.00@2.50  
Garlic .....7

## VEGETABLES

Wholesale prices:  
Artichokes, doz. ....1.25  
Beans—Wax .....11@12  
Limas, lb. ....11@12  
Ky. Wonder .....11@12  
Beets, sk. ....1.00  
Cabbage, lb., 1 1/4; sk. ....1.25  
Carrots, doz. ....35  
Cauliflower, doz. ....1.00  
Celery, cr. ....2.75@3.00  
Cucumbers, lug .....2.50  
Egg Plant, lb. ....7@8  
Horseradish, lb. ....15  
Lettuce, doz. ....35  
Leeks .....30  
Mint .....40  
Onions, green, doz. ....25  
Okra, lb. ....13@14  
Peas, lb., Telephone .....11@12  
Peppers, Chili, lb., 6@7; Bell .....8@9  
Parsnips, doz. ....40  
Parsley, doz. ....20  
Pumpkins, lb. ....2  
Radish, doz. ....20  
Rhubarb—Strawberry .....1.25  
Romaine, doz. ....50  
Spinach, doz. ....25  
Squash—Crockneck .....70@75  
Hubbard, lb. ....2  
Tomatoes, cr. ....1.25  
Turnips, doz. ....35

## FRUITS

Wholesale prices:  
Apples—Skinners Seedling... 1.50@1.75  
Bellflowers .....1.35@1.50  
Greenings .....1.75  
Jonathan .....1.80@2.25  
King David .....1.75@2.00  
Spitzenburg .....2.40@2.75  
Y. Newton .....1.40  
Avocados, doz. ....6.00@9.00  
Bananas, lb. ....5 1/2@5 3/4  
Casabas, lb. ....2  
Cranberries, bbl. ....16.00  
Figs, bx. ....1.35@1.50  
Grapes—Carnichon .....1.60@1.65  
Red Emperors .....1.65  
Guavas, lb. ....6  
Peaches, lug .....1.25@1.35  
Pears, lug, 2.00; bx .....2.75  
Persimmons, lb. ....7@10  
Plums, lug .....1.25@2.00  
Pomegranates, 1/2 bx .....1.80@2.00

## CITRUS

Lemons, 4.50@6.00; juice .....2.25  
Grapefruit .....3.00@3.50  
Jimes, basket .....1.00  
Navels, New, bx .....4.00@4.25  
Valencias .....4.00

## DRIED FRUITS

These are not prices to producers but  
prices made by wholesalers to retailers.  
(25-lb. bx., faced, 50s, 1/2c less.). App-  
les, evaporated, 50s, 16; extra ch., 16 1/2;  
apricots, ch., 16; extra ch., 17 1/2; 18;  
pears, 12 1/2; peaches, ch., 12; 12 1/2;  
peeled, 16; citron, 30 lb.; lemon peel, 25;  
orange peel, 25; prunes, 20-30s, 16 1/2; 30-  
40s, 12 1/2; 40-50s, 11; 50-60s, 10; 60-70s,  
9 1/2; 70-80s, 9; 90-100s, 8.  
Figs—Bulk, 25 lb. bx., blk. \$3.00, wh.  
\$2.75.

## NUTS

Almonds—Not growers' prices but prices  
of wholesaler to retailer.  
I. X. L. ....22 1/2  
N. P. U. ....21 1/2  
Peanuts, raw .....12 1/2  
Pecans, lb. ....19  
Walnuts—Cal. Walnut Growers' Associ-  
ation named prices Oct. 1:  
No. 1 Soft Shell, lb. ....20  
No. 2 Soft Shell, lb. ....16  
Budded, Diamond Brand .....24  
Budded, Standard Brand, (same size  
as No. 1 Soft Shell) .....21  
Prices delivered in East 1 1/2c higher.

## HONEY

Owing to shortage of sweets in general  
and honey in particular, a material ad-  
vance has been made on all grades. Prepa-  
ration for another year's increased out-  
put is general all over the state.

Prices of wholesaler to retailer:

Extr. White, lb. ....12@14  
W. W. lb. ....13@15  
Comb. case, W. ....4.00@4.50  
W. W. case .....4.50@4.80

## RICE

Wholesale quotations: Price to grow-  
ers around 4 cents pound.  
Cal. ....7.50  
Broken .....5.60@6.00

## BEANS

These are prices made by wholesaler to  
retailer.

Lady Washington .....13.00@14.00  
Limas .....13.50@14.00  
Pinks .....9.50@10.00  
Manchurian Reds .....9.25  
Baby Mex. ....9.00  
Garbanzos .....9.00  
Small White .....13.00@14.00  
Blackeyes .....9.50  
Tepary .....9.00@10.00  
Lentils .....25.00

## HAY

Quotations by Nichols-Loomis Com-  
pany. Prices to growers f. o. b. L. A.

carlots:  
Tame Oat .....25.00@27.00  
Volunteer Oat .....13.00@20.00  
Wheat .....20.00@23.00  
Barley .....22.00@25.00  
Alfalfa .....22.00@25.00

The Alfalfa Growers Association of  
Southern California quotes:  
Alfalfa, \$27.50 per ton f. o. b., where  
the \$1.50 freight rate applies, and \$26.50  
f. o. b. where the \$2.50 freight rate ap-  
plies.

## GRAIN AND FEEDSTUFFS

Wholesale cwt. f. o. b. L. A.  
Alfalfa Meal .....1.95  
Alfalfa Molasses .....2.00  
Barley, Rolled .....2.85@2.95  
Barley, Recleaned, Whole .....3.00  
Barley, Hulled .....3.55  
Beet Pulp .....2.00  
Bran, Heavy .....2.15  
Cocoanut Meal .....2.50  
Cottonseed Meal .....3.40  
Corn, Yellow .....4.45  
Corn, White .....4.55  
Corn, Cracked .....4.50  
Corn, Feed Meal .....4.55  
Corn, Egyptian .....3.40  
Middlings .....3.05  
Milo .....3.15  
Oat Chop .....1.90  
Oats, White .....2.85  
Oats, Rolled White .....3.05  
Oats, Hulled .....4.75  
Oats, Rolled Chicken Groats .....4.85  
Oatcake Meal .....3.65  
Wheat, No. 1 .....4.00@4.05  
Wheat, Cracked, No. 1 .....4.40  
Red Millet .....4.65@4.75  
Rye .....4.00  
Blood Meal .....5.00@5.10  
Bone, Green .....2.75@2.85  
Bone, Dry .....2.95@3.05  
Charcoal, 50-lb. sk. ....3.00  
Clam Shell .....70@80  
Grit, Granite .....75@85  
Oyster Shell .....1.45  
Sunflower Seed .....5.25  
Soya Bean Meal .....3.60  
Scratch Feed .....3.80@3.90  
Gritless .....3.90@4.00  
Rice Bran, ton .....40.00  
Middlings, ton .....45.00  
Rice Polish, ton .....49.00

## San Francisco Markets

San Francisco, Dec. 4, 1917.

## BUTTER

Dairy Exchange quotations, lb.:  
Fresh extras .....41  
Prime firsts .....42  
Dairy Exch. quotations past week and  
year ago:  
Nov. 27 28 29 30Dec.1 3  
'17 43 42 42 41 41  
'16 36 36 35 35  
Rets. wk. ending Dec. 3, 498,700 lbs.

## CHEESE

Dairy Exchange quotations:  
Cal. Flats, 18@23. Y. Am. ....22@25  
Ore. Young Am. ....25  
Jack Cheese, full cream .....23@24  
Half skim .....17@18

## EGGS

Extra .....53 1/2  
Selected, Pullets .....43 1/2  
Dairy Exch. quotations past week and  
year ago:  
Nov. 27 28 29 30Dec.1 3  
'17 56 54 54 53 53 1/2  
'16 48 47 44 44 1/2  
Rets. wk. ending Dec. 3, 6793 cases.

## POULTRY

We quote from producers, lb.:  
Hens, large, 26@27; Leghorns .....24@25  
Small colored .....24@25  
Broilers, 1-1 1/4 lbs., 45; 1 1/4-1 1/2, 35@40;  
1 1/2-2, 30@35; 2-3, 26@30.  
Roosters .....26@28  
Squabs, doz. ....3.00@4.00  
Ducks .....14@20  
Geese .....19@20  
Belgian Hares, live .....18@20  
Turkeys, lb., live young .....27@29  
Old, live, 25@26; dr. young .....28@32  
dr. old, 3 cents under.

## LIVE STOCK

Prices gross weight:  
Cattle: The following prices are for  
grass fed stock. Hay fed brings 1/2 to 3/4 c  
10.  
Steers, lb. 9 1/4@9 3/4; undesirable, 6@8;  
cows and heifers, 6 1/2@7 1/4; undesirable,  
4@6; calves, 7@9 1/4.  
Hogs—Hard grain fed, weighing 100 to  
150 lbs., 14 1/2; 150 to 300 lbs., 16; 300 to 400  
lbs., 15 1/2.  
Sheep—Wethers, 12@12 1/2; ewes, 9 1/2@  
10.

## POTATOES

Wholesale selling prices at wharf:  
Sallinas Burbank, cwt. ....2.50@3.00  
River .....1.50@1.90  
Sweets, cwt. ....2.50@2.70

## ONIONS

Wholesale selling price on wharf:  
Australian Brown, cwt. ....1.00@2.00  
Garlic, lb., new .....4@5

## VEGETABLES

Wholesale selling price.  
Beets, sk. ....1.25@1.50  
Beans, string, lb. 6@8; Lima .....7@8  
Brussel Sprouts, lb. ....4@5  
Cauliflower, doz. ....50@75  
Carrots, sk. ....65@75  
Celery, doz. ....40@60  
Cucumbers, lug .....2.00@2.25  
Hothouse .....1.25@1.50  
Lettuce, cr. ....75@1.25  
Egg Plant, lb. ....6@8  
Onions, bx .....85@1.00  
Peas, lb. ....7@12  
Parsnips, sk. ....1.00@1.25  
Peppers, Bell, lb., 6@8; Chili, lb. ....5@6  
Pumpkins, sk. ....85@95  
Rhubarb, bx. ....1.00@1.50  
Squash—Marrowfat, sk. ....85@95  
Cream, lug .....75@1.25  
Hubbard, sk. ....90@1.00  
Summer, lug .....1.25@2.00  
Tomatoes, lug .....50@1.00  
Turnip, sk. ....65@75

## FRESH FRUITS

Berries—Strawberries, 6.00@10.00 ch.  
to trade; raspberries, 4.50@10.00.  
2.50; Winter Nellis, wrapped, 1.50@1.75;  
winter pears, 1.00@1.50.  
Cranberries—Bx.: 4.00@5.00.  
Pears—Bartlett, wrapped, bx., 2.00@  
2.50; Winter Nellis, wrapped, 2.00; winter  
pears, 75@1.25.  
Quinces—Bx., 75@1.25.  
Grapes—Tokay, 1.25@1.50; Cornichon,  
1.00@1.50.  
Apples—Bellflower, 1.00@1.35; Spitzen-  
burg, 1.00@1.85; Red Parnmain, 70@1.00;  
W. W. Parnmain, 1.10@1.50; Newton  
Pippins, 1.00@1.60.  
Melons—Casabas, cr., standard, 65@85;  
doz., 65@75.  
Citrus Fruits—Bx.: Lemons, according  
to size, 4.75@6.75; ch., 4.25@5.75;  
lemonettes, 1.50@3.00; grapefruit, Tulare  
seedless, 3.25@3.50; ch., 2.50@2.75;  
Seedless limes, 1.75@2.00. Oranges—Bx.:  
Valencias, ch. to 1/2, 3.25@3.75; lower  
grades, 1.25@2.00; Mandarin oranges, cr.,  
1.75@2.00; half orange bx., 2.75@3.00;  
navels, 3.50@4.00.  
Tropical Fruits—Bananas, Hawaiian,  
5 cents lb.; pineapples, doz., 3.50@4.50.  
Avocados, South Sea, doz., 2.50@4.50.  
1.50@1.75.  
Pomegranates—One-half orange bx.,  
1.25@1.75.  
Persimmons—Bx.: 1.00@1.25.  
Olives, ton, 140.00@180.00.

## DRIED FRUITS

Not producers' prices but prices of  
wholesaler to retailer.  
Peaches—Unpeeled, lb. standard, 9 1/4;  
choice, 9 1/2; extra choice, 10; fancy, 11.  
Figs—In 50-pound boxes, per pound.  
White Adriatic, standard, 8 1/2; choice,  
9 1/2; extra choice, 10 1/2; fancy, 11 1/2; Cal-  
myrna, fancy, 15 1/2; extra fancy, 16 1/2.  
Apricots—Bulk basis: Standard, 13 1/2;  
ch., 15; extra ch., 15 1/2; 16 1/2; extra 1/2,  
17 1/2; 1/2, 17 1/2; 1/2, 18 1/2; extra 1/2, 18 1/2.  
Prunes—60s to 90s, 6 1/2 basis; 50s to  
60s, 5 1/2 premium; 40s to 50s, 1 1/2 prem-  
ium.  
Apples—In 50-pound boxes, lb.: Fancy  
14 1/2; extra ch., 14; ch., 13 1/2.  
Pears—Bulk basis, lb.: Fancy, 11 1/2;  
extra ch., 9 1/2; ch., 8 1/2; standard, 6 1/2.  
Raisins—Cases: Sun Maid, seeded, 16-  
oz. cartons, \$4.20 for 48s and \$3.15 for 36s;  
fy., \$4.20 for 48s and \$3.15 for 36s; do, 12-  
oz. 45 to cs. \$5.25; ch. 16-oz. cartons, \$3.00  
for 36s; do, 12-oz. cartons, 45 to cs. \$3.10.  
In bulk: Sun Maid, 1 1/2; 1 1/2; 1 1/2; 1 1/2;  
1 1/2.  
Sulphur-bleached Thompsons, extra 1/2,  
\$5.37 1/2; 1/2, \$5.12 1/2; ch., \$4.87 1/2; soda-  
bleached, \$4.75.  
Loose: One-crown, 4.15; 2-crown,  
\$3.40; 3-crown, \$3.65; 4-crown, \$3.20.

## NUTS

Almonds—Cal. Almond Growers' Exch.  
Gross prices: Nonpareils, 21 1/2; I. X. L.,  
19 1/2; Ne Plus, 18 1/2; Drakes, 16; hard  
shell, 11 1/2.  
Pecans, lb. ....18@19  
Pine Nuts .....20@22

## HONEY

Comb. W. W., lb., 15@18; Amber .12@15  
Extr. W. W. Alfalfa .....14@15  
W. W. Sage .....15  
Lt. A. Alfalfa, 14; do Sage .....15  
Amber Sage .....11 1/2@13 1/2  
Beeswax, lb. ....38@40

## BEANS

Jobbers' prices, cwt., new crop, re-  
cleaned.  
Limas .....12.75@13.00  
Bayous .....9.00@9.25  
Small Whites .....12.00@12.85  
Mexican Reds .....9.00@9.50  
Large Whites .....11.50@11.75  
Pinks .....8.00@8.25  
Blackeyes .....8.75@9.00  
Red Kidney .....13.00  
Cranberry .....12.00@12.25

## HOPS

Per lb.: California crop of 1917, 28@  
33; on contracts, spot, 1916 crop, 18@22;  
old, 8@15.

## RICE

California rice, new crop, cleaned, 100  
pound head rice, 6.50; brewers, 5.25;  
screenings, 5.37 1/2.  
Rough rice, 100 lbs., 3.50@3.60 to grow-  
ers at shipping points.

## HAY

Under date of December 1 Scott  
Magner & Miller says:  
Receipts past week, 1317 tons. Al-  
though these receipts were small and  
about 50 per cent of them were for the  
government, yet the balance has been  
enough to take care of all demands. The  
car situation has shown a slight improve-  
ment during the week and although most  
of this has been on account of gondola  
cars upon which a great risk is taken in  
shipping hay, yet it has been greatly ap-  
preciated by the trade and every ad-  
vantage has been taken of it. We must  
look for heavy rains at most any time  
from now on and the shipment of hay in



open cars will naturally stop as soon as the wet weather starts.

Stock hay continues in good demand as does alfalfa. A few cars of rice straw arrived and were of exceptional quality.

We quote today wholesale prices in carload lots as appear from dealers' transfers upon the hay market. For prices to consumers charges of cartage, commission and handling must be added according to conditions.

Fancy Wheat Hay, (light 5 wire bale) .....\$28.00@29.00  
No. 1 Wheat or Wheat and Oat Hay .....24.00@26.00  
No. 2 Wheat or Wheat and Oat Hay .....21.00@23.00  
Choice Tame Oat Hay .....22.00@24.00  
Other Tame Oat Hay .....21.00@24.00  
Wild Oat Hay .....21.00@24.00  
Barley Hay .....21.00@24.00  
Alfalfa .....21.00@25.00  
Stock Hay .....18.00@20.00  
No. 1 Barley Straw .....60@90

GRAIN

Grain Exchange prices, ctl.

Corn—Egyptian .....3.07½@3.10  
Barley, Feed & Brewing, cwt. 2.50@2.52½  
Oats, Red Seed, 2.80@2.90; Feed, 2.60@2.70  
New Black .....3.25@3.50  
White .....2.80@2.85

Wheat — Government prices: Common white hard, base price is \$3.50 per cental, or \$2.10 per bushel of 60 pounds delivered in terminal warehouses in bulk; soft wheat, base price 2 cents per bushel less, or \$2.08 per bushel; white club (including Sonora), \$2.06 per bushel. If wheat, after cleaning, weighs 60 pounds or more to bushel, base price stands; if 58 to 60 pounds to bushel, 3 cents per bushel reduction; if 56 to 58 pounds, 6 cents per bushel less; if less than 56 pounds, grain becomes sample grade and sells on its merits up to within 1 cent per bushel of 56-lb. wheat. Sacked wheat 4 cents per bushel more, less tare for weight of sacks.

FEEDSTUFFS

Wholesale prices per ton:

Bran .....38.00@40.00  
Cornmeal .....81.00@82.00  
Cracked Corn .....81.00@82.00  
Middlings .....51.00@54.00  
Alfalfa Meal .....30.00@32.00  
Rolled Barley .....51.00@52.00  
Shorts .....41.00@42.00

SEEDS

Prices in round lots, lb.:

Millet, recleaned .....4½@5  
Alfalfa .....20@21  
Flax .....6@6½  
Rape .....2½@3

Citrus Fruit Market

Los Angeles, Dec. 5, 1917.

Some Valencias are "greening up" but quality remains good and prices satisfactory. There now remains less than 200 cars. No Navels have yet reached the auctions and private sales have been at long prices. The quality of the new fruit is exceptionally good.

The demand for lemons quickly takes up every offering.

Shipments

Shipments of citrus fruits from Southern California since November 1, 1917: oranges 1827, lemons 298, total 2125. Shipments to same date last season: oranges 1094, lemons 475, total 1569. From Central California this season: oranges 444, lemons 31, total 475. Same date last season: oranges 1150, lemons 93, total 1243. Northern California this season: oranges 29; same date last season 448.

AT THE AUCTIONS

November 30  
New York: 11 cars. Val. \$1.60-\$6.05; Lem. \$5.85-\$7.95.  
St. Louis: 6 cars. Val. \$1.15-\$3.90; Lem. \$3.70-\$4.90.  
Boston: 10 cars. Higher. Val. \$2.20-\$4.40; Lem. \$4.00-\$7.95.  
Philadelphia: 6 cars. Val. \$2.00-\$3.85; Lem. \$3.85-\$4.70.

December 3  
New York: 21 Val., 3 Lem. Val. \$2.45-\$6.35; Lem. \$4.15-\$7.75.  
Boston: 13 cars. Val. \$1.75-\$4.45; Lem. \$2.75-\$7.65.  
Cincinnati: 3 Val., 1 Lem. Val. \$1.75-\$3.55; Lem. \$4.00-\$5.15.  
St. Louis: 5 Val., 1 Lem. Val. \$2.20-\$3.70; Lem. \$2.80-\$5.40.  
Cleveland: 5 cars. Val. \$1.45-\$3.70.

December 4  
New York: 6 Val., 2 Lem. Val. \$2.05-\$6.05; Lem. \$4.00-\$7.15.  
Pittsburg: 1 car. Val. \$2.95-\$3.20.  
Boston: 18 Val., 1 Lem. Val. \$1.95-\$4.00; Lem. \$7.35.

MONTHLY WEATHER AND CROP BULLETIN

Except in the extreme northwest counties the rainfall during November was much less than usual. The deficiency was proportionally greater in the southern half of the state. This lack of moisture caused a shortage of feed for range stock, especially in the coast counties south of San Francisco and in the foothill districts of the southern portion of the Sierras. Some cattle have died on this account, but so far the losses have not been heavy. The dry weather also seriously hampered fall plowing and not so much of this work has been accomplished as usual. Should good rains occur in December the acreage in wheat will be considerably larger than last year. As near as can be determined about half of the fall seeding of wheat, barley and oats has been done, but very little has yet germinated, and that which has come up, does not show a good stand in most places.

A large number of our crop correspondents mailed their reports before the rains on November 30, and as the rain on that day was quite general over the northern half of the state, grain and pasture has undoubtedly improved greatly north of the Delta counties in the last two or three days.

The weather was favorable for finishing the harvest of rice and beans, and for the digging of potatoes. These crops all turned out better than expected.

There were a number of frosty mornings in the Sacramento and San Joaquin Valleys, but they did no damage of consequence. The cool nights, however, prevented much growth and alfalfa and clover are now dormant.

An excellent crop of tomatoes has been secured in fine condition, and lettuce in the Imperial Valley is well advanced. The raisin crop in San Diego County was large and of good quality. Oranges and lemons are ripening satisfactorily and the fruit is sizing up well. Shipments of both are steadily increasing.

MARKET NOTES

Beans are being held firm; producers are in no hurry to sell, and demand is very light because of uncertainty of the future market. New York reports Mich. Whites, \$14 to \$16; Colo. Pintos, \$9.00 to \$11 per hundred pounds; Cal. Small Whites, \$14 to \$15; and Cal. Limas commanding about 25 cents above the Whites.

The government crop report places this season's olive pack at 60 per cent of normal. This will be the smallest pack in years for California. Packers in California assert that this estimate is still too high. No such price for olive oil has ever been obtained as at the present time.

Shortage of shipping is causing famine of bananas and prices are advancing rapidly.

In a large purchase in San Francisco by the army and navy from a delegation of Northern California bean growers a price of 11 cents for Whites delivered at terminal points was made. The purchase was made through Ralph Merritt, California food administrator. This was a slight increase over prevailing quotations on the market. The average cost of producing an acre of beans is approximately \$40, or maybe \$45, per acre. The average yield is less than 1000 pounds.

The bureau of markets, United States department of agriculture maintains in Los Angeles an office for collection of data as to shipments daily from the

state, and is at present working with voluntary contributors in the field who send in post card notices of shipments. These are not complete, but give fairly good idea of totals. During the past week the shipment of raisins totalled 154 cars, the week preceding 231. Dried apples this week, 13 cars; prunes, 42; dried pears, 1; dried peaches, 15; dried figs, 3; dried apricots, 1; mixed dried fruits, 3; beans, Limas, 7; dried, 49; mixed fruits, 16; apples, 27; casabas, 3; grapes, 15; tomatoes, 6; celery, 35; lettuce, 36; mixed vegetables, 29; potatoes, 19; peas, 1; sweet potatoes, 7; cauliflower, 21.

Raise more on less acres—intensive farming does not necessarily mean growing special crops and garden truck. In ordinary farming it means doubling your crop on the same acreage or cutting your farm in two, and growing as much as you did before. Too often a farmer is measured by the number of acres he operates while his actual farming ability is shown by the quantity and quality of farm products he produces per acre. With the right kind of management, it is possible in many localities to make 80 acres produce more crops and more profit than the average quarter section.

WEATHER CONDITION

	San Francisco, Cal., Dec. 1, 1917.			Temp.	
	Wk.	Season.	Norm.	Max.	Min.
Eureka	3.61	7.26	9.90	60	44
Red Bluff	.16	1.90	5.74	64	40
Sacramento	.06	.75	3.70	66	40
San Francisco	.44	.83	4.17	64	50
San Jose	.44	.95	3.25	68	38
Fresno	.00	.34	2.06	72	42
San Luis Obispo	.00	.56	3.37	76	38
Los Angeles	.00	.34	2.38	76	50
San Diego	.00	.23	1.38	74	46

Merchants of Turlock have united their various free delivery lines into one.

Every ball of the YUBA TREAD kept at work at food production helps as much as a hundred balls flung into German trenches.

Write for the Catalog

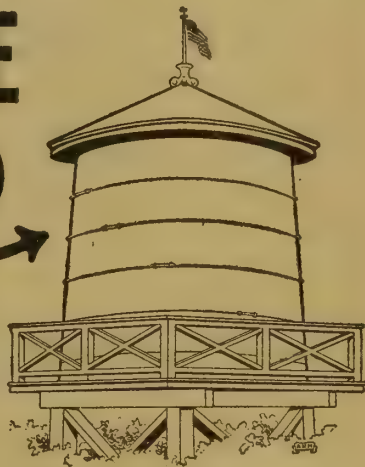
Yuba Manufacturing Co.

Dept. B12

433 California St.  
San Francisco



DO YOU USE THIS METHOD OR THIS



Time is the stuff of which life is made  
you can't afford to waste it carrying water

Help is scarce—and growing scarcer every year on the farm and everywhere

You can't afford to utilize labor carrying water  
—it makes water too expensive

Put up a redwood tank and install a redwood pipe line  
—it's the sanest investment you can make

In the long run its economy of time labor and money  
—besides it's a lot of real satisfaction

Ask our engineering department to tell you what it would cost to install a redwood tank and pipe line on your place

Very likely you'll be surprised at how little it will cost and certainly you'll be glad when you have it working for you

Water for the house and for the stock—where and when you want it, is the modern up-to-date method for the progressive farmer

Redwood tanks and pipe lines outlast all others and cost less in the first place

ADDRESS NEAREST OFFICE

PACIFIC TANK & PIPE CO.

318 MARKET ST. 910 TRUST & SAVINGS BLDG.  
SAN FRANCISCO LOS ANGELES  
CALIFORNIA

Pacific Tank and Pipe Co.  
318 Market St.  
San Francisco. Dept. C7

Gentlemen:  
Please send promptly your catalogue of Water Tanks.

I need a tank to hold..... gallons.

It should be mounted on a tower.....feet high.

The water to be delivered from.....

Pipe { Length.....  
Size.....

Name.....

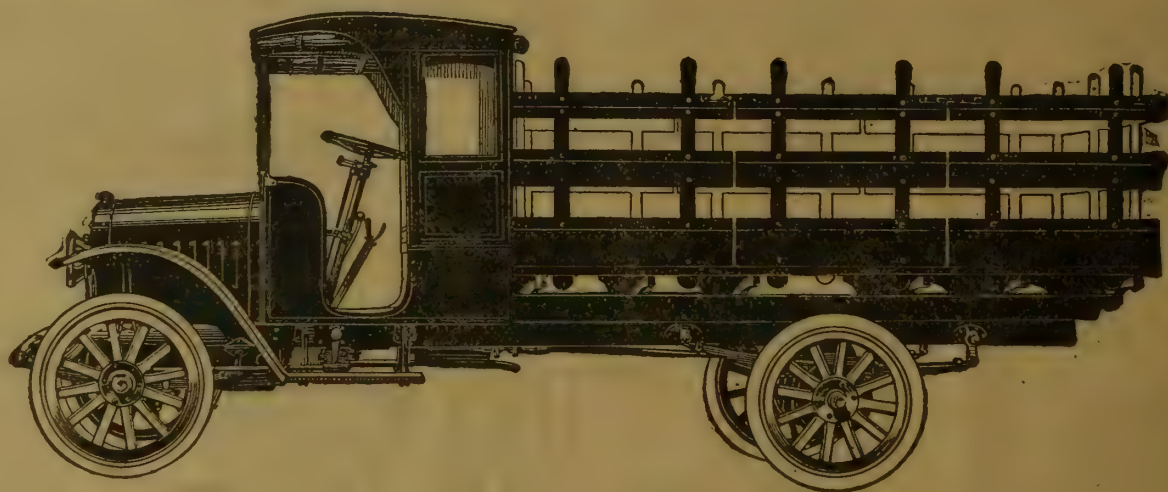
Address.....



# MAXWELL

Most Miles  
per Gallon

Most Miles  
on Tires



## Seven 18-Mile Trips to Town by Motor Truck in One Day

That is what Mr. Walter Faber did with his Maxwell one-ton truck during the last season.

Mr. Faber is a successful farmer living nine miles out of Wayne, Nebraska.

He believes in applying business methods—efficiency methods—to agriculture.

So last spring he bought a Maxwell one-ton truck.

In that truck he hauled to market EVERY-THING his farm produced. Said Mr. Faber:

"I made seven trips into Wayne and back each day with my Maxwell truck—just five more than I could possibly have made with horses."

Among the crops truck-marketed by Mr.

Faber were corn, oats, wheat, hay, potatoes, etc.

He hauled 10,000 bushels of shelled corn—55 bushels, that is, 3080 pounds, to the load.

That was more than 50 per cent overload.

Mr. Faber's truck cost no more to keep going than one team of horses.

Now most of his neighbors are planning to buy Maxwell trucks.

What are you going to do? Continue using slow, expensive horses? Or buy a low-priced, economical and swift Maxwell Truck?

Your nearest Maxwell dealer has the trucks. See him.

*One-ton truck chassis, \$985; Chassis with cab and windshield, \$1025; Chassis with box body, \$1035; Box body with windshield, \$1075; Express canopy body, \$1095; Chassis with stake gate body, \$1080  
All prices f. o. b. factory*

Write Today for Catalog A

**Maxwell Motor Sales Corporation**

Detroit, Mich.

San Francisco, Cal.





# CALIFORNIA CULTIVATOR

**THE LIVESTOCK** *Combined* **CALIFORNIA**  
*and DAIRY JOURNAL* *with* **CULTIVATOR**

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

December 15, 1917

SAN FRANCISCO

## May God Be With You on This Christmas Day!

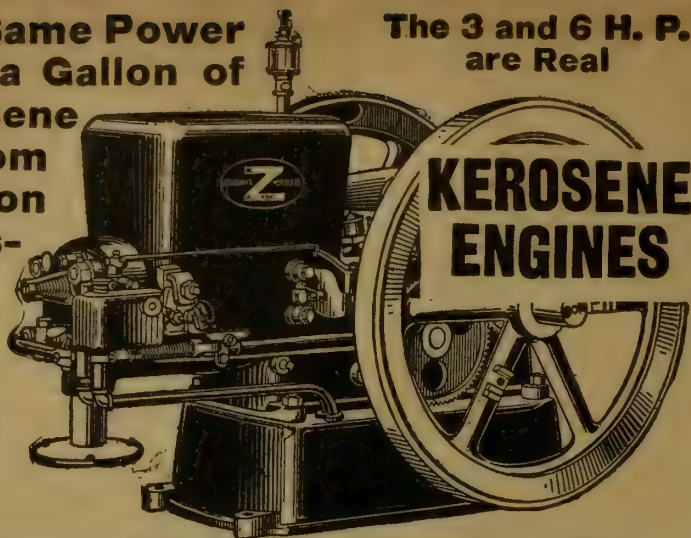
**T**HE accustomed merry greeting comes slowly to our lips because our full hearts mean so much, much more. Nor would we show a gloomy face. Could gloom have entered radiant Bethlehem that Christmas night so many centuries ago, when Mary bowed her head above her Son, and shepherds knelt in adoration of the Child who came to save the world? Yet we know their hearts, uplifted in a solemn exaltation, must have told their joy through tremulous lips. So on this day, when we commemorate His birth, our hearts are filled with that same holy joy. Never have they been so purged of flesh and self; never have our spirits touched so close the spirit of the Infinite; never have we followed in the path Christ trod with eyes so clear and unafraid. And, as we set our feet upon the road that leads to our own bitter Calvary, we hear, above the roar of cannon and the weeping of our desolated hearts, the song that rang above Judean hills: "On earth, peace; good will to men." And as Christ gave His life that we might live, on this, His Sacred Day, we consecrate ourselves and our beloved to the brotherhood of man He taught us. For we see, as we have never seen before, the honor of the world, our honor; its pain, our pain; and, through the promise of This Day, its joy, our joy.





**The Same Power  
from a Gallon of  
Kerosene  
as from  
a Gallon  
of Gas-  
oline**

**The 3 and 6 H. P.  
are Real**



**The 1½  
H. P.  
Gasoline  
Only**

**T**HERE are engines that cost more money—but you can't buy a better farm engine at ANY price than the Fairbanks-Morse Type "Z," or one that operates more economically.

Next to its low operating expense—extreme simplicity is the secret of its popularity. No makeshift attachments—nothing added for ornamentation or just for "talking points"—an engine that will deliver the engine performance you want.

Think of buying this combination in one engine: Simple—light weight—substantial, fool-proof construction—gun barrel cylinder bore—leak-proof compression—complete with Built-in Magneto—and then, the feature of quick starting even in cold weather.

When you see this combination on your dealer's floor, you—like thousands of other farmers—will not be satisfied with any other engine for all-round farm engine work.

**THE SERVICE YOU GET FROM  
YOUR LOCAL DEALER**

Buy your "Z" from your local dealer, because he has it in stock and can make prompt delivery. His assurance added to ours gives you double protection that you will get the engine service you want.

**3 H.P.  
\$89<sup>00</sup>  
6 H.P. \$156<sup>00</sup>  
Both With Throttling  
Governor  
1½ H.P. (Gasoline) \$48<sup>50</sup>  
on skids  
All F.O.B. Factory. With  
**BUILT-IN  
MAGNETO****

**Fairbanks, Morse & Co., Chicago**  
Manufacturers

## Crammed Full of Extra Value!

That's Hanes Winter Weight Underwear. Look at the big features in the illustration, then balance up with this:

Hanes is made form fitting—pre-shrinking keeps it true to size and shape—its natural elasticity makes it "give" with every movement—there's no itching, ripping or flaring, just warm and comfortable.

The answer is the finest underwear value in the world and at such popular prices.



**Test it yourself.**

Ask a Hanes dealer for this underwear and see if it isn't the biggest value you ever saw. If you don't know a dealer, write us.

**Here's the Best Bet  
For Your Youngsters**

A new union suit for boys—too strong and elastic to knock out at the knees and warm and cozy enough for the coldest days. Washing can't faze it. Its value can't be duplicated. Look these two big values over at your dealer's. Ask him for

Greatest  
Winter  
Underwear

**HANES**  
ELASTIC KNIT  
UNDERWEAR

Sold at  
Popular  
Prices

**P. H. HANES KNITTING CO.**  
Winston-Salem, N. C.

**GUARANTEE**  
We guarantee every  
seam on Hanes  
Underwear.



## Tree Protectors

**THAT REALLY PROTECT**

FITTED WITH GALVANIZED WIRE TIES WHICH GO  
ALL THE WAY AROUND THE TREE

10 Inch.....\$ 9.00 per 1000	18 Inch.....\$12.50 per 1000
12 " ..... 9.50 " "	20 " ..... 15.00 " "
14 " ..... 10.50 " "	24 " ..... 17.50 " "
16 " ..... 11.50 " "	30 " ..... 20.00 " "

WRITE US OR SEE YOUR NURSEYMAN FOR  
DISCOUNTS AND FREE SAMPLES

**Angelo & Son**

398 Bay St.

SAN FRANCISCO

DEALERS: Write us for our sales proposition

Add years to the life of your harness by an occasional application of Eureka Harness Oil. Eureka prevents the attacks of dust, sweat and moisture - keeps your harness like new. Keeps it jet black.

**Eureka Harness Oil**

Standard Oil Company  
(California)

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OF EVERY DESCRIPTION  
**BOUGHT and SOLD**  
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"Kero-Oil" Engines

Immediate Shipment—All Styles—  
2 to 22 H. P.—No Waiting—Big Factory—Big  
Output—Prices most favorable. Write for my  
terms and prices—Cash, Payment or No  
Money Down. E. J. H. WITTE, Inc.  
**WITTE ENGINE WORKS**  
810 Oakland Ave., Kansas City, Mo.  
810 Empire Bldg., Pittsburg, Pa.

**I Save  
You \$15  
to \$200**



## A Tempest in the Vacuum Pan

Sugar Refiners Make No Proposition Which Growers Will Accept. Ralph Merritt, California Representative of Hoover, is Unable to Coordinate Growers and Refiners, and Los Angeles Mass Meeting Ends in Uproar

**A**T the mass meeting of sugar beet growers and sugar manufacturers at Los Angeles last Saturday, State Food Administrator Ralph Merritt remarked that were it not for the shortage of transportation facilities the Pacific Coast would be drained of its sugar supply and consumers would be buying at the most in one pound lots as they are now buying in the northeastern states of our country. He also spoke of the growing need and of real suffering caused by shortage of sugar or, rather, absolute dearth of sugar, in France for a time. This was partly relieved by stripping the eastern markets of sugar and sending it to relieve the suffering in Europe. Now the Pacific Coast sugar is needed to give relief in those sections stripped. But in spite of all his appeals and his statement of the serious condition confronting all the world, the sugar manufacturers and the beet growers failed to get together.

The beet growers feel that injustice has been heaped upon injustice for years, and notwithstanding they will yield to none in answering their country's call, they do not propose to be a cat paw or be forced into the position of giving enormous profits to the manufacturers, while they exhaust the fertility of their land and run all chances of loss. They propose to produce food needed by America and our Allies in some different form rather than submit to these injustices longer.

Practically every beet grower lost money last year. This was partly due to conditions over which they had no control. At the same time evidence brought out by the grand jury of Los Angeles County was in effect that enormous profits were made by all manufacturers. It has been alleged that this profit was in excess of 100 per cent in at least one or two cases.

Some time ago Mr. Merritt wrote to beet producers, asking certain questions which brought to him over 2600 letters in reply. At the same time he called a conference of sugar manufacturers in the city of San Francisco. Then he called for a meeting of growers and manufacturers in Los Angeles on December 8. Blanchard Hall was filled, and every moment of the time from the first fall of the gavel until Mr. Merritt left for his train was fraught with intense interest and at times with no little commotion.

After hearing from the beet growers, those owning lands used for beet production, from Prof. Vaile, and others who have been making investigations as to beet production, costs and averages, Mr. Merritt called on the manufacturers for any statement they might wish to make.

Henry T. Oxnard of the American Company read his statement in effect that while the last season may have been profitable to the sugar manufacturers, many of the preceding seasons had not been so profitable, and many of the years had resulted in no dividends to the stockholders. He referred to the offer of the sugar companies to pay \$7.00 on the 15 per cent basis, and said that the manufacturers had decided they would give an additional 50 cent bonus per ton providing 80 per cent of last year's planting was made by all the beet growers of Southern California, and another 50 cents if

there were 90 per cent of last year's planting.

Plainly this offer was not acceptable to the growers. Mr. Merritt turned to Mr. Oxnard and asked him that the 90 per cent feature be left out of consideration, offering the growers \$1.00 bonus for 80 per cent of last year's production. This the factory men acceded to, but this offer also was refused by the beet growers, or rather, no action was taken, for by this time the meeting had become almost unmanageable, and there was no chance to put through parliamentary procedure.

The position taken by the growers was in effect that they were willing to

We did not learn from Prof. Vaile as to whether the above costs are based on farm labor and other costs or on next year's probable costs. Also as to taxes, interest, overhead, etc., assume that they are included in the \$30.12 rental.

District Attorney Woolwine was at the meeting. He made a very short talk and appealed to the growers and the factory people to let true patriotism guide in the entire matter and get together and produce a greater crop than California has ever produced. He asserted that if there was not



grow beets under a just division of the profits. While the government has made no definite price on sugar, there is a certain amount of control which gives practical guarantee to the manufacturers of a reasonable price another year. The beet grower feels that he is taking all the chances of weather or any losses which may come to his field during the period of several months. This may result, as it did last year, in a net loss. For the manufacturer then to take whatever beets are produced and make enormous profits, with the grower shouldering his loss as heretofore, or even if the chances are that such will result, he frankly says that he will not, because he cannot, grow beets with labor and other conditions as they promise to be.

The facts secured by Mr. Merritt from his more than 2000 letters showed that the production is not far from ten tons per acre. Prof. Vaile's canvass of portions of Orange and Los Angeles Counties shows the average to be 10.3 tons. This covers a period of from 1904 to 1914 inclusive, or 11 years. The average test was 17.75 per cent, or 2 3/4 per cent above that on which the base price is fixed. Mr. Vaile says that with that average and at the price offered by the factories for the coming year at the mass meeting, the returns to the growers would be about \$90.35 per acre, and if land rental is figured at one-third of the crop, which is above the average, \$30.12, the total cost of producing beets is \$84.84, which would leave a net of only \$5.50 per acre. The costs of production given by Prof. Vaile are:

Per Acre	
Field operations	\$44.05
Equipment charges	4.47
Interest on working capital	1.20
Supervision	5.00
	\$54.72

a getting together he would take the matter to Washington and, if necessary, directly into the halls of congress.

In making his appeal to the growers Mr. Merritt read the following telegram from Food Administrator Hoover:

"You must remember that the United States shipped 100,000 tons of sugar to Europe in October. There is a sugar shortage in the East, and in New York it is impossible to buy more than one pound of sugar at a time. The reason we have sugar in California in abundance today is because there is a shortage of rolling stock to carry it to the Atlantic seaboard. But we sent 40,000 pounds East last week and 20,000 pounds for the first half of this week.

"Don't be fooled that Germany is being starved. She is down to bedrock, but she is still a going concern, and she is going to remain a going concern.

"There are men here who feel that the food administration is being run by the sugar trust, but any man who accuses the food administration of being nonpatriotic knows not whereof he speaks. The food administration has eliminated the speculation in food during the period of the war. California hasn't begun to face the food problem. Last week we shipped from this state 55,000 tons of foodstuffs, and that is just a starter.

"The total production of foodstuffs in California this year increased 25 per cent over the greatest production year we ever had, and that is a wonderful contribution to the cause. But I fear there will be a reduction in the acreage of sugar beets planted in California for 1918, and if that happens California will fail to do its full share in the war. The sugar companies paid little or no dividends up to 1916, but after that they made enormous profits.

"The sugar refineries have made money in 1917, but they would have made far more if they had not voluntarily come to the government and signed a working agreement. Now the beet sugar refineries are operating under a federal license and the government shares their profits in form of taxes.

"We have not set a price for the beet sugar crop because it is not within our power to set such a price. But our control over the companies is now absolute and if the companies break their contract in any way, we can rescind the license. No one can predict today what the price of sugar will be next year. If this war should end next year, the price of seven cents a pound will tumble."

To give an idea of the trend of feeling among the growers we quote from the daily press from a statement made by Clarence Dougherty, a beet farmer of Artesia:

"Our own trusts are riding the backs of the producer and charging exorbitant prices to the laborer, and are the true allies of the kaiser," he asserted. "They are starving France as much as the U-boats. The food profiteer and the kaiser are one and the same. Children are already suffering from hunger in our cities.

"To shout against profiteers in general is one thing, but to lay your hand upon a wealthy and powerful member of the community, and say, You are the guilty party," requires a different brand of courage. To give battle to a group of wealthy men like the sugar barons of New York, as skilled in politics as in finance, requires a high order of courage."

The California beet growers are not alone in the situation in which they find themselves. The following telegram received by District Attorney Woolwine from an association of beet growers in Utah gives an idea of how widespread is the distrust of the sugar factory management:

"Salt Lake City, Utah, December 3, Hon. Thomas Lee Woolwine, District Attorney, Los Angeles, Cal.: Dear Sir: Have just noticed in the Salt Lake Tribune a dispatch stating that a grand jury in your county has probed the sugar situation and that you had telegraphed results of the investigation to President Wilson and Food Administrator Hoover.

"We have been fighting the sugar crowd out here for a year past. Conditions are quite as bad as they are with you. The farmers feel that they have had enough of beet growing and the industry has reached the point where the government must intervene in behalf of the farmer.

"The beet growers in this state are organizing under the corporation laws and are standing together in the Intermountain Association of Sugar Beet Growers.

"Under separate cover I am mailing four pamphlets, one folder and a copy of a petition which is being circulated among the growers. These will give you some idea as to what we are doing. The facts stated in the folder as to the sugar company's business are positively accurate. They are precisely what the company's books will show. Have other data that might be of use to you. If so it is yours for the asking. If you will furnish the names of your grand jurors will be glad to mail them literature.

"Our fight is the same as yours. We want to help you and want you to help us. If you will write particulars concerning the results of your investigation will appreciate it. If we can do anything for you let us know. Very truly yours.—Intermountain Association of Sugar Beet Growers. C. G. Patterson, Secretary."





## The Quality of Fruit and When You Get It, are What

**Stark City**  
**roots mean**  
**Quality Fruits**

Your investment in young trees is small compared to your investment in land and time.

It is poor economy to buy any but the very best rooted and sturdy stock. A few cents saved on the purchase price of a tree now may mean a year or more lost before the trees begin to bear. It may also mean still greater loss in the quantity and quality of the fruit when you get it.

## Stark City Grown Trees of Wm. P. Stark Nurseries

have unusually heavy, vigorous roots, due to scientific care—plus the right combination of soil and climate. Stark City is on a high rolling plateau, in the heart of the Ozark Country. The soil is a rare highland limestone formation, with just the right amount of grit. Trees grow extra large and heavy-rooted during our long season of bright sunny days and cool nights. These heavy roots store unusual vitality which enables the trees, when transplanted, to establish themselves quickly and make satisfactory growth. Our trees will thrive wherever the variety of fruit is grown successfully.

### Read What Growers Say:—

"Your trees are the hardiest, best rooted stock we receive, well packed and in good condition."—H. B. M. Hall, Quarantine Inspector, Calif.

"The 16,000 J. H. Hale peach trees we bought of you for our ranch near Mentone, Calif., are doing exceedingly fine."—R. Schiffman.

"Trees arrived safely and I am much pleased with them. They were packed so carefully not a root or a bud was injured."—J. B. Hershey, Calif.

"After having written six of the leading nurserymen in western and eastern states and upon receipt of their literature, I have selected you to be it."—Mrs. Lucy Miller, Calif.

### Our Trees are Guaranteed

1st.—To Reach You in Prime Condition. 2nd.—To be True to Name. 3rd.—To Live and Make Satisfactory Growth. You Are to be the Judge.

### We Sell Direct from Nursery

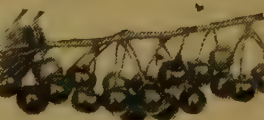
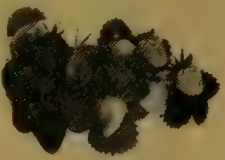
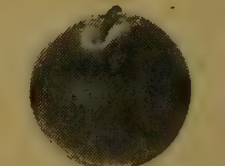
No agents or other middlemen represent us. This is the only way you could be sure of getting Stark City grown trees. Our prices are fixed and reasonable for the finest grade stock. We burn trees which don't come up to our standard.

### Free Service to Our Patrons

Not only is it necessary to get good trees, but also to care for them. We will gladly confer with our customers at any time and will give them the benefit of our experience and help. This service is free. Our book "Inside Facts on Profitable Fruit Growing," is a complete guide to successful fruit growing. Our book "How to Beautify Your Home Grounds," shows how to lay out your grounds, care for ornamentals, etc. These books sell for 10 cents each, but are sent free with orders.

## 1918 Fruit Book FREE

Illustrates and describes best fruits of all kinds, color, quality, ripening season, hardiness, growing habits, which are best money makers for your section. Apples, pears, peaches, plums, cherries, quinces, grapes, bush fruits, everbearing strawberries, shrubs, shade trees, etc.



ROF. I. J. Condit writes us that another meeting of fig growers will be held at Fresno. He writes:

"You probably know of the success which attended the fig institute which was held last January at Fresno. Those who attended the meeting seemed to get a great deal of benefit from it, and have mentioned it many times since. We are therefore planning to hold a second meeting of the fig growers on Friday and Saturday, January 4 and 5, 1918. The program will be along the following lines:

"Morning session: Report of committee on organization, E. Newby, chairman; Benefits of Cooperation, Organization and Standardization, F. H. Wilson; Symposium, The Best Soil for Fig Trees and its Treatment, Including Cultivation, Fertilization and Irrigation, led by F. Yokum; The

Year's Development with the Kadota Fig, L. C. Beckwith, discussion led by Sam Clarke.

"Afternoon session: The Maslin Seedling Fig Orchard and its Relation to Smyrna Fig Culture in California, by W. T. Swingle and G. P. Rixford; Symposium, How Can We Improve the Quality of our Dried Figs, discussion led by Henry Markarian. Notes from various other speakers. As a feature of the program a special exhibit of figs and fig products will be made. These will include brands of dried figs, fig paste, fig jam, canned figs, preserved figs, crystallized figs, glace figs, fig marmalade, etc. Specimens of such products will be very welcome indeed.

"The second day will be given over to field demonstrations and conferences on pruning, top working, examination of soils and roots, etc."

## Income Tax

Written for California Cultivator



WHAT is income was reasonably fully answered in last issue on Page 574, but here comes a question from a subscriber at Redlands:

"Will money received in 1917 on 1916 bills be considered as income of 1916? I mean on contracts that were wholly completed in 1916 and on which payment was due before 1917?"

### Delayed Payments

This question was submitted to the revenue office, and a very definite answer received that "money received in 1917 is a part of the 1917 income." Likewise expense of 1917 must be considered by itself, and the expense in growing the crop or in completing a contract in 1916 may not be deducted from amount of income in 1917.

Therefore we put at the revenue officer this question—which we admitted was extreme: In some counties in the fall of 1916 taxes were allowed to go over until January, 1917. This fall the time for paying taxes was not extended. Hence the first payment of 1916-17 taxes was made in January; the second in April; and the first payment of the 1917-18 taxes was made the last of November or the first of December of 1917; three half yearly payments within the 12 calendar months.

The answer given to this was equally as positive as that regarding the income. "The transactions as shown by the cash book from January 1 to December 1 are the deciding factor."

### Foster Child

"As I understand it an additional allowance of \$200 for each dependent child is exempted. Is this allowable in case of foster child taken care of from infancy?"

The law says: "Provided further, that if the person making the return is the head of a family, there shall be an additional exemption of \$200 for each child dependent upon such person, if under 18 years of age, etc." "Dependent child" answers the question to the effect that dependency is the determining condition rather than relationship.

### What are Expenses?

An Ontario subscriber wants to know what really are the expenses on the farm.

This is a long question for there are all kinds of farms. However, a short answer may be given in that any money paid out for actual upkeep of the farm or for growing a product constitute legitimate expense. This is more fully brought out in the column which follows:

"Now let us see what the government allows the farmer to deduct in the way of expenses. The government says in a general way, that the farmer may deduct as his expenses, 'all necessary expenses actually paid within the calendar year in carrying on his business.' Then the government through its law department proceeds to define just what are necessary expenses actually paid that may be included, and then some items that

must not be included. It is a long list. First comes what the government calls deductions proper, and then it lists under a second heading of deductions losses that the farmer may put down in the deduction column. Taking up the deductions proper as many as can be thought of are given below.

"Deduct all taxes actually paid during that year, except for local benefits and income taxes. By local benefits, is meant local drainage, roads, etc. Deduct all interest actually paid on personal indebtedness including interest on a mortgage on the home if any. All insurance except on your own dwelling. All actual cash paid for hired help, not including boarding, washing, or any product of the farm. All seed, grain, hay purchased for planting or food for stock. All stock bought for resale, stock purchased that dies, or is killed by order of the authorities of a state or the United States. If insured or reimbursed, the loss, if any, to be deducted is the difference between the price paid and the amount received. Any debts due the farmer made since March 1, 1913 that he has used every effort to collect, or are not outlawed, are expenses to be deducted.

"A reasonable allowance for depreciation of property, except on the farmer's own dwelling and contents occupied by him, but on property used in business such as machinery, implements, farm buildings, etc., is an allowable deduction. The treasury department has approved deductions made on account of depreciation in the following percentages; 10 per cent on cost of machinery, implements, etc., five per cent on frame, 2½ per cent on brick or stone buildings. Depreciation to be deductible must be an amount that fairly measures the loss occurring, during the year for which return is made, by reason of the use, employment, or obsolete character of physical property and must be based on the cost of the property sought to be depreciated and the probable life thereof, taking into consideration the material of which constructed and the uses in which employed, etc. He can charge off for deterioration, the same amount each year until he has charged off the amount of capital invested, that is, the cost of the property."

However, specifically the Ontario grower wants to know as to groceries and repairs of implements, etc.

Here are two separate questions. The purchase of groceries or the use of products of the farm for the family may not be considered as a part of expense of upkeep. On the other hand, products of the farm consumed by the household should be reckoned in the income of the farmer.

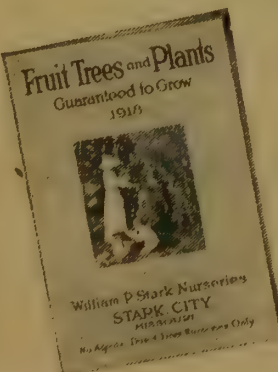
The Ontario inquirer also wishes to know as to what losses may be deducted.

As to losses we quote again from the Eagle of Wichita:

### Losses That May be Deducted

"Under deductions called losses, the following list can be put down.

"Losses sustained during the year in business or trade or from fires, storms, or theft, not compensated by insurance or otherwise, the value of



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Wholesale Growers of  
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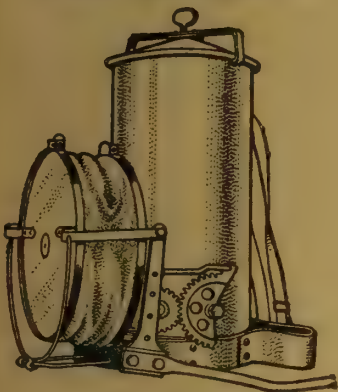
Twenty-nine years of continuous and consistent service to the Western fruit growers.

There is a shortage of trees this year. To make sure of getting just what you want, place your order now.

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Standard Size ..... \$16.00  
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the property lost to be that of a fair market value. He cannot deduct for loss of his dwelling or contents if he was living in the dwelling at the time of loss, as that was a living expense. But if he loses machinery, implements, barn, granary or any other property used in farming this may be deducted. "He cannot deduct for loss anything produced or raised on the farm such as stock, grain, hay, lumber, but can deduct for anything purchased, such as breeding stock, work horses, seed wheat, food for stock, etc. For example, a man loses by fire a field of grain, or hay or stacks of grain or hay. He has no insurance. His loss is complete. He cannot deduct his loss because he is not required to report his grain as income until sold or exchanged for cash or the equivalent, therefore, it cannot be deducted from his income.

A loss is not deductible if the market was down when he sold, and had been higher before he sold. He cannot deduct from his income any amount paid on debts, or investments, or for purchase of Liberty bonds. Nor can he pay his income taxes with Liberty bonds, but can with the interest secured from them.

"If a farmer sustains a loss in an investment outside of his farming he cannot deduct anything unless he has made profit in other outside investments. Then he can deduct the amount of his loss in one investment if such loss is equal to the profit in the other investment, or he can deduct that proportion that equals the profits, if the profits are less in the one investment than the loss in the other investment." This is considered speculation. He cannot deduct for alimony paid, as that is a personal expense. He can deduct for contributions or gifts, not over 15 per cent of his net income, to corporations or associations exclusively religious, charitable, scientific or educational, and to societies for prevention of cruelty to children or animals, when no part of the net income of such corporation or association inures to a private stockholder or individual.

### Losses Not to Be Deducted

"Here are some of the items that a farmer is not to deduct as expenses: No personal, living or family expenses. Also no share of expenses of partnership, as the partnership is considered a separate business and the farmer reports as income the amount due him in profits after the partnership has paid all expenses.

"He cannot deduct cost of permanent improvements, or betterment of property, machinery, implements, automobiles, tractors, etc., as that is capital investment, but he can deduct cost of small tools, nails and the like, and repairs, expenses of running his machinery, tractor, etc., but not the cost of running automobile, unless used solely and exclusively in and for business. The farmer can not deduct for the use of his team, his own services or the services of any minor member of the family, as all have a personal interest in the farm.

"A farmer cannot deduct as expenses interest on indebtedness incurred by purchase of obligations or securities, the interest on which is not taxable. This means, that if he borrows money to buy government, state or municipal bonds, the interest on which the government says shall not be taxed, he cannot deduct as expense the interest he has to pay on this borrowed money. Such bonds are Farm Loan Bank bonds, Liberty bonds, etc.

He can deduct for all stock bought for resale, but not bought for breeding or for use."

### CAMPAIGN OF RAISIN GROWERS

**A** WHIRLWIND drive on the raisin growers of the state is to be conducted from now until February 1. The first contracts have expired. A new and better one is presented to the growers. The board of directors, composed of Wylie M. Giffen, James Madison, Hector Burness, H. Graff, A. G. Robinson, H. H. Welsh and A. G. Wishon, is sending out to all raisin growers, the following letter:

"All crop contracts held by the California Associated Raisin Company expire with the present crop; new contracts must be signed if the present method of marketing our crops is to be continued, and a new contract is now

# Come to Headquarters for Trees



Fresno is a  
Great Fruit  
Growing

Center and We Specialize in  
Fruit Bearing Trees

## Growers Made Big Money

This Last Year

From Peaches and Apricots

**W**E ARE at present in a position to fill either small or large orders for Muir and Lovell Peach Trees and Tilton and Blenheim Apricot Trees.

This condition may not prevail later in the season, so we would suggest that if you have in mind planting these varieties, that you order as soon as you can conveniently do so.

The demand for all varieties of trees this year will be heavy.

Be sure and register your name for a copy of our catalogue. Use coupon below

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The advertisers in the California Cultivator are known to be reliable and we recommend them to our many subscribers.



## TEAGUE QUALITY CITRUS TREES

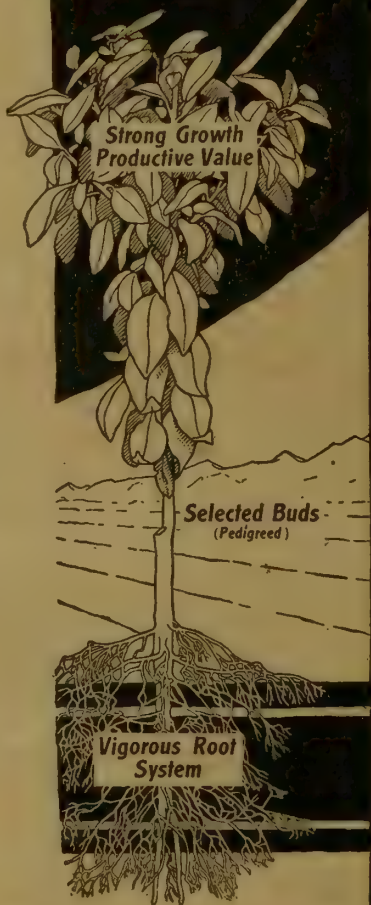
AWARDED THE GOLD MEDAL AT FOUR INTERNATIONAL EXPOSITIONS.

For Productive values, fine quality of fruit and vigorous growth Teague's bud-selected, (pedigreed) properly trained and carefully handled orange and lemon, pomelo and lime trees are the trees to plant. An experience covering a third of a century warrants the assertion that Teague Quality Citrus Trees possess these qualifications in a superlative degree. All the standard commercial sorts, and garden and ornamental varieties; the largest assortment of citrus trees in America. . . . We invite correspondence from intending planters. . . . Consultations on citrus planting by appointment. 1918 Price list just out; send for a copy.

**The R. M. Teague  
Citrus Nurseries**

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CALIFORNIA

FOUNDED IN 1889  
AT IT 29 YEARS



being presented to you for your signature. The new contract has been most carefully prepared, and the weak points in the old contract eliminated. Under it we shall have more capital with which to do business and provide badly needed packing houses; thus obviating much delay and annoyance in delivering the crops. It provides for higher prices at the time of delivery on Muscats, Malagas and Feherzagos; for approximate settlement on each variety when entirely sold, and gives the growers every cent received for the raisins, less only the actual cost of manufacturing and selling and eight per cent earnings on the capital stock of the company.

"We believe now, as we believed two years ago, that our value to the industry depends largely upon the control of the crop, and unless at least 125,000 acres are signed up under the new contract by February 1, 1918, all contracts taken will be returned; thus each grower is confronted with a question, vital to every man, woman and child in the raisin growing district: Shall we continue our cooperative plan or return to the old time competitive methods? In answering that question it should be borne in mind that we are better prepared to serve you than ever before. We began our work handicapped by a large holdover of the preceding crops. This condition has been changed and we will start under the new contract with practically a bare market. We began our work with limited capital and facilities and uncertain credit, making many things absolutely necessary then, such as the payment of large sums of money in rentals for packing houses, which can and will be avoided under the new contract.

"In the main the work accomplished speaks for itself. There is, however, one point thoroughly misunderstood, and that is in regard to the higher prices supposed to be received by the outside growers. The facts are that the growers of Thompson Seedless and Sultana raisins have received more per pound for every crop handled by us than have the outside growers. It is true that a few outside growers have sold at the end of the

season each year for a figure higher than was received by the Associated growers, but from 90 to 95 per cent of the outside growers sold their crops before the Associated named prices and sold them at figures much under our prices. One illustration that is still fresh in your minds: During the spring of 1916 practically all of the outside Thompson Seedless raisins were sold from five to six cents per pound, whereas on that same crop our growers received over six and one-half cents. Even on Muscats the 1916 crop has netted the Associated growers one-quarter cent per pound more than the average price received by the outside growers. With the increased efficiency of the organization and the savings possible under the new contract our settlement, as compared with the outside grower, will be even more favorable than in the past.

"Mistakes have been made in the past, as they will be in the future, but in spite of every argument that has been made, and every criticism that has been thrust at us, there is one fact that stands out beyond and above everything else, and that is that 580,000 tons of raisins have been grown and sold in the past five years, and every ton has brought more than \$65 per ton. The price has been three and one-quarter cents and up instead of three and one-quarter and down. Both as to production and price this is a record unequalled since the raisin business assumed large proportions, and it is on the strength of this record that we now offer this new contract for your signature.

"California has taken the lead of every state in the Union in intelligent marketing of farm products, and your own organization was a pioneer in this work. Our success so far has been heralded far and wide, giving courage and support to many similar movements in other lines, so that the result of the campaign upon which we now enter determines not alone the prosperity of ourselves, but in a much larger measure than we realize, affects the welfare of the state. The eyes of California are upon us today, and let no man falter! '125,000 acres and then some, by February first,' is the slogan."

## Home Pickling of Ripe Olives

By Frederic T. Bioletti

These directions are suitable for preparing small quantities for home use.

Gather the fruit carefully by hand, without bruising. It is best when cherry red or just turned black. When green, it lacks flavor and oil and when over-ripe, it is too soft and the skin is tough. Soft, shrivelled, or frost-bitten olives are unsuited for pickling.

Place the olives in an open vessel of glass or earthenware, or a wooden bucket or barrel. Metal vessels should not be used. A wooden cover to fit loosely inside the vessel on top of the olives will prevent the spotting of any olives which float.

Make a lye solution of three ounces (three tablespoons) of soda lye to a gallon of water or approximately one pound to five gallons.

Cover the olives with this solution, keeping them submerged by means of the wooden cover. Stir and examine the olives every hour. As soon as the skin changes color, cut an olive occasionally to note by the discoloration of the flesh how far the lye has penetrated.

When the lye has gone through the skin but only a short way into the flesh, pour it off into another vessel. This will be in from three to eight hours, according to the olives and the temperature.

Expose the olives to the air until the color is darkened and equalized. They should be stirred frequently while exposed. To make them all black requires from one to three days or more, but the flavor is better if not exposed too long.

When the desired color is attained, replace the old lye by fresh lye and leave with frequent stirring until it has penetrated to the pit. It must reach the pit or the olives will be bitter, but if left long after reaching the pit, the flesh will be softened and the color bleached.

Replace the lye with water which should be replaced twice daily, until

all taste of lye is removed—about five to seven days.

Then place for twenty-four hours in a brine of five ounces (five tablespoons) of salt to a gallon of water.

Then heat the olives and brine to boiling and pour hot water into scalded jars or cans. Cover and seal and place in a pot or washboiler sterilizer and heat for one hour.

N. B.—Certain olives, such as Manzanillo, darken easily when aerated even if they are somewhat underripe. Others, such as Mission, will not darken if underripe unless exposed for a very long time. Over exposure injures the flavor. It is better to be satisfied with imperfect color than defective flavor.

Before sterilizing the brine may be poured out of the jars or cans which are then sealed immediately while still hot and sterilized as above. They keep quite as well without the brine.

## Queries

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

### Postage

Any inquiry which comes to the Cultivator for treatment in this department is answered most willingly and without cost to the inquirer, that is, of course, presuming the inquiry is of general agricultural interest. The same is true of the veterinary and the legal departments. Where immediate mail reply is requested of our veterinarian, this calls for the sending, direct to him, of \$1.00 fee. This is a matter in which the Cultivator has no part whatever, but quite often matters of general agricultural interest are asked and requests made for mail reply. Usually in such cases the



## Ornamental and Fruit Trees

*For More than Fifty Years We Have  
Been Growing and Selling Nursery Stock*

Bartlett Pears on Quince root double-worked on Beurre Hardy are more and more in demand—double the number of trees can be planted to an acre.

Let us have your order early for Cherry Trees and Resistant Grape Vines. The demand for all varieties of trees this year promises to be big.

Illustrated Catalogue on Request

**California Nursery Co.**  
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Not gravity, but boiling points, is the real test for gasoline. Red Crown has the correct boiling points in a continuous chain.

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*The Gasoline  
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THE WAY TO BIGGER CROP PROFITS

Next year will be the Farmer's greatest season in which to make money. Prepare to raise big crops. Be sure your irrigation facilities are adequate. Take no chances. Better install a Layne & Bowler Turbine Centrifugal pump and minimize your crop risk.

Ask for Catalog No. 30—it gives full information regarding these pumps.

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"Coates French 1418"



Pure French Prune Dries 32 to the Pound

Grafting Wood for Sale — 25 cents per foot; \$15.00 per 100 feet; \$100.00 per 1000 feet. See catalogue for full description. Order at once, or it may be too late.

Leonard Coates Nursery  
Morgan Hill California

"THE BOSS" TREE PROTECTOR

Made of Yucca Palm.

Is cheap, durable and quickly put on the tree. It prevents rabbits from destroying your trees. A sure protection against frosts, sunburn, grasshoppers, or dry winds. Can be easily removed, will last for years. Send for samples.

Prices

	Per 1000
10 in. long, 7 in. wide....	\$10.00
12 in. long, 7 in. wide....	11.00
14 in. long, 7 in. wide....	12.00
16 in. long, 7 in. wide....	13.50
18 in. long, 7 in. wide....	15.00
24 in. long, 7 in. wide....	18.00
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1880 Willow St., Los Angeles, Cal.

\$1.00 Bulbs Special Collection \$1.00

6 Hyacinth mixed .....	.50
12 Tulips mixed .....	.35
6 Narcissus .....	.15
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Total .....	\$1.30

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postage for reply is enclosed, but occasionally the inquirer forgets or neglects this, and with the large number of inquiries coming it is quite a factor. We prefer not to answer by mail but where it is possible answer through the query columns. Another feature is brought to our attention by a correspondent, one who had written an article for the paper and unfortunately his post office address was given. It was along a line which created considerable interest, and he writes to please call off the correspondents who write asking him questions only of personal interest "and in 75 per cent of all these inquiries no postage is enclosed for my reply. I am willing to take my time, write letters, and furnish the stationery, but when the inquirer has not sufficient interest to enclose a three cent stamp, I do not think his interest is sufficient to justify my going to the extent of a long letter which is usually required in these inquiries." Where a man writes the Cultivator for advertising rates, or any other business matter, or writes any business house along a line which may lead to business for them, it is the province of the house to pay its own postage and seek after the business, but unfortunately many make personal requests without observing the slight courtesy of making the work as light as possible to the one from whom the favor is requested.

Beet Pulp for Chickens

Is beet pulp good feed for laying hens?—Subscriber, Pasadena.

Sugar beet pulp, either fresh or dried and soaked in water, has been used by poultrymen as a substitute for green feed, but it contains too little ash to be a satisfactory substitute for the more succulent greens, and too little protein to be of much use for laying hens. Since it consists mainly of sugar, starch and crude fibre, it might be used to a limited extent to feed birds that are to be fattened, but care should be taken not to feed so much that the fibre clogs the digestive organs. The composition of fresh beet pulp, according to Professor Jaffa's table is : Water, 90 per cent; ash, .36 per cent; crude protein, 1.15 per cent; starch, sugar, etc., 6.25 per cent; crude fibre, 2.11 per cent; crude fat, .13 per cent. Dried, it contains: water, 9.80 per cent; ash, 2.97 per cent; crude protein, 8.10 per cent; starch, sugar, etc., 53.03 per cent; crude fibre, 25.45 per cent; crude fat, .65 per cent. I have not known of beet pulp being used as a substitute for any of the grain feeds for hens, and should be glad to hear from anyone who has tried it.—J. A. K.

Peanuts

Would like advice about raising and yield of peanuts, also how they are prepared for market and sale price.—Subscriber, Pomona.

Time was when California produced hundreds of cars of peanuts. Today she is producing practically none for the reason that other crops have proved far more profitable. This has been especially the case since the importation of large quantities from the Orient. The Japanese peanut is inferior, but the same has filled the market at such low price that Americans have found no profit in it. Orange County used to be the principal peanut growing section. Peanuts are planted the same as corn, on well pulverized, light, friable soil. Plant to a depth of six or ten inches from early April till the first of June. Distance between rows is determined partly by quality of soil, usually about three feet. Kernels are dropped in row 12 to 20 inches apart. They are harvested much as are beans, that is, cutting the roots, winnowing and stacking. The harvesting should be done in October or early November before the rains have started. The picking is usually by hand. The price some years ago ran around 40 cents per sack which held about 40 pounds. After the hand picking the vines with the cull nuts remaining make excellent feed for hogs and cattle, but not for horses.

Watsonville has shipped out about 150 carloads of apples so far this season. Oakdale, Stanislaus County, has shipped out a big output of almonds, amounting to 15 cars, nearly three times last year's crop.

BUY TRACTORS TO HELP FARMS, U. S. PLEA NOW

By H. B. Hunt

WASHINGTON, Oct. 9—Uncle Sam's farmers must motorize for the war.

That is the decision of government officials here who have been studying ways and means of increasing farm production when army drafts and war industries are taking hundreds of thousands of young men from our farms.

The only solution is to increase the productive capacity of the farm labor remaining. And the most practicable means of enabling each plowman to turn two or three furrows instead of one, and harrow 25 or 30 acres a day instead of 10, is to put our farmers on modern farm tractors.



Cleveland Tractor

YOU must motorize your farm. Stern necessity demands it. Patriotism urges it. In that way alone can you counteract the shortage of labor and produce the bigger, better crops America expects of you.

Patriotic, progressive farmers are helping both their country and themselves by the use of the Cleveland Tractor.

This remarkable little machine hauls two 14-inch bottoms and with them it plows up to 3½ miles an hour—8 to 10 acres a day. That is more than you possibly can do with three good 3-horse teams and their drivers.

It not only plows faster—but better and with far greater economy.

Because it *crawls on its own tracks*, the Cleveland can go practically anywhere—over ditches and gullies—even through the sand, gumbo and rice swamps of the South. It enables you to plow exactly where you want and when you want.

The Cleveland will not pack even a mellow seed bed—because it is light—only 2750 pounds—and has 600 square inches of continuous traction surface—a bearing pressure of less than five pounds per square inch. Though small enough for use among young fruit trees, it possesses tremendous power. It gives 12 horsepower at the drawbar, plenty for plowing, harrowing, pulling the manure spreader, seeder or any hauling job. At the pulley belt it develops 20 horsepower for pumping, sawing, cutting ensilage, filling silos and other stationary work.

The Cleveland Tractor is designed and built by Rollin H. White, the famous motor truck engineer. Mr. White uses scrupulous care in his choice of materials. The gears are identical with those of the finest trucks and are enclosed in dirt-proof, dust-proof casings.

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# Making Sorghum Syrup

By A. B. Ballantyne of University of Arizona Extension Service



**I**N RESPONSE to many inquiries concerning the making of sorghum syrup the following suggestions are offered, based largely upon the experience of Martin Mortensen of Thatcher, Arizona, a practical sorghum grower and syrup maker.

## Mills and Evaporators

Since the making of syrup will require the attention of one man practically all of the time, it is important that the equipment be large enough to justify his attention. A number two, or a number three roller power mill and an eleven or twelve foot evaporator will usually do this. The main requirement of a mill is that it shall get all of the juice, and shall be large enough to keep an ample supply for the evaporator. Where farm power engines of sufficient power are available, a three roller power mill would be desirable. Have it trued up on a good, solid foundation. The power mills will cost from \$75 up. Best results have been secured by many from the sectional evaporators since the heat can be controlled very satisfactorily, and the work is more evenly distributed.

## Varieties of Sorghum Cane

Goose Neck, or as it is sometimes called, Texas Seeded Ribbon Cane, yields well, 200 gallons and over per acre, and some of the best syrup makers in the Gila Valley prefer it. The syrup from it, however, is somewhat darker than from the Sumac or Red Top Cane. The Amber Cane is a short season variety adapted especially to the colder climates. Goose Neck Cane requires about ten days longer season than Sumac, but yields more syrup and is of a better body.

## Cutting the Cane

To make the best syrup the leaves should be stripped from the cane and of course the tops also cut off. Stripping also offers the advantage of reducing the amount of skimming by half, and gives a greater yield of juice from the stalks, since when the leaves are not removed they absorb part of it as it is pressed out and the leaves that are crushed impart an undesirable flavor and increase the amount of dark solid particles that are often noticed in sorghum syrup.

When the cane reaches the "roasting ear" stage or when the seed is in

the stiff dough and until it becomes hard, is the proper time to cut it for syrup making. The earlier cut cane—or the juice from it—will require more boiling but will produce a finer flavoring syrup than that from the cane cut when the seed is hard, though the yield of syrup will not be quite so great as from the later cut cane.

Be sure that the cane is cut before frost, as standing after having been frosted impairs the quality and flavor of the syrup made from it. When the sorghum is mature it can be stripped, cut and piled in small piles and covered from freezing and be worked up later. Sorghum so handled will require much less evaporating.

## Making the Syrup

Scrupulous cleanliness in making syrup will be repaid by the superior flavor of the product, as well as in its superior keeping qualities. Repeated cleansing of the juice containers and the syrup pans is necessary.

As the juice runs from the mill it is important that it be strained, preferably through a flannel cloth, though several thicknesses of cheese cloth or a fine wire strainer will do.

As the syrup is removed from one section of the evaporator to the next, repeated skimmings of the coagulated scum will be necessary. Skimmers are usually flat with perforations in the bottom.

When a stick dipped in a cooled

sample of the syrup in the last section shows it adhering well—not running off and leaving only a thin film—then the boiling is completed and the syrup is ready to be strained again into the sterilized cans in which it is to be sold.

Sixty gallons of syrup in an eight hour run from an eleven foot evaporator is an average day's work. Where it is run 24 hours of course the production will be increased accordingly.

## Marketing

A superior quality of sorghum syrup attractively packed should find a ready sale in any community. It is far superior to the corn syrup commonly found in our grocery stores and should be handled by our grocers to the exclusion of the imported corn syrup. This should be done from a sense of local patriotism if from no other motive. But makers of sorghum syrup should be sure that their products are attractively put up in containers adapted to the trade and above all things be sure that only quality products are branded as such.

## COST OF GROWING WHEAT

According to figures given in the Farmer and Stockman, a lot of eastern wheat producers are growing wheat and selling for less than actual costs, even at present prices. That is, 14.22 bushels is the average per acre, and many are producing less than the average. As may be seen from the following figures there is a net loss. Here they are as given from an eastern standpoint.

The cost of wheat production for this year is given as follows:

Plowing	\$1.75
Disking	.35
Two harrowings	.50
Dragging or rolling	.25
Drilling	.55
Seed	2.50
Cutting, twine and shocking	2.00
Stacking	2.15
Threshing	1.00
Marketing	.60
Binning	.30
Hail insurance	2.40
Fire insurance, six months	.23
Soil Fertility	2.40
Interest on land	5.00
Taxes	.60
Depreciation on improvement	.25
Depreciation on equipment	.50

\$23.23

It is pointed out that the average yield of wheat in Oklahoma for the past 20 years has been 14.22 bushels per acre. Thus at \$2 a bushel, the acre income would be \$28.44. Deducting from this the cost of production and the cost of marketing—35 cents a bushel—a profit of only 33 cents per acre would be obtained, which is the same as no profit at all.

## RED CROSS MEMBERSHIP DRIVE

W. L. Hathaway, chairman of the divisional committee of the Pacific division, writes that "there will be a Christmas Membership Campaign which will extend over a period of eight days, starting December 17 and concluding the evening of December 24. Prior to the campaign for membership the organization of the forces in the various chapters is quite essential, and the results during the campaign for membership largely depend upon the perfection of the organizations within the various chapters."

Before the war the United States was almost at the bottom of the list of nations in the matter of membership. We believe there were less than 200,000 members at that time. It is anticipated that the present drive will bring the membership of the American Red Cross up to at least 10,000,000. Let every one who is not a member of this organization support it at least to that extent.

## BLACK MOLD OF ONIONS

The discovery of black mold in the onions of California gives to onion growers an additional problem and should make for very careful planting and cultural methods.

Adding to information given in a former Cultivator, Assistant Botanist Wayne Van Pelt of the Ohio agricultural experiment station writes regarding treatment of soils: "I have planned for more extensive experiments as to control measures the cur-



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rent season and will be pleased to mail you my results. Results from last season's experiments show that sets immersed in formalin solution, one pint or pound of 40 per cent formalin to 33 gallons of water, for a period of six to 12 hours, freed the sets entirely from black mold, with no injury to sets. Results from solutions of copper sulphate gave unsatisfactory results."

### WHEN PUTTING THE TRACTOR AWAY



If you aren't going to use your tractor for a while do these things when you put it away" is the suggestion of one of our biggest tractor companies in a recent circular:

#### Here are the Things:

If you are going to lay the tractor away for a while, you should, when stopping the tractor on its last run, pour a pint or more of oil into each priming cup and then shut the motor down immediately afterward. This oil will be drawn into the cylinders and will coat the valves and valve stems with an oil film which will protect them from rust.

In putting a tractor away, it should be looked over very carefully to see that all parts of the cooling system are drained thoroughly. If the tractor sits high at one end or the other, water may lodge in certain places, and if freezing does not damage, it will rust the parts and in time cause trouble.

The user of a tractor will find it a paying proposition to house the tractor at all times when it is not in service. However, if it is not housed, there should be something placed over the stack of the radiator which will prevent snow and rain getting in, and a tarpaulin or canvas large enough to cover the motor complete used, as the motor should not stand out and take the weather.

The fuel tanks should be drained and protected so that it will be impossible for water to get into them. If the last time the tanks are filled with fuel a pint of cylinder oil to each five of fuel is put into the fuel tanks, it will leave an oil film on the inside of the tanks which will be very beneficial in prolonging the life of same.

Also in putting away a tractor the user should make a note of all parts that will be needed to put on the tractor when it is put into service again, for if you wait until then you are not only liable to overlook some of these parts but there may be a delay in getting them promptly.

Remember, it is the little oversights that are most expensive and cause the greatest delays.

### COOPERATIVE PURCHASING

"Cooperative Purchasing and Marketing Organizations Among Farmers in the United States," Bulletin 547 of the United States department of agriculture, gives in condensed form the early history and growth of cooperative organizations, present forms and tendencies, statistics, types of cooperative organizations, financing and business practices, cooperative laws, list of publications on cooperation. It is written by O. B. Jesness and W. H. Kerr. Any cooperator who may wish this information may have the publication by writing United States Department of Agriculture, Washington, D. C., and remitting 20 cents.

December 15, which is interest payment day on the first series of liberty loan bonds, is the time set by the treasury department as best for exchanging the first issue of three and one-half per cent for the second of four per cent issue. Anyone wishing to make this exchange should see his bank at once and surrender the bonds of the first issue. The right to convert the first liberty bonds into the new or second series must be availed of prior to May 15, 1918, and December 15 being the interest payment date the exchange is more easily effected.

Put the farm machinery in first-class order. An hour spent in repair may prevent later on a day of despair.

A silo is more than granary. It improves feed as well as storing it.

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—saws 25 cords in a day



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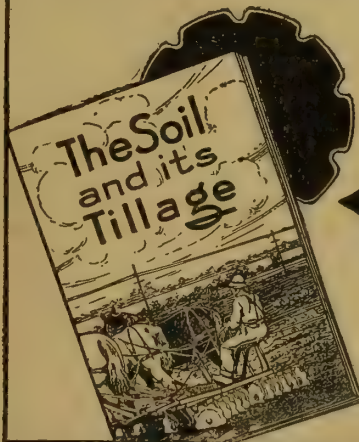
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**THIS WEEK'S COVER**

The sentiment on the cover of this issue takes little space in wishing a "Merry Christmas," but it does express a feeling which generally obtains this year that, so far as we may, this should be a season filled with joy, and such joy as comes from service to others. These are wonderful days for the American people, and the great question of all is; "Are we living up to the best of our opportunities?" May this Christmas time cause us to consider those opportunities. A happy augury of a brighter year is the capture by the British forces of the city of Jerusalem, which, after five or six hundred years in the hands of the Turks, now has a Christian flag flying over it.

**SUGAR BEETS**

The southern end of the state of California produces more beet sugar than any other section of the United States of similar area. With the present shortage, and with probable shortage a year from now, the entire country is looking to this state to do its duty, but unfortunately a condition has arisen which makes it improbable that California will produce within 75 per cent of its last year's output.

For years the beet growers have felt that they have not had just treatment from the manufacturers. Last year scarcely a beet grower in the state made money. A far greater number lost and lost heavily; this partly because of weather conditions; partly because of labor conditions; partly, some growers say, because the factories would not take the few beets they could raise at the proper time, and the sugar content was lowered by the delay; partly because, other growers say, they did not receive pay for the full sugar content. In any case, they

lost money, and are in a more or less rebellious frame of mind, and this because the sugar manufacturers never coined money so rapidly as last year.

According to the statement of District Attorney Woolwine of Los Angeles County the profit on the original investment of some of the factories was even more than 100 per cent. This difference in the enormous profit to the manufacturer and the loss to the grower has driven a great part of the growers to decide to plant cabbage, beans or other crops whose marketing will not be exclusively controlled.

The result of the mass meeting in Los Angeles Saturday is given on another page, and while we believe Food Administrator Merritt has only a desire for greater production of sugar, the growers unfortunately have a feeling that he is friendly to the factories. At present writing District Attorney Woolwine contemplates taking the matter up with congress, and latest reports suggest possible indictments because of combination in restraint of trade.

Instant action only will result in

"And thou Bethlehem, in the land of Judah, art not the least among the princes of Judah; for out of thee shall come a Governor, that shall rule my people Israel."

The "Governor" who was a shepherd to His people, to all peoples, came, and for nearly 2000 years has brought joy to the world, the King of Kings and the Prince of Peace. But he never cried "peace when there was no peace." When he came there was a Herod, a sinister figure, drunk with the thought of his own "destiny," and to remove all possible barriers from the accomplishment of that destiny he decreed that all babies under two years should be slaughtered. All in Judea, perished, save One who escaped to Egypt. He returned, and ever since we have observed His birthday. It is the period of the year's greatest joy; greatest because we give most greatly at this time. Let this year be no exception. There is still an Anti-Christ; there is an awful conflict of nations; there is outraged justice, a demand that arrogance, that tyranny, that the awful barbarities of a people drunk with lust of war and of power, stop. The principles of Jesus are not on trial, but the human race is. The barbarities shall stop and on God's terms of peace.

Meantime Christmas is here! If not Merry, it may be Joyous at least in the passing of joy and helpfulness on to others.

anything like ordinary production. Many sections should have finished planting prior to this date.

**ANNUAL REPORT**

Secretary Houston's report for 1917 gives a review of agricultural conditions, gratifying to every well-wisher of America. He calls attention to the unsatisfactory situation at the time of the declaration of war in respect to foodstuffs and feedstuffs. The production of 1916 was comparatively low, for example, corn and wheat and other cereals aggregated 4,806,000,000 bushels as against 6,010,000,000 bushels for 1915. Even for normal times the production for 1916 was desperately low, but for a nation entering a war the situation was exceedingly serious.

The report tells how this condition was met by the farmers of the country, acting as one man in patriotic response to the appeal for greatly increased production. Amongst the successful methods they followed to accomplish this were the purchase of additional machinery and equipment, working together in local organizations to increase and equalize the market, stimulation of home production through home gardens, the food saving campaign, conservation of all kinds of perishables, together with the market news service and fertilizer service, purchase and distribution of seed, and making the most of labor and other forces. The secretary ends his report with:

"The spirit revealed by the farmers and the results of their efforts during the present year indicate that they recognize the responsibility resting upon them in this emergency. 'I am

confident that they will patriotically continue to assume and to bear their full share of the country's burden. The farmers of the nation have always shown their devotion to the cause of freedom and have not been slow to respond to their country's call for men and means to defend its rights. They will not submit to Germany's dictation. They will not permit her to impose illegal restrictions on their privilege of going freely to any part of the world where they have a legal right to go or of sending their products into the open markets of the world. They will realize that the dictum of Germany that this country should not send its ships at will to the ports of great nations of Europe was not only unwarranted and impertinent, but also that, if it had been acquiesced in, it would have involved them very particularly in great direct financial loss and suffering. As the meaning of this struggle is more fully revealed, as it becomes increasingly clear that a contest is again being waged to determine whether the world shall be dominated by the will and policies of medieval despotisms or by those of free and enlightened modern states, and whether the mere right of might or the rule of law shall prevail in the world, and it becomes more obvious that the surest way to force a righteous peace is to employ effectively all the resources of the nation, the farmers will increase

**This Week's War News**

This has been a wonderful week for the Allies.

The most disquieting feature of the week's news is the claim by Berlin that Germany has secured from Russian and Rumanian armies on the Rumanian front the signing of a three months' armistice. The Rumanians are said to have stipulated that no German troops might be transferred from the Rumanian front to other points to oppose Allied forces.

A terrible explosion of munitions at Halifax has killed probably 2,000 people, injured 6,000 and rendered homeless 25,000. Blizzards have swept the city causing fearful suffering. The cause of the explosion has not been determined. So far as reports indicate it was accidental, though many German residents have been arrested by the police and careful investigation is being made.

Italy is declared safe from the Austro-German forces by official cable from Rome. The great Teuton plunge into Italy did not even succeed in reaching Venice, but was halted at the Piave River by what is called the most successful operation of the Allied forces next to the battle of the Marne. With the coming of winter the Teutons face enormous difficulties in keeping their supply lines open over the frozen passes leading to Austria.

The Germans are massing troops and supplies on the western front in the Cambrai and other sections, with the evident intention of making the biggest drive of the war on the Allies before they can be reinforced by any considerable number of American troops. Our declaration of war against Austria and the speeding up of American plans for getting to the front at once seem to have convinced the Germans that American help is after all going to be a thing to be reckoned with, and that soon.

First in interest, no doubt, in the week's war news is the taking of Jerusalem from the Turkish forces by the British under General Allenby. So ends the Turkish-German attempt to push through Palestine, take the Suez canal and overrun Egypt. Jaffa, the seaport of Jerusalem, was captured by the British more than a month ago, and a slow enveloping movement undertaken to preclude necessity for a violent attack which might destroy sacred and historic monuments in the Holy City. General Allenby, accompanied by commanders of French and Italian troops, made his formal entrance into Jerusalem on Tuesday.

Japanese forces are in control of Vladivostok, the eastern terminal of the Trans-Siberian railroad on the Sea of Japan. Presumably they are acting in concert with Russian government forces and the Siberian government which is opposed to the apparent intention of the Bolsheviks to make terms with the Germans. This move will safeguard to the Allies the great quantities of foodstuffs and other supplies sent from this country and other points, now awaiting shipment to Petrograd. Harbin is reported to be held by Chinese troops. It is at the junction of the branch of the Trans-Siberian railroad running down to Port Arthur at its crossing of the Sungari River.

The situation in Russia seems as dubious as ever. The action of the Bolshevik forces in attempting to conclude an armistice with Germany is condemned by manifestos issued by a number of non-Bolshevik Socialist bodies and the Executive Committee of the Peasants Deputies. They declare it "only the action of a party of usurpers. The armistice does not bind Russia, nor any part of it, pending the decision of the constituent assembly." The People's Commissary of Agriculture has issued a proclamation declaring "all lands, with their living and slaughtered stock, all the buildings and the produce of the lands, national property under the management of the land committees."

We are Hooverizing—observing the very letter of the law on meatless Tuesday and wheatless Wednesday, but unless we observe somewhat its spirit on other days of the week and save staples to the limit, we may say with the poet after he had finished all the tin cans and began on the pieces of the mirror: "This surely is food for reflection."

ingly put forth their strength, send their sons to fight at the front and see to it that neither this nation nor those with which we are associated lack anything in the way of materials for food and clothing. It is incumbent upon them, as it is upon all other civilians, to work and to save, to seek no mere selfish advantage, and to reveal the same spirit of devotion and willingness to make sacrifices and to give all they are and have which animate the soldier in the trenches, if this struggle is to be brought to a satisfactory conclusion. Every facility that this department can command to assist them will be freely placed at their service."

**REVISIONS**

Senator Johnson recently made a speech in Los Angeles in which he referred to the fact that there was need for revision of the war tax bill because of the injustice of allowing the munition manufacturers to make almost untold millions of profits, and suggested that the present session of the legislature would correct this. As it is, these enormous profits are taxed only to the same extent that other business interests are. Why they should not pay 50 to 60 or even a greater percentage of these swollen profits into the war treasury the common people fail to see.

While on this point, is it not proper to ask why the congressman should deprive himself of the patriotic service of paying the small percentage of the war income tax on his salary as well as those who elected him to office? It is reported that members of congress are planning in the present session to remove this exemption from their salaries that they may stand before their fellow countrymen in a more favorable light. Now come the teachers of our young people with the claim that as state and county employees their salaries are exempt from the war tax. These are certainly not inspiring examples of patriotism to the children who are being educated for future citizens.



# Agricultural News Notes of the Pacific Coast

## Northern California

Mendocino County is organizing and wants a farm adviser.

Cloverdale recently shipped a car of high grade Franquettes.

A farm center has been organized at Moraga, Contra Costa County.

E. A. Gammon is president of the Sacramento County farm bureau.

Placer County's tomato crop will be materially decreased by killing frosts of last week.

Concord, Contra Costa County, recently made a shipment of 19 tons of California walnuts.

Butte County is now harvesting her cotton crop which as yet is merely an experimental proposition.

Grape growers at Cloverdale, Sonoma County, have contracted their 1918 wine grapes for \$35 per ton.

Car shortage is making the moving of barley very slow, and farmers are restive under inability to sell.

The farm center at Colfax, Placer County, is pursuing a course of study in fruit growing, poultry husbandry, etc.

There are about 17,000 acres of bearing pear orchards in California and nearly 24,000 acres of non-bearing orchards.

The Grange at Bennett Valley, Sonoma County, recently elected Hans Mortensen, master; Miss Marie Beutel, secretary.

Pear growers of Lake County are organizing and will unite to market next season's pear crop at more satisfactory prices.

Glenn County will add 6000 acres to its wheat acreage, and it is hoped the rice acreage will be at least 10,000 greater.

Oakland claims to have made the record with the biggest poultry show ever held on the Coast. In the poultry division there were 2000 fowls.

Sacramento County farm bureau meetings are to be held December 18, at Carmichael; 19, Del Paso; 21, Cosumnes; 26, Hood; 28, Franklin.

The Humboldt County Dairyman's Association met last week in connection with the creamerymen and discussed the matter of greater production next year.

Grain farming is materially decreasing at Byron, Contra Costa County, for lands are being subdivided and planted to sugar beets and other more intensively farmed crops.

Sacramento County estimates she will produce 65,000 acres of wheat. The greatest production will be in the Natomas district. This is 30,000 acres more than were planted last year.

Nearly 60 Sacramento County orchardists recently made a trip up into Placer County, inspecting methods of orchard work in that diversified fruit county. This is a type of institute which is very valuable.

As we go to press we have wire from State Horticultural Commissioner Hecke that the committee to handle the labor question, according to resolution of the recent state fruit growers' convention, is now named, except for one more producer from the South. The list is: F. B. McKevitt, Sacramento; Frank Wilson, Dinuba; P. F. Cogswell, El Monte; George W. Pierce, Davis; C. C. Dunlap, San Jose; R. C. Merryman, Exeter; George C. Roeding, Fresno; George H. Whitman, Concord.

## Central California

Supervisors of Kings County have voted to provide funds for a farm adviser.

Construction on the Terra Bella irrigation project has been practically completed.

The Three Rivers district of Tulare County will this year ship out eight carload of apples.

Manteca, Stanislaus County, gets a new tomato cannery which will be built at a cost of \$50,000.

The Stanislaus board of trade reports that it has succeeded in supplying much labor to farmers.

The California Peach Growers, Inc., has made definite plans for building a new packing plant at Hanford.

Another large seed farm of over 3000 acres is being established in San Joaquin County, near New Hope.

Merced County farmers have estimated each jack rabbit to destroy at least \$5.00 worth of farm products.

A series of vine and tree pruning demonstrations has been held by the county farm bureau of Fresno County.

The farm bureau center at Claus, Stanislaus County, is discussing beans and how to grow more and bigger and better.

County Farm Adviser Jungerman of Stanislaus County has been holding interesting hog feeding demonstrations at Modesto.

Stanislaus County grain growers have almost entirely completed their seeding and are now saying, "Let the rains come."

San Joaquin County this year had a big output of beans, not only because of increased acreage, but heavy yield on practically all land planted.

In a recent survey of Kern County it was found that the wheat acreage of the county would be increased about 3500 acres over the acreage of 1917.

The navel orange section of Tulare County is now shipping oranges which stand up to the eight to one test. The crop is less than 50 per cent of normal.

The Associated Raisin Company has started a big campaign to secure signers for its new contract. "125,000 acres of raisins by February 1" is the slogan.

Orange growers of the Springville district of Tulare County are now busy picking. Growers in the Success district are also beginning to pick their crop.

One thousand acres will be planted to grain on the Kearney Estate near Fresno, now the property of the state university. Plantings will be made of oats, barley and wheat.

Jack rabbit control is the topic of farm bureau meetings in Madera County. Some of the sections have killed as high as 2000 rabbits, and these have been sold for sufficient to pay for shotgun shells.

Horticultural Commissioner Roulard has asked fruit growers of Fresno County to make plans to welcome the semi-annual convention of the fruit growers of the state which will be held at Fresno this spring.

The California Prune and Apricot Growers, Inc., has begun suit against Geo. N. Herbert, a packer, for \$100,000; also for \$160,000 worth of dried fruit which was turned over to him by members of the Growers' Corporation.

## Southern California

A new farm center hall is to be built at Nuevo, Riverside County.

This season's pack of sardines and tuna has been unusually large.

Chino, San Bernardino County, is moving for a cow testing association.

A local farm bureau has been formed at Lankershim, Los Angeles County.

Grain smut treatment and rabbit poisoning are items of discussion in San Diego farm bureau meetings.

The sugar and bean crops of Orange County will, it is estimated bring to that county this season \$14,000,000.

The 1917 cotton crop of the Palo Verde Valley of eastern Riverside County will this year total 8000 bales.

Chatsworth, San Fernando Valley, is the site of a 2500 acre storage reservoir which gives practical guarantee to producers of that valley.

The dehydrating plant connected with the American Beet Sugar Company's plant at Chino took care of 1200 tons of pulp every 24 hours.

Chino, San Bernardino County, is still working for its cannery which is to be on cooperative lines similar to those of the Ontario cooperative cannery.

The Thermal Cantaloupe Growers' Association reports cost to shipper of 1½ cents per crate this season, against three cents last year and five in 1915.

Market gardeners of San Diego County are to be advised in their spring planting by Specialist Ryan of the United States department of agriculture.

Inspector George Wilson who has been employed in the office of the Riverside horticultural commission has now taken up work with the state quarantine office in San Francisco.

A tomato cannery at Oxnard is now contracting for 1918 tomatoes at the rate of \$12 per ton for delivered stock or \$7.50 per ton on vine. This is materially above last year's prices.

Shippers of oranges and lemons will be required to load refrigerator cars seven boxes wide and two high along the entire length of the car, under a food administration order effective December 1.

Sugar bowls will be removed from tables in all restaurants, beginning Monday, according to orders received from the food commission by Los Angeles restaurant keepers. Sugar is sugar these days.

Prof. Vaile of the citrus experiment station at Riverside has been making investigation of cost of growing sugar beets in Southern California. Members of the Associated Beet Growers of Southern California have turned over their books to him.

Farmers of Imperial Valley have organized the Imperial Valley Water Users' Association and appointed a committee to go to Washington to consult with Secretary Lane as to making connection at Laguna. It is hoped to have this connecting canal ready by July.

E. J. Houser, poultry expert of the state college of agriculture, addressed a gathering of poultrymen of the Arlington section of Riverside County one afternoon last week at the poultry farm of J. M. Davison. Similar meetings will be held at various farm centers throughout the county.

## The Coast and General

Montana has found success in growing sunflowers for silage.

The Ohio state university is making a campaign on hog cholera.

There are 20,000 acres of pineapples planted in the Hawaiian Islands.

Honey producers of Oregon and Idaho met at Ontario, Idaho, this week.

The University of Arizona is conducting a series of extension schools in the Yuma Valley.

The English house of commons has agreed to disfranchise conscientious objectors to serving their country in the army.

Arizona live stock people are still talking about the great show of pure bred animals recently made at the state fair.

The International Apple Shippers' Association is closing up its campaign for 100 cars of apples for the boys in the trenches.

More than half the bean crop of the Salt River Valley of Arizona has been destroyed by recent fires thought to be incendiary.

A produce dealer of Washington, D. C., has had his license revoked by the food administration because of allowing two carloads of potatoes to spoil.

Governor Cantu of Lower California, has ordered 300 young men, in that country to escape the American draft law, to cross the border.

Agents of the Arizona commission of agriculture and horticulture are quarantining cotton seed from Texas for fear of introduction of boll weevil.

Storage warehouses near Bahia, Brazil, have installed colonies of bats which keep down the pest of boll worms, cut worms and night flying moths.

There is a vast amount of soft corn in the Middle West, and the food administration is endeavoring to solve the problem of bringing this low grade corn and high grade feeder cattle together.

Notwithstanding the great production of wheat and corn in 1917, the production of the two years of 1916 and 1917 is practically a half billion bushels short of the aggregate of the two preceding years.

There are now 130 agricultural experiment stations throughout China's provinces. There are also two cotton experiment stations, one stockraising station, and a department of forestry with a forest commissioner in each province.

Texas and New Mexico and a small portion of southern Arizona will greatly increase their supply of stock feed by using mesquite beans. Some housekeepers are also grinding beans into flour which makes a most nourishing bread.

Owners of high grade photographic lenses are requested to loan or sell their lenses to the government for use during the war. Factories are unable to supply the immediate need. Write Photographic Division, Signal Corps, U. S. A., Washington, D. C.

A committee of bean growers of California recently held a conference with Food Administrator Merritt and fixed upon a price of eight cents for Pinks and 11 cents for Whites. It is estimated that the average cost of producing beans is not far from \$40 per acre.



## Where Disease Shows First

Just watch the milk yield for the first sign of weakening in the cow's system. If your cow is not giving the quantity or quality of milk you expect, it is time to give her medical attention.

For twenty-five years thousands of the most progressive dairymen have used Kow-Kure as their "first aid" when a cow shows signs of "falling off" or coming down with disease. Particularly before and after the calving period, the use of Kow-Kure is valuable. It is a sure preventive of Milk Fever and Retained Afterbirth, and will enable the organs to resist the diseases which frequently originate at this time.

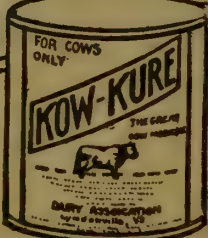
Kow-Kure has a positive action on the genital and digestive organs, toning them up, making them perform properly and helping the system to function as nature intended. Kow-Kure has proven a prompt remedy for Abortion, Barrenness, Scouring, Lost Appetite, Bunches and other common ills.

A small investment will prove the worth of Kow-Kure in your dairy. Put it to a severe test: try it on your poorest milker and watch results. Druggists and feed dealers sell it; 55c and \$1.10 packages.

DAIRY ASSOCIATION CO.,  
Lyndonville, Vt.

# KOW-KURE

Free Treatise,  
"The Home Cow Doctor"  
Sent to Dairymen on Application



## Santa Anita Rancho

Anoakia Breeding Farm

**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by Imported Stallion Iba are the choicest thoroughbred mares on Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Iba Mahruss, world renowned imported desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China hard bears, Banker's Boy and Glenview Wonder. And Berkshire boars, Kistyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted State Record Cows. Write for details.

Correspondence Invited

Anita M. Baldwin

W. H. TAYLOR, Superintendent

Santa Anita, Cal.

# AYRSHIRES

The Economical Breeds  
when Feed is High

# CHESTERS

A Few Would Give You  
A Good Start

Melone Co. Oak Knoll Napa, Cal.

## ABORTION IN CATTLE

PREVENTED AND CURED PERMANENTLY  
YOUR COWS MADE PROMPT, REGULAR BREEDERS BY  
**STERILOID**

STOP LOSING CALVES

TREATMENT: If STERILOID is used at the first sign of

have a healthy calf. If your cows or heifers do not come in season, or fail to get with calf, use the causes and symptoms of Abortion and tells how to cure Abortion, and make your cows regular, healthy breeders with STERILOID. Also contains letters from breeders who have used STERILOID successfully.

**GUARANTEE:** We will refund money in every case when STERILOID FAILS to make good. Price \$1.00. Mail postpaid. In plain wrapper. Dept. L 898-408 Columbus Ave., New York City. Reference, Colonial Bank.

When writing advertisers, mention The Cultivator.

## Who's Who

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photographs and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Written for California Cultivator By M. C. Holman

### A VISIT TO THE CARRUTHERS FARMS

**W**E could not possibly have enjoyed a day among live stock with keener appreciation of quality and fitness than the day recently spent with W. M. Carruthers, at his extensive ranch near Mayfield. Some great prize winners are being developed in both Berkshires and Shorthorns. The Berkshire herd of 18 brood sows would be hard to duplicate anywhere, and the young boar, Mayfield Champion 2nd, is probably the greatest boar ever produc-



W. M. Carruthers

ed on the farms. In all probability he will be seen on the fair circuit in coming years. We feel that he is superior to the selection made by Dean Curtiss to head his herd at Ames, Iowa.

Also traveling the fair circuit will be seen two grand show sows which are considered by Mr. Carruthers to be nearly equal to Rookwood Lady

100, the sow that was sold last August to Mr. Frank Brush of Santa Rosa. She was later made grand champion at the National Swine Show at Omaha, an honor which means the pinnacle of perfection.

More champions are coming from the East. In a few weeks will arrive 15 daughters of Rival's Champion's Best, the greatest living Berkshire sire.

At the 1917 California state fair the grand champion sow and the reserve grand champion sow were both products of these farms, and at the Western Berkshire Congress, held in Salem, Oregon, recently, three of the championships and one grand championship were won by hogs sold at the last Carruthers Farms sale. The premier exhibitor's banner at the Panama-Pacific International Exposition was won by hogs that came originally from the Carruthers Farms. It is evident that this herd has been the progenitors of more prize winners than any other herd in the state during the past three years.

Mr. Carruthers is the originator of the private sale in this state, and for the past two years his sales have made the highest averages of any Berkshire sales held in America. Dean Curtiss, the noted Berkshire authority at the last annual sale announced to the assembled buyers that the offering which Mr. Carruthers was putting up for sale had never before been equalled in the United States.

It is a real pleasure to see such great development going on and such wonderful specimens of the Berkshire breed being turned out to win the prizes that are offered for classy porkers.

## Field Notes from the Live Stock Men

Billings, Montana is planning for Midland Empire Fair and Stock Show for 1918. It is proposed to equip for 500 head of stock.

Artillery horses are now demanded of a lighter weight than earlier in the war. The heaviest type of a drafter is considered not so hardy under severe war conditions.

Drouth stricken Texas has thousands of head of live stock starving. The railroads and government forces are uniting in moving the stock as rapidly as possible.

Lancaster County, Pennsylvania, farm bureau and Pennsylvania state college are uniting in a farm steer feeding demonstration. Others in that state are urging more liberal feeding of cotton seed meal.

Registrations of the American Jersey Cattle Club show an increase of 44 per cent, while the increase in the transfers of ownership is nine per cent; authenticated milk and butter-fat tests, five and one-half per cent.

Peters, Lamson & Walker report the sale of four registered Duroc-Jersey gilts and one boar to the Southern Sierras Power Company for their big ranch. This company will go in for high class registered Durocs and Shorthorns.

Wm. Bernstein, one of Kings County's Poland-China breeders, writes that the demand for thoroughly good Poland-Chinas was never greater than at the present moment. We know that Kings County turns out some remarkably fine stuff.

All America, in the live stock line, has its eyes on the International which is the center of attraction for this week. War demands and the large earnings of the live stock men have added to the wonderful interest usually shown in this great exposition.

Live stock breeders of Nebraska recently met at university farm at Lincoln and talked and observed the 500

hogs in feeding tests. The university is also making a test with 50 steers. In connection with the farmers week was an exhibition of pure bred live stock.

Notwithstanding the war interest, the National Horse Show was pulled off at Madison Square Garden during the middle of November with over 1600 entries. The function was conducted this year in behalf of the Red Cross fund. Gross receipts are not far from \$100,000.

For Fontana Land Company: seven bred sows and gilts to W. Moore; for J. S. Prendergast, one bred sow, W. Moore; for Peters, Lamson & Walker, one boar to A. C. Whidden; for W. M. Taylor, one boar to A. C. Whidden; H. S. White of Chino and Falfadale Farms was obliged to refuse association orders as their boars have all been sold.

The International Sheep and Wool Bureau of Chicago is the newest organization along live stock lines. One of its activities is shown in that it has recently transferred several hundred range ewes to the corn belt section of the Middle West. They are also working for recognition by the bankers of live stock men's needs and where a farmer has one sheep he is given another pure bred and a mortgage taken on the two.

Rancho Rubio, owned by Elmer Lamb, Ceres, reports the following recent sales: C. J. Boyd, bred gilt, Modesto; J. N. Chenoweth, bred gilt, Visalia; J. D. Bradshaw, bred gilt, Hughson; C. M. James, four bred gilts, Escondido; Walter McGarvey, two open gilts, Hughson; J. S. Cowan, boar, Hendersonville, Tennessee; George L. Dickson, boar, Ceres; Fred W. Dickson, seven bred gilts, Hawaiian Islands; Dr. L. J. Belknap, two gilts and one boar, San Jose.

The Southern California Duroc-Jersey Association reports that it furnishes any prospective buyer with an



**THE BEST LINIMENT**

OR PAIN KILLER FOR THE HUMAN BODY

**Gombault's  
Caustic Balsam**  
IT HAS NO EQUAL

For — It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Bolls, Corns and Bunions. **Human Body** CAUSTIC BALSAM has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

**Perfectly Safe and Reliable Remedy for**  
Sore Throat  
Chest Cold  
Backache  
Neuralgia  
Sprains  
Strains  
Lumbago  
Sore Lungs  
Rheumatism  
and  
all Stiff Joints

**REMOVES THE SORENESS—STRENGTHENS MUSCLES**

Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than \$25.00 paid in doctor's bills."

Price \$1.50 per bottle. Sold by druggists, or sent by express prepaid. Write for Booklet E.  
The LAWRENCE-WILLIAMS COMPANY, Cleveland, O.

**Shorthorns**

Bred for Range Purposes and of Pure Scotch Blood Lines.

Show Herd won highest honors in 1917.

Visitors welcome — Information cheerfully given.

**T. T. Miller**

So. Normandie St., Los Angeles, Cal.

**ROSAMAINES HOLSTEINS**

King Pontiac Netherland Segis 3rd

**CHOICE BREEDING STOCK FOR SALE**  
A. R. O. Records up to 34 lbs. Butter in 7 Days

**ROSAMAINES RANCHO**  
Stalder Bros. RIVERSIDE, CAL.

**Holstein Bulls**

Well bred, vigorous, registered Holstein bulls of good type for sale. Steady sales have moved all our bulls of service age, but we have a few unusually good calves to offer at moderate prices.

**The McCloud River Lumber Company**

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**Bemmerly  
HEREFORDS**

Perfection and Beau Donald breeding. Noted for their size, bone and quality. Now booking orders for service bulls for future delivery.

Visitors always welcome.  
**W. J. BEMMERLY, Woodland, Cal.**

**Foundation Herds**

of any sizes our specialty. Best blood lines.

Write to  
**Butte City Ranch**  
The Home of Good Berkshires  
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**KENDALL'S SPAVIN TREATMENT**

The old, reliable remedy you can depend on for Spavin, Curb, Splint, Ringbone or lameness. Thousands have proved it invaluable. Get a bottle from your druggist. Price per bottle \$1.10, 6 for \$5.50. "Treatise on the Horse" Free at drug stores. Get it from Dr. B. J. KENDALL CO., Kanesburg Falls, Va., U. S. A.

**DUROC JERSEYS**

Sows, gilts and a few boars of the best breeding FOR SALE

H. P. Slocum & Son R 1 Willows, Cal.

uninterested expert hog man to select Durocs from any of the many herds of Durocs in Southern California. This service is free to the buyer. Sales last week through the secretary's office are as follows:

"With the object of determining the effect of the 'Meatless Day' on the demand for marketable beef cattle, the California Cattlemen's Association has been requested to furnish the food administration for California with the most reliable figures that can possibly be obtained at short notice, of the number of fat cattle now ready, and the approximate price at which they are held. All cattlemen are requested to address the California Cattlemen's Association at its office, 320 Sharon Building, San Francisco, and furnish complete data as to the exact number of really fat cattle they have available and in prospect, price placed on same and shipping point, in order that the officers of the association may be in a position to make proper representation to Mr. Ralph Merritt, the food controller, on the subject and secure such relief as the situation warrants."

**REPORT OF DAIRY COMPETITION**

Prof. F. W. Woll, in charge of the State Dairy Cow Competition sends the following report of October performance of the herds competing for the Cultivator's three \$100 prizes.

**Herds Under 25 Cows**

Owner	No. Cows	Ave. Lbs. Production Butterfat
Ambort, Aux—Holtville	21	47.93
Beebe, Floyd—Woodland	17	37.31
Coppini, J. W.—Ferndale	22	42.03
Darnell, Curtis—Brawley	3	20.00
*Kell, F. J.—Stockton	12	30.56
<b>Herds of 25 to 50 Cows</b>		
Iverson, Iver—Arcata	37	46.66
Terkelsen, Walter—Ferndale	53	42.13
Trigg, G. E.—Ferndale	35	47.35
<b>Herds of Over 50 Cows</b>		
Coppini & Coppini—Ferndale	58	36.53
Hansen, John—Loleta	101	34.98
Note—*Herd sold to D. J. Sullivan, Stockton, October, 1917.		

**HORSES' SHOULDERS AND BACKS**

Too much care cannot be exercised in seeing that the collar is a perfect fit. A collar which is too large is quite as likely to injure the horse as one that is too small. The collar should be scraped each morning and carefully cleaned before it is again put on the horse. It is well to oil the harness, if this has not already been done, and have it soft and pliable. For the first few days of hard work on soft ground, the shoulders of the horse should be bathed in cold water every night after the harness is removed. The horse will be very sore and tired for a few days and should be given every kind of attention. Watch the hames to see that the draft is at right angles with the shoulders. If it is too low, the collar will be constantly "kicking up" at the top and the horse will soon have a sore neck. If the draft is too high, the collar will not rest securely on the lower part of the shoulders where the horse is best prepared to throw his weight. If there are any calloused lumps on the horse's shoulders or back, they should have been carefully removed during the winter when his services were not much needed. If the collar is put on over one of those "sit fasts," it will have the same result as a man trying to walk with a button in his shoe or a bunion on his foot.—Farm, Stock and Home.

**MARKETING COTTAGE CHEESE**

The utilization of skimmilk by making it into cottage cheese and using the cheese as a substitute for meat has been urged jointly by the United States food administration and the department of agriculture. Ordinary pasteboard oyster pails make serviceable containers for marketing cottage cheese locally in small retail quantities.

**MORE HORSES PER MAN**

In view of the probable shortage of farm labor next spring, now is a timely occasion to rig up several three and four-horse eveners to be used on the farm implements. One man with a four-horse team will do almost as much work in preparing the spring seed bed as two men, each using a two-horse team.

Without more meat and fat from America than the Allies have received in the past three years, they cannot remain in fighting trim.

**Elliott-Brant Rancho Guernseys  
Are Persistent Producers**

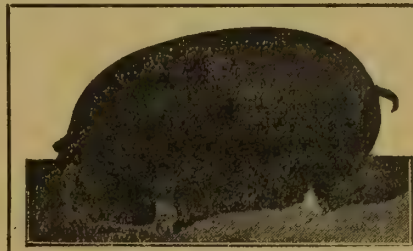
The results of our first two years of official testing show our herd to average 10,172.28 Pounds of Milk and 507.97 Pounds of Fat. One half of these cows were heifers with first calf who averaged 8,670.24 Pounds of Milk and 436.01 Pounds of Fat (only seven pounds under the average of all A. R. records). Our mature cows averaged 12,710.5 Pounds of Milk and 621.52 Pounds of Fat (120 pounds over the average of the mature cows of the breed).

A bull from these cows will increase the production of almost any herd.

**Elliott-Brant Rancho, - Owensmouth, Cal.**

**Poland Chinas, Medium Type**

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain; 12 firsts, Junior Champion and Reserve Grand Champion Boar. Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

**M. Bassett**

Hanford, Kings County, Cal.

**KINGS COUNTY****JACK RANCH**

Breeders and dealers in American Jacks and Jennets.

Jacks and Jennets for sale at all times. Come and see them.

**John Burrell**

R. F. D. B. Box 74

Hanford, Kings County, Cal.



California Wonder

**MONTELENA HERD****Large  
Yorkshires**

Have large litters. Service boars of exceptional quality, in best breeding condition. They are strong, active, long, deep fellows, with big bone and splendid heart girth. Come and see them, or write to

**A. L. TUBBS CO.**

Callistoga - California



Raising the Standard of California Bacon

**BERKSHIRES**

Forest Grove Duchess 5th

Booking orders for a few bred sows, in service to Maplewoode Duke and Highwood Standard 91st.

**MAPLEWOODE RANCH**

Callistoga, Cal.

E. M. HOLJE, Owner  
HOMER HEWINS, Jr., Manager

**SHORTHORNS****BERKSHIRES****Hopland Stock Farm**

Hopland Cal.

Registered Bulls—yearlings and two year olds. Bred on same lines as our Grand Champion cow at Sacramento, 1917.

Boars and Gilts by Iowana Rival Majestic, a son of Rival's Champion.

Prices Reasonable on Application

226 Southern Pacific Bldg

San Francisco Office

**WHEN  
BUYING?  
BULLS**

Do you consider the dam's production?  
Do you value transmitting ability?  
Do you care if the bull's dam tests high in fat per cent?  
Do you like mostly white colored animals?  
Do you want something choice at a reasonable price?  
Do you want something choice at a reasonable price?

If so, communicate with me at once, or visit my ranch and be satisfied.  
Herd sire: PRINCE RIVERSIDE WALKER, son of Prince Gelsche Walker, the greatest proven sire in the West, and whose dam made 808.82 pounds butter in one year and whose half sister made 1095.1 pounds butter in one year.

W. J. HIGDON

Tulare, California



## California Cattlemen's Association

By David J. Stollery



THE purposes of this association, as in part prescribed by its articles, are:

To procure the enactment of legislation beneficial to the cattle industry.

To prevent the theft of cattle, to aid in prosecution therefor; and to offer rewards for the apprehension of criminals.

To procure the best possible market for cattle products, and to this end to prevent combinations or monopolies.

To act as a bureau for the collection and distribution of information concerning prices, sales, shipments, supply and demand of cattle, and other matters of interest.

To enlarge the market for cattle products.

To promulgate sound and correct principles of breeding, fitting and marketing cattle.

To make beneficial traffic agreements.

To generally do such things as may at any time be suggested in the interests of the cattle industry.

### To Increase Production

Representations have been made to the association by Ralph Merritt, federal food controller for California that it is the urgent demand of Mr. Hoover and the administration that the supply of live stock throughout the United States be increased to offset the present European shortage, estimated by them to be at least 40,000,000 head. To further their purpose in California a commission of three has been appointed under the United States food administration of California, of which the president of this association is a member, the other members being Gordon H. True, professor of animal husbandry of the University of California, and the president of the California Swine Breeders' Association.

The board of directors of this association, while they have pledged their active support in carrying out the above objects will seek to secure for the cattle industry of the state such consideration as is consistent with prevailing conditions, and that the rules and regulations to be issued by the food administration shall be so framed as not to militate against the attainments of the objects the federal food commissioner has in view. Remedies for any disabilities resulting from any such rules and regulations will be suggested through its president as they may be observed from time to time, and will, we feel sure receive the serious consideration of the food commissioner.

Under the above conditions we can count upon the cattlemen of the state to do everything in their power to forward the interests of the United States and its Allies in bringing the war to a successful conclusion.

### Hide and Brand Law

The cattle protection board, appointed by the governor under the authority of the last legislature, counts upon the assistance of the association in carrying out the measure known as the "Hide and Brand Inspection Bill."

The hearty support of this association, should, we feel, be given in enforcing the provisions of this bill. Meanwhile we must observe its effects upon the cattle industry in order that the effort of the Association may hereafter be directed in curing any defects that may appear.

### Improve the Market

This association realizes the necessity for improved marketing conditions for California live stock, both for the larger cattle raisers as well as for the producer of smaller quantities of beef cattle.

Our affiliation with the American National Live Stock Association and the participation in its councils by several of our directors insures the earnest consideration of the necessities of the larger class throughout the United States, and the association will interest itself actively in local marketing conditions wherever necessary, so as to better them wherever possible.

### Stockyards

Efforts that are now being made by the state market director in consulta-

tion with our board, with the active cooperation of the farm bureau of the state of California, will, we hope, lead in the near future to the establishment of local marketing facilities under state supervision, as well as the creation of state regulated stockyards in most of our principal cities, both of which will enjoy the cooperation of the cattlemen themselves. This should insure better prices for "less than carload" members and eliminate several commissions.

### Packers Being Investigated

At the solicitation of the American National Live Stock Association a large sum was voted by the last congress to enable the federal trade commission to thoroughly investigate the meat packing industry in the United States. Francis J. Heney of California has been retained by the federal authorities, and the interests of the live stock men are being represented by W. Fisher. Expert accountants are working on the books of the packers, and there is no doubt that as a result of the investigation stabilized prices for live stock will be established, greatly to the benefit of the cattlemen who have hitherto been seriously handicapped by the fluctuations in prices, which it is suggested have been controlled by the packing interests. The support of the association should be given to the efforts of the American National Live Stock Association to better our conditions in this regard.

### Grazing

The hearty cooperation of the forest service has been promised in increasing grazing facilities and conditions. It only remains for the association to make known its wants in this particular, to insure favorable consideration under liberal regulations.

The act of December 29, 1916, affords an opportunity to stock raisers to take up 640 acres of "stock raising lands" on any part of the unreserved public lands vested in the federal government.

The foregoing does not pretend to cover all the activities possible by the association, and other problems will be dealt with as they arise. Suggestions on the part of any members tending toward the welfare of the industry at large will be welcomed at any time.

We trust that our campaign will be so successful that we can make assured the appointment of local boards in each county, who can give attention to local needs, and, acting in concert with the board of directors of the association, work to the mutual benefit of all. Interested stock men may write the secretary, David J. Stollery, 320 Sharon Building, San Francisco.

## Veterinary

Answers in this column by Dr. Wm. Petrie, 2714 South Harvard Blvd., Los Angeles, are without charge. For immediate mail answer remit \$1.00. In writing questions give full symptoms or particulars of injury of animal.

### Founder

I have a horse about 14 years old that is very nervous. When I purchased him a year ago he showed considerable stiffness in the fetlocks and has been growing worse ever since. Now when he is lying down he stretches out his limbs and groans a great deal, but when he gets up he shows his real weakness. At first he can hardly stand. He draws his hind legs under him, putting his whole weight on the hind feet, and nearly drops over back. When he moves he is very stiff and appears to have considerable pain. Of course we can not work him. Is it kidney trouble or what is wrong and what would you advise doing with him?—Subscriber, Etiwanda.

The trouble is all in the front feet. It is inflammation of the lamina of the feet, probably caused by acute indigestion. Remove the shoes and pare the feet thin on the bottom. Let him go barefooted for a long time. Get a pound of saltpetre, mash it fine and give him a small tablespoon of it

in the feed twice a day. Also blister the skin around the tops of the front feet but not in the hollows at the heels. Have your druggist prepare a blistering ointment made of two drams of biniodide of mercury, four drams of cantharides and five ounces of lard. Mix well. Rub it in well with the fingers and tie the horse so he can not reach it with his nose for

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24 hours. Then grease the parts with lard and turn him loose. Repeat the blister every two weeks until four or five blisters have been applied. All this will hasten the growth of the hoofs and relieve the inflammation. He should soon be able to do your work on the farm but such horses are seldom good on the road again.

#### Horse Rubbing His Tail

Lately one of my horses backs up to a post and rubs his tail. What is the trouble and what can be done for it?—Subscriber, Etiwanda.

The trouble may be due to a mite in the skin or to worms in the rectum. Scrub out the skin well with soap and warm water and then wet the skin with a solution of permanganate of potash, one dram to half a gallon of water. If this does not relieve him then steep about four ounces of tobacco in two gallons of water and when cool strain and inject it into the rectum. Repeat this once a week for two or three weeks.

#### Fungus Growth on Horse's Feet

I have a ten year old gelding that has a growth on each front foot at the back end of the frog which extends two or three inches farther back than where the frog should end. It makes the horse quite lame when walking on plowed ground. I have cut them off and am sending you a sample of the growth. It was quite painful to him when cutting them off and bled quite freely. Treated it with potash permanganate solution and with powdered alum. There is less lameness now but the parts where the growths were removed are quite sore. The horse was cut on both feet just where the growths appear on barb wire some

time ago. I fear the growths may return. What can I do to prevent it?—Subscriber, Olay.

The fungus growths on the horse's feet are such as often follow barb wire cuts. It is caused by the wire dragging the ends of the nerves out and leaving them exposed. Nature in trying to cover them up sends out the growth of fungus tissue. You did right in cutting them off. You should have cut them very close, even below the natural surface and then you should have seared the parts with a red hot iron. Then you should have put about a full teaspoon of Monsel's iron powder on the parts and covered it with surgeon's cotton and then covered this with a bandage wrapped several times around the foot. This might be left on for a week or longer. After that it would be easy to heal the wound by dusting on a little dry lime or burnt alum. It is not too late to follow this treatment now.

#### Caked Udder Before Calving

If a cow's udder becomes hard before she has calf should she be milked? Is it absolutely necessary that a calf should have the first milk? What is the best treatment for caked udder?—Subscriber, El Cajon.

By all means milk her out twice a day. It will make little or no difference with the calf whether it gets the first milk or not. Also give the cow one pound of epsom salts and half a pound of common salt dissolved in three pints of hot water. When cool give it all at one dose as a drench. It would be good to give every cow a dose like this two or three days before calving. It cools out the system and is a good preventive for milk fever.

## A Great Sale of Quality Holsteins

The Long-Heralded Guaranty Sale at Sacramento  
a Proof of the General Recognition of the  
Worth of Holsteins

**S**OLD to W. J. Higdon for \$6500." The time, Wednesday, December 5; the place, the great Guaranty Holstein sale of the California Breeders' Sales and Pedigree Co. at Sacramento; the bull a descendant of King of Pontiacs, with 228 A. R. O. daughters, on one side, and on the other from Prince Gelsche Walker, the famous bull which A. W. Morris & Son sold to Santa Anita Rancho for \$12,500. This young animal which Higdon bought is the son of King Korndyke Pontiac, now the chief sire in the herd of Fred W. Kiesel of Sacramento. Miss Valley Meade De Kol Walker, with a record of 36.81 pounds of butter in seven days as a three-year-old, is the dam. She is from the Morris herd. This bull is King Korndyke Pontiac 20th.

The top notcher of the females was Korndyke Sadie Vale Rena, the famous McAlister heifer. Fred W. Kiesel took her away after bidding her up to \$2300, and then announced that he came prepared to take her if it required \$5000.

Sales Manager Hughes reported that the average of \$957.37 made at this sale gives it the record of third highest in the United States and of course such average makes it supreme among sales west of the Rocky Mountains. No such sale was ever held anywhere when quality of stock is considered. A Wisconsin auctioneer said he had never seen a sale before in which six 30 pound cows had been offered at auction.

Averages secured by individual consignors have been calculated as follows: Santa Anita Rancho, eight head averaged \$1388; McAlister & Sons, Chino, 11 head averaged \$1328.50; Alexander Whaley of Tulare, three head averaged \$1067; A. W. Morris & Sons of Woodland 15 head averaged \$951; Palo Alto Stock Farm, Palo Alto, eight head averaged \$950; Bridgford Company of Knightsen, ten head averaged \$921.50; Gotshall and Magruder, three head averaged \$812; Fred W. Kiesel of Sacramento, three head averaged \$892. R. F. Guerin of Visalia, two head averaged \$665. W. J. Higdon of Tulare, three head averaged \$652; Toyon Farm Association, one animal, \$1000; J. S. Gibson Estate

Company, Williams, one animal, \$430; Dr. E. J. Weldon, Sacramento, four head averaged \$421.

The auctioneers were Col. Ben Rhoades and Col. J. E. Mack of Wisconsin. The manager was C. L. Hughes and other bidders were R. S. Guerin and a big bunch of thoroughbred believers in pure bred stock.

Some other of the big sales were: Stanislaus Abbecker Maid, by Stalder Bros. to Fred Kiesel, \$1375; the cow, Rag Apple Alcartra, was sold by Bridgford Company of Knightsen to Alex Whaley for \$1175.50; the cow, Fairmount Echo Alcartra, from Bridgford Company to Otto McClure of Santa Ana and J. W. Benoit of Modesto for \$1225.

The heifer, Lady Sadie Vale Joe Karlay, was sold by Gotshall & Magruder of Ripon to John Benoit of Modesto for \$1400; the cow, Miss Luit Aralia Burke, was sold by Morris to A. M. Bibbens and H. E. Cornwell of Modesto for \$1450; the cows, Princess Hartog Walker and Miss Filled Korndyke Walker were sold by Morris to E. D. Barry, Jr., of Daggett for \$1400 each; the heifer, Natoma Verna Korndyke, was sold by Kiesel to the Morris for \$1300; the bull, Finderne Soldene Pontiac Valdesa was sold by Palo Alto Stock Farm to George A. Smith of Corcoran for \$1150; the cow, Anokkia Diotime Korndyke, was sold by Santa Anita Rancho to Bibbins & Cornwell of Modesto for \$1350.

The Red Cross bull, offered for sale by Mrs. Anita Baldwin, the entire proceeds to go to the Red Cross of the county of the purchaser, was purchased by Guion R. Gibson of Williams and I. G. Zumwalt of Colusa.

It was a great sale, and Manager Hughes and all members of the California Breeders' Sales and Pedigree Company have occasion to feel pride at its success.

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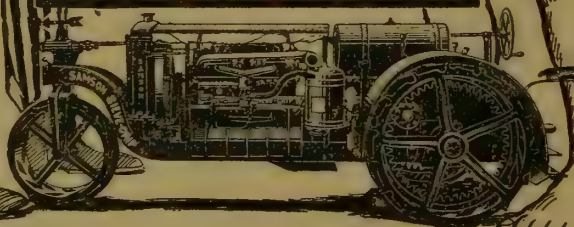


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## Insure Hogs



**V**ACCINATION is cheap insurance against hog cholera in view of the present high prices of pork, according to Dr. C. W. Hobbs, field veterinarian and director of the serum laboratory of the Kansas state agricultural college.

The exact health condition of the hogs or pigs should be ascertained before treatment. The herd should be penned in a clean and disinfected enclosure the day before they are treated. This allows them to become reconciled to the new surroundings. One may then take temperatures and come to some definite conclusions as to the condition and health of the pigs.

### Ascertain Hog's Condition

Swine that are penned and prepared for immediate treatment will show abnormal temperature and thus render it impossible for the veterinarian

it outside the pen where the pigs are kept. Nail a strip across the trough three feet from the top. Place the pig on his back in the trough with his face under the strip. An assistant should hold his hind legs.

The side of injection should be thoroughly cleaned with a cresol solution and then dried. The serum should then be injected in the arm pit or axillary space, dividing the dosage in each side. The virus should be injected in the inside of the thigh.

### Feed Is Not Needed

Feed should be withheld a day or two previous to vaccination and from six to eight days after. Plenty of exercise and green pasture are all the pigs need after vaccination.

It is advisable at all times to employ a qualified veterinarian to vaccinate swine. He will be able to give the exact condition and will under-



As They Raise Hogs In Some States



As They Raise Hogs In California—Usually

Hog comfort is just as profitable as human comfort. Without discussing the wallow question, we may, at least, filthy corrals. They cost a lot of money. Clean cement also costs—it also makes more money.

to give an accurate statement as to their exact condition.

The operator should be required to take the temperature of each individual before administering the serum or virus, and if any of the animals show an abnormal temperature, they should be given only the serum and be isolated for investigation. All those showing normal temperatures may be given the simultaneous treatment. Those that are isolated may be given the serum and virus after they regain normal condition.

### When to Give Treatment

The best age for treating pigs is from 10 to 15 days after weaning. Give one cubic centimeter of serum per pound weight of the pig up to 35 pounds and after that one-half cubic centimeter per pound weight. Half a cubic centimeter of virus per pig is sufficient. Should there be any infection on the farm, pigs may without danger of infection be treated about 10 days before being weaned, as nursing pigs rarely contract cholera. The milk from the mother, if she is immune, protects the pigs. Pigs must not receive the serum and virus treatment before being weaned unless their mothers are immune.

Many breeders are following the plan of vaccinating pigs before they are weaned, as then there is no danger of losing them and the expense is lessened considerably.

### To Administer Serum

A convenient method of administering the serum to pigs of from 35 to 100 pounds is to take a V-shaped trough eight to ten feet long and place

stand the dosage. If one is not available, however, it is easy for a person to learn to administer the virus and serum accurately. Anyone can administer serum but a permit must be secured from the live stock sanitary commissioner before one is allowed to use virus.

### WASTE IN HOLDING HOGS FOR FUTURE SHIPMENTS

A loss of five weight of hogs and waste of feed result from the practice of purchasing local hogs in small lots and holding them in local stockyards until a carload shipment is collected, according to specialists of the United States bureau of markets. They point out that at this and other seasons when runs are light it often takes local buyers four or five days to assemble enough small lots for a carload. As facilities for feed and watering are inferior in small yards the hogs make no further gains on their feed and often suffer actual loss in live weight. Local buyers, therefore, would do well to specify a certain day for the delivery of lots from the various farms and load and ship without holding. Farmers also could club together to make up cooperative carload shipments on regular week days, thus saving the margin lost in individual small lot selling.

Modern warfare consists of united, coordinated effort on the part of entire nations. If the present war teaches Americans to cooperate it will not have been entirely wasteful.

Tractors are the busy Berthas of agriculture.



## Races of Bees

Written for California Cultivator By Ralph de Ong

**T**HERE are but few races of bees common in California. Of these the Italian are the most popular on account of their great freedom from brood diseases. This point is especially valuable for the beginner and the small beekeeper, for foul brood is the rock upon which scores of ventures have been wrecked.

### Italian

There are variations in the type of the Italian, principally in the markings of the abdomen, the general appearance being a light colored bee with the abdomen largely yellow, either a solid yellow color or more or less striped. They are very prolific, which accounts in some measure for their resistance to diseases, for even though a considerable percentage of the young is lost by foul brood there will nearly always be sufficient brood matured to maintain the strength of the hive. The Italian bees are gentle, build few queen cells, swarm less than Carniolans, are good workers, keep their hives sanitary, but cap their honey rather dark, which detracts from the appearance of comb honey. Some beekeepers report considerable trouble from their tendency to rob neighboring hives.

### Carniolan

These are a dark grayish-black bee, quite common in California. They are one of the largest honey bees, gentle, good workers, much inclined to build extra queen cells and to swarm often. The honey is capped white. These bees are apparently not as resistant to foul brood as are the Italians and hence are losing favor.

### German or Black Bees

A dark colored bee, rather small, difficult to handle even by the use of smoke, less prolific than the two former races, have a dirty hive, build a large number of queen cells and are very susceptible to brood diseases. The honey is capped white.

The Italian bee has been carefully bred in this country, longer than any other race, which will account in part for its high development. There are several reliable breeders of queen bees in this state from whom pure stock can be purchased and in this way gradually Italianize the apiary. A fertilized queen, alone, is all that is necessary to change the race in an established apiary for if she has been bred true, her offspring, both drones and workers, will be Italians.

## Write for It

**T**HE Committee on Public Information, Washington, D. C., which consists of the Secretary of the Navy, Secretary of War and George Creel, has been most active in sending out a series of pamphlets and reports upon our nation, its making ready for war, the reason for the war, and other points invaluable at this time. The American people are doing a lot of fighting with their heads, and this series of books should be in the hands of the people. Most of the reports are free for the asking. "National Service Hand Book," and "Battle Line of Democracy, Prose and Poetry of the Great War," are each sold at 15 cents. The latest to be added to the series is Number five, "Conquest and Culture, Aims of the Germans in Their Own Words." It is a 171 page book with map showing "Why Germany Wants Peace Now and The Pangerman Plan as realized by War in Europe and Asia." From this latter we quote extracts from utterances of Kaiser Wilhelm and other public men of Germany:

"The German empire has become a world empire. Everywhere in distant quarters of the earth, thousands of our countrymen are living. German guardians of the sea, German science, German industry, are going across the sea. The value of what Germany has upon the sea amounts to thousands of millions. It is your earnest duty gentlemen, to help bind this greater German Empire firmly to our ancestral home. \* \* \* It is my wish that, standing in closest union, you help me to do my duty not only to my countrymen in a narrower sense, but also to the many thousands of countrymen in foreign lands. This means that I may be able to protect them if I must." This is from a speech of the kaiser, June 16, 1896. It is one of his most pointed and significant utterances. The protection of German citizens of South America could only mean interference in the affairs of South American nations, and if they refused such interference it was likely to mean such ultimatums as Austria sent Serbia. Such a statement was a threat against the Monroe doctrine and was likely to involve the United States.

Also touching upon the United States of America, von Edelsheim, an officer of the general staff, in 1901 wrote in "Operations Upon the Sea," translated in 1914: "If the German invading force were equipped and ready for transporting the moment the battle fleet is dispatched under average conditions, these corps can begin operations on American soil within at least four weeks. \* \* \* The United States at this time (1901) is not in position to oppose our troops with an army of equal rank. \* \* \*

"The fact that one or two of her prov-

inces are occupied by invaders would not alone move the Americans to sue for peace. To accomplish this end the invaders would have to inflict real material damage by injuring the whole country through the successful seizure of many of the Atlantic seaports in which the threads of the entire wealth of the nation meet. It should be so managed that a line of land operations would be in close juncture with the fleet, through which we would be in a position to seize in a short time many of these important and rich cities, to interrupt their means of supply, disorganize all governmental affairs, assume control of all useful buildings, confiscate all war and transport supplies, and lastly, to impose heavy indemnities. \* \* \*

"As a matter of fact, Germany is the only great power which is in a position to conquer the United States."

### SUMMER SESSION IN LOS ANGELES

Many papers of the state have made announcement that the next summer session of the University of California would be held in Los Angeles high school. There will be certain sessions in Berkeley as heretofore, but we understand the main summer school will be in the south. The papers have not however, given the information as to the work to be taken up by the college of agriculture in this school. We have from Prof. J. Eliot Coit information that the college of agriculture will have important work in this summer school which will extend from June 24 until August. Of course the Cultivator will give more explicit information as to the program to be followed in due time, but it is well that our readers should know that the division of citriculture of the state university will have entire charge of the horticultural work of this school. There will be courses on citrus fruits, and others on semitropical fruits, agronomy and animal husbandry, and they will be along most practical lines. One special course will be given to the poultry industry. The agricultural work will be in charge of Professors Coit, Condit and Hodgson.

If you have not begun to inquire into the fitness of tractors for your farm you will be surprised to find how the inventive genius for which America is famous has conquered the obstacles which you have thought stood in the way of your owning and using a tractor. And if you have not investigated the advantages of farming with power you will be surprised at the benefits it will bring you.

Farm boys should lay in plenty of nuts and popcorn. It's going to be patriotic to eat it instead of candy this winter.

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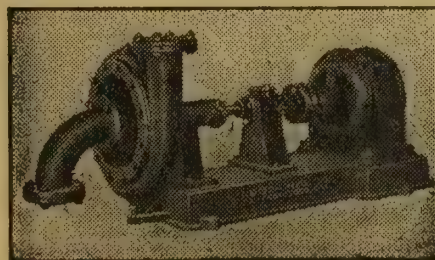
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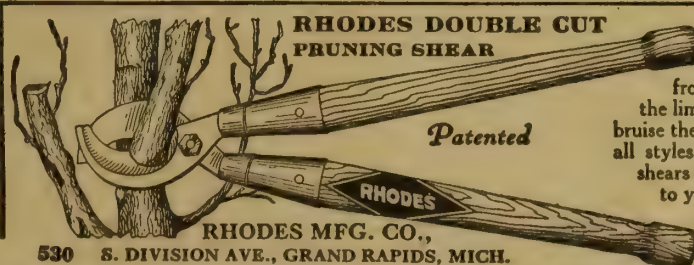
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**Here Is Your Opportunity to Secure A-1 citrus trees.** We offer several thousand 2-year-old lemons: Eureka and Villa Franca, also Washington navel; also several hundred Valencia on sweet root. We call these good trees and we know whereof we speak. **ALBERT JACKSON, Upland, Cal.**

**Let Us Show You Our Ideal** twelve hundred acre orchard from which these perfect yearling citrus trees were propagated. Healthy straight stock, budded one foot high on sour root growing in our own nursery. References. R. R. Morris, East Whittier, Cal.

**For Sale**—Between 60,000 and 75,000 Florida Sour Orange seed bed trees. Average height 12 inches. Seed planted last April. Trees are clean and thrifty. Have had good care and are in fine growing condition. **Frank A. Curtiss, Box 628, Upland, Cal.**

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**\*\*PAYNE SEEDLING WALNUTS\*\***  
Orders taken now for spring delivery of PAYNE SEEDLING WALNUT grafting wood. Five cents per foot. **R. W. Miller, Linden, San Joaquin Co., Cal.**

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**Citrus Trees**—All kinds, any quantity. Butler's Morning Side Nursery, Laramanda Park, Cal.

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**Apricots, Olives, English Morello Cherries and Arizona Ash.** First class trees. **C. E. Moyer, Hemet, Cal.**

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**For Sale: Pomegranate Trees**—W. R. Slight, Lindsay, Cal.

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**Buy Your Alfalfa Seed at wholesale prices and save several dollars per hundred pounds.** We have Common or Chilean, Hairy Peruvian and other varieties, grown under various conditions as to soil and climate. Our GREEN GOLD BRAND is perfection in Alfalfa seed. Write us your soil and climate conditions and we will send you samples and prices and suggest the proper kind of seed. **Bomberger Seed Co., P. O. Box 986, Modesto, Cal.**

**\*\* ORDER YOUR SEEDS NOW \*\***  
If you are going to need any seed for next season now is the time to render your order. It may be impossible for you to buy what you need later. **V. A. Peterson Alfalfa Seed Co., Arbuckle, Cal.**

**\*\*ALFALFA SEED OUR SPECIALTY\*\***  
Alfalfa Seed—Common variety, Hairy and Smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. **E. F. Sanguinetti, Yuma, Arizona.**

**Thoroughbred Strawberry Plants, Early Ozarks, Gold Dollars, Wm. Belt, Goodells, Magoons, Improved New Oregon, \$2.50 per thousand.** **J. Christiansen, R. F. D. 2, Canby, Oregon.**

**Rhubarb Plants**—Crimson Winter Burbanks \$3.00 per hundred; Victoria \$3.00. Wagner's Giant Crimson Winter \$3.00. 50 cents per dozen. **Currier Bulb Co., Seabright, Cal.**

**Strawberry Plants**—Gold Dollars, Magoons, Kellogg's Prize, Marshalls, Brandywines, and Mitchell's Everbearing. **Primma Vista Gardens, R. R. 4, Arlington Sta., Riverside, Cal.**

**For Sale**—Extra quality Defiance wheat especially released by government for seed only. **Carl G. Melners, Nordhoff (Ojai), Ventura County, Cal.**

**Rhubarb**—\$127.00 from one acre. A crop every month of the year. Write to me and I will tell you how you can do as well. **J. M. Stone, Lodi, Cal., Route 4.**

**Mr. Alfalfa Grower**—If you want good seed at the lowest price, write me for samples and prices. **Smooth Peruvian a specialty.** **O. C. Nordahl, Bard, Cal.**

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**New Crop Alfalfa Seed** now ready. Not the lowest in price, but high in quality. **Leo Turner, Yuma, Arizona.**

### LUMBER

**Lumber—Sash—Doors—Plumbing—Supplies—Building materials of all kinds.** New and second hand. **\*A\* R. W. shingles 55 cents per bundle.** Send list for estimate. **Dan P. (Mission Street) Dolan, 1620-1680 Mission Street, San Francisco, Cal.**

### HOGS

**Registered Durocs**—We offer for sale a choice service boar out of a daughter of Modesto King and by a grandson of Burk's Good E Nuff; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col.; three young boars out of a great sow of Crimmon Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. **Derryfield Farm, I. O. O. F. Building, Sacramento, Cal.**

**The Billiken Brand of Chester Whites**—Entirely sold out of bred sows and gilts. Have a few open gilts of March and April farrows; also 6 boars, same age. Have 9 young tested sows to offer for late December shipments. These have each farrowed once and will be bred for a late March or early April farrow. Fall pigs, both sexes, now being weaned and will be ready for delivery during December. Good breeding stock is getting very scarce and rapidly increasing in value. If you want some of this easy feeding, melon type, get busy with your orders. **C. B. Cunningham, Mills, Cal.**

**Grape-Wild Farm Berkshires**—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all of the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. **A. B. Humphrey, Escalon, San Joaquin Co., Cal.**

**20 of the Finest Boars Ever Sold to improve the herds of pork producers.** High price of pork assured because of the scarcity of breeding stock. Improve your herd with a good Poland-China boar. I have them from six to eighteen months old, priced from \$40 to \$100. Saving all sows for Kings County Poland-China Breeders' Sale, February 20. **Bernstein's Ranch, Hanford, Cal.** Hogs shipped on approval.

**Bargain**—Choice young Duroc-Jersey registered boar, 8 months old, son of First Choice and Advancer of Napa, \$30 if taken immediately; also a few weanlings at \$10 each. Apply **San Diego Land Corporation, 401 Southern Title Bldg., San Diego, Cal.**

**Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed.** Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. **Rough's Greenfields, Arlington Sta., Riverside, Cal.**

**Berkshires**—First prize junior boar; first and second senior boar pigs including junior champion; fifteen spring and fall open gilts sired by Ames Rival 115, champion boar; and two junior yearling bred sows priced cheap for immediate sale. **F. D. Hall, Ferris, Cal.**

**We Pay Cash for Hogs of All Sizes,** weights and breeds. Any number from one to several thousand considered. What have you? **Durbin and Forbes, 722 San Fernando Building, Broadway 4170, Los Angeles.**

**For Sale**—Thoroughbred Poland-China weanlings, and gilts, also 18-months old boar, winner first prize **Riverside County Fair, Primma Vista Gardens, R. R. 4, Arlington Sta., Riverside, Cal.**

**PLW. Duroc-Jerseys,** the most consistent winners wherever shown. **Peters, Lamson & Walker, Devore, San Bernardino County, Cal.**

**Big Type Durocs**—Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. **F. M. Johnson, Napa, Cal.**

**Most Money in Duroc-Jerseys**—Bred sows and weanlings, either sex all the time. **Delta Farm and Live Stock Co., Colton, Cal.**

**Large Yorkshires**—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. **A. L. Tubbs Co., Callatoga, Cal.**

**Large Type Poland-Chinas** are prolific and profitable. Can furnish boars any age at reasonable price. **J. A. Crawshaw, Hanford, Cal.**

**Rancho Rubio Durocs** all sold out except some choice fall boar pigs. Write for prices. **Elmer Lamb, Ceres, Cal.**

**Greenwood Farm Durocs**—"Size with Quality." **H. C. Witherow, Palo Cedro, Shasta County, Cal.**

**Berkshires**—Sired by Star Leader, the \$1,500 boar, ready for service. **Kounias Registered Stock Farms, Modesto.**

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**Model Herd Berkshires** bred for size and quality. Weanlings and gilts. **J. L. Gish, Laws, Cal.**

**Carruthers' Farm Berkshire Hogs**—Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

**Poland-Chinas**—A few good breeding boars. **S. F. Williams, Orland, Cal.**

### AUTOMOBILE STORAGE BATTERIES

**Titian Batteries for Service,** get our prices before buying or having an old battery repaired. Call or write, **Olive Street Electrical Co., 910 South Olive St., Los Angeles, Cal.**

### FOR EXCHANGE

**Pretty 6 Room Bungalow,** 1 acre, choice bearing fruit trees, chicken houses, etc. Value \$3,000. Sell cheap or part exchange poultry, livestock. **Box 615, Inglewood.**

### CATTLE

#### OREGON JERSEYS

**Bull, Fussy Fern's Noble Boy, Junior Champion,** his dam also first prize State Fair, R. of M., 488 lbs.; other bulls for sale, whose dams have made up to 1040 lbs. There is butter in these pedigrees. Write for one.

**Reid Stock Farm, Second Floor Wilcox Bldg., Portland, Oregon.**

**Guernseys**—We will sell stock from our prize winning, high producing herd, at reasonable prices, valued according to individuality and breeding. Our supply is limited but if the buyer wants a number of animals and will write us we will furnish him with particulars. **Revada Guernsey Farm, Yountville, Napa Co., Cal.**

**Pedigreed Bull Calves,** Registered \$50.00, unregistered \$25.00. Service bulls \$75 and up. Good individuals from producers. Cows with yearly records at a profit, tuberculin tested. Write or come and select. **Horses. N. H. Locke Co., Lockeford, Cal.**

**Registered Holsteins out of A.R.O. Dams.** Grandsons of King Korndyke Hengerveld Ormsby who has 20 A.R.O. daughters with records of over 29 pounds. Look up this sire. **Geo. Kounias, Modesto Farms, Modesto, Cal.**

**D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco.** Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. **Farm at Mayfield.**

**Venadery Jerseys,** the herd with official yearly records. Calves of both sexes for sale. **Guy H. Miller, Route 1, Modesto, Cal.**

**Veramont Stock Farm Pure Bred Herefords.** Location Plumas County. Ideal for stamina and vigor. Bulls for sale. Address **H. M. Barnegover, San Jose, Cal.**

**Registered Holstein Bulls** from high producing dams for sale at reasonable prices. Also a few choice females. **McAlister Sons, Chico, Cal.**

**Ayrshires (registered)**—A few young bulls, heifers and cows in milk at a bargain for quick sale. **A. MacMinn, Phoenix, Ariz.**

**Young Holstein Bulls,** bred right, grown right, priced right. **Creamcup Herd, M. Holdridge, Modesto, Cal.**

**Sunshine Farm Jerseys**—Bulls from officially tested dams for sale. **E. E. Greenough, Merced.**

**Registered Holstein Bulls of various ages** for sale. **Millbrae Dairy, Millbrae, Cal.**

**Registered Jerseys—both sexes** for sale. **J. R. Carhart, Fullerton, Calif.**

### MACHINERY

**WHY BUY NEW? SAVE HALF**  
Material guaranteed. It's second-hand after used few times; but not worn out. **USED AND NEW GALV. AND RED-WOOD TANKS**—100-gal. with covers and faucets, \$5 to \$7; 2000, 3000, 4000, 5000, 6000, 10,000, 25,000-gal. redwood, about half-price; new 1000-gal. galv., \$35; 2000, \$48; used 5000 galv., \$75; 10,000 galv., \$150; 17,000 galv., \$250; 25,000-gal. redwood, \$95; many others guaranteed first-class or money refunded. **PUMPS, CENTRIFUGAL,** rotary, single, double-acting deep well pumps. No. 2 Ames, double-acting, fine, \$145; 50 brass cylinders, all sizes; old-style pump head, 18-inch stroke, \$38; small Bulldozer, \$42.50; large size, 20-inch stroke, \$68; 24-inch Stearns pump, \$75; 2, 3, 4, 5 hor. centrifugals. No. 5 vertical centrifugal pump with shaft, frame, complete, \$95; No. 5 two-stage horizontal B. & J., good as new, cost \$400, our price, \$150; 25 others.

**Engine snaps:** 2½ h., \$39; 8 Foos, \$115; 18 Fairbanks, \$250; 34 Lambert, \$350. How'd this suit you for deep well? No. 2 Ames double acting pump; 150 ft. 5 in. pipe, double rods 4 in., double acting cylinder, 8 h. p. engine, belt, complete, \$475; guaranteed. 20 h. Fairbanks and No. 3 deep well Ames pump, 100 ft. 10-in. casing and rods, 9-in. double acting cylinder, plant complete, \$795. Pumps 50 inches. Many others.

**WINDMILLS, SPECIALLY PRICED**  
8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel. **900-GAL. WAGON TANK AND WAGON,** \$90; 700-gal. galv. wagon tank, \$48; slip, \$5; lawn mower, \$6; low down tank pump, \$6; diaphragm pump, \$16; broadcast seeder, \$13.50; 60 ft. 10-in. riveted pipe, \$25; 4 gang Stockton plow, \$28; 8-ft. orchard disc, \$37.50; 14-in. sidehill plow, \$14; weeder, \$14; power sickle grinder, \$9; 4 gang 10-in. mouldboard, \$25; 4 gang Flying Dutchman disc plow, \$95; 5 gang, \$90.

**RANCH MACHINERY**  
Walking plows, \$4 to \$14; old style 2 gang 12-in. mouldboard will do work of \$125 plow, \$28; two mowers, \$28, \$35; 10-ft. rake, \$22; 5-ft. Fresno, \$12 to \$14; two-wheel scrapers, bone grinders; 150 new discs for plows, half price. Harrows, cultivators, ¼-in. cable, 6c; belting; sundries. **DIEMMITT CO.,** downtown office, upstairs, 120 N. Main. Yards, 816 Yale, Los Angeles.

**Stocks and Dies** to cut pipe from ¼-in. to 2-in. pipe; pipe cutters and pipe vises and gasoline furnace all in good condition. No ranch should be without their tools. **OTTO F. STILLE, 1224 3rd Street, San Diego, Cal.**

**Gasoline Engines,** the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 783 North Spring St., Los Angeles.

**For Sale**—1914 Samson Tractor, size 6-12 with extension. Good condition, \$200. **Oscar C. Harms, Duarte, Cal.**

**Disk Plows**—Rolled Cold. Auto trailers built to order. **J. O. Parrish, 859 South Garey Pomona, Cal. Phone 3132.**

### DUCKS

**Indian Runner Ducks** 280 Egg strain.—Baby ducks \$20, 100. Eggs \$8 per hundred. Rocks and Reds, \$15, hundred. Incubator 300 egg, \$8. Expert hatcher will hatch and raise every variety of poultry on shares. Satisfaction guaranteed. **Box 615, Inglewood, Cal.**

### FARM LANDS FOR SALE

**Will Take Other Property,** preferably clear and under \$5000 on portions my ranch north of this city, in silt, arid basin of Madera County. It is generally recognized as some of the finest alfalfa fruit and general farming land in San Joaquin Valley. Convenient to schools, modern town, creameries, cheese factory, state highway, Southern Pacific, etc. Neighbors are high type American farmers, making good livings on moderate sized acreage. I am no agent and will try and work in with your conditions. **Arthur Vernon, Fresno, Cal.**

**160 Acres, fenced, and cross fenced,** several springs, fine garden spot, land slightly rolling, about 30 acres plow land, on Auto Road, 10 miles from town. Gold mine on place, \$1800. Another 160 acres, buildings \$1200 cash. No trades, inclose stamps for reply. **W. W. Baldy, Raymond, Cal.**

**Exceptional Opportunity** to purchase few hundred acres high class patented land, considerably improved. Irrigation water available. Poor health. **Shea, Box 68, Imperial, Cal.**

**Oregon, California Government Lands.** Latest Green Booklet Free. Tells "How, Why, Where." Write **Joseph Clark, Sacramento.**

**Free List of Monterey County bargains.** **Bohannon Realty Co., King City, Cal.**

### POULTRY

**White Leghorn Baby Chicks**—We have culled our flock down to 2500 of our best laying hens that average over four pounds each. They have paid a nice profit every month this year. Baby chicks will be scarce this spring for the reason that there were very few male birds kept over. You should place your order early and get the chicks when you want them. **Lyon Hatchery, Gardena, Cal.**

**Order Now,** pure bred White Leghorn chicks, 15c each until March 15th, then 12c. Eggs \$1.00 per 15; \$2.00 per 30; \$6.00 per 100. Big plant, best strains foundation stock, thousands of breeders, 20,000 feet under roof, green feed and fresh cut bone fed daily. Remember, the chick or egg cost is small compared to the feed cost, so get the best. Catalogue free. **Newton Poultry Farm, Dept. 3, Los Gatos, Cal.**

**Baby Chicks**—From my thoroughbred and carefully selected flock of S. C. White Leghorns. Orders booked now for January and February delivery at \$12.00 per 100, \$110.00 per 1000. March delivery \$10.00 per 100, \$95.00 per 1000. Correspondence solicited. **J. R. Heinrich Poultry Yards, Arroyo Grande, Cal.**

**Spring Chicks**—We are booking orders now. S. C. White Leghorns, only selected and fully matured stock that is bred to lay used in the breeding pens, which assures strong and vigorous chicks. \$12 per 100; \$100 per 1000. **H. A. Schlotthauer, Exeter, Cal., Route A.**

**Penn's Quality Barred Plymouth Rocks** are correctly bred. Blood lines that produced the WORLD'S FAIR and other noted winners BOTH in Utility and Exhibition classes. Eggs and breeding stock. Catalogue. **GOLDEN RULE POULTRY FARM, St. Helena, Cal.**

**200-290 Egg Leghorns, Wyandottes, Anconas, Reds, Rocks, Minorcas, Orpingtons.** Chicks, eggs weekly. Booking orders January, April delivery reduced prices. Cockerels that transmit laying qualities; \$3.00-\$10.00 profit per hen last year. **C. Beeson, Pasadena, Cal.**

**Baby Chicks**—We start in January to hatch those sturdy youngsters, like we had last season. We will have lots of them too, but please order early. **White, Brown and Buff Leghorns, R. I. Reds, Barred Rocks, and Black Minorcas.** **Campbell Poultry Ranch, Campbell, Cal.**

**Day Old Chix**—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. **Enoch Crews, Seabright, Cal.**

**Poultry Wanted**—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. **National Poultry Co., 607 E. Third St., Los Angeles, Cal.**

**Baby Chicks (White Leghorns)** shipped on approval before remitting. No weak ones charged for. **Schellville Hatchery, Schellville, Cal.**

**"Eastman's Bred to Lay"** Barred Plymouth Rocks. Choice Cockerels. **Fairmead Poultry Farm, Fairmead, Cal.**

**Official 200 Egg White Leghorns** in Washington Contest. **Charles Hudson, Escondido, Cal.**

**For Sale**—Pearl Guineas and Golden Seabright Bantams. **E. A. McKinley, Ukiah, Cal.**

**Special Prices**—Silver Campbells, Barron White Leghorns. **J. D. Brubaker, Hemet, Cal.**

**Buff Orpington, Buff Leghorns, Bourbon Red Turkeys**—Breeding stock. **The Ferris Ranch, S. Reservoir, Pomona, Cal.**

### MISCELLANEOUS

**Pasture for Rent**—Good pasture now and for all winter for 600 head of cattle at (75c) seventy-five cents per month at Dutton Station, Solano County. Address **E. N. Chaplin, Dutton's Landing, Solano Co., Cal.**

**Famous Hairy Peruvian Alfalfa Seed**—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. **E. F. Sanguinetti, Yuma, Arizona.**

**To Reduce the high cost of living,** send for our Wholesale to Consumer Catalogue. **Smith's Cash Store, 112 Clay St., San Francisco.**

**Quality Trees, Seed Potatoes, berry plants, seeds, milk goats.** **Cash Nurseries, Sebastopol, Cal.**

**C. A. W.**—Please communicate with your family. **M. K. & D.**

### PATENT ATTORNEYS

**Patents that protect are secured through The PACIFIC COAST PATENT AGENCY, INC.,** Savings & Loan Building, Stockton, California; send for our little booklet on "PATENTS."



## WANTED

**Wanted**—Working foreman for San Joaquin Valley alfalfa and grain ranch who understands soils, irrigation methods and pumping plants, and can get bigger crops than the other fellow. Want clean-cut, sober, dependable man, a hard worker and good manager of men. Knowledge of dairy cattle and hogs desirable. Must show successful alfalfa record. Excellent living conditions, fine equipment, good future. Give age, full experience and salary expected or no attention paid. Address North, care of Cultivator

**Wanted**, by established California company, ten men with rigs preferred to solicit and collect in Central, Southern and Northern California, prefer resident agents who can work part or all time, good pay and several weeks work to right parties. Address J. H. Yetter, 115½ North Broadway, Los Angeles.

**Wanted Position as Ranch Superintendent**, development, alfalfa and grain a specialty. Years of experience. Best of references. Address Arnold Taylor, Box 78, Terra Bella, Cal.

**Wanted**—Position as manager of breeding and beef herd by graduate veterinarian who knows how. Address Park, Care Cultivator.

**Wanted**—To hear from owner of farm or unimproved land for sale. O. K. Hawley, Baldwin, Wisconsin.

## TURKEYS

**Mammoth Bronze Turkeys** from my best prize-winning stock. Eggs in season. N. E. Mulick, Willows, Cal.

## LIVE STOCK

**For Sale**—Highly bred Kentucky Jack. Black with white points, five years old this winter. Good height, weight and length. Bought of Ed Bradley, Trenton, Ky. Eligible to registration. He is by Silver Crown No. 2652, by King George No. 3189, by Silver Crown No. 79: first dam, Black Anna No. 3984, second dam, Rox Anes No. 149. J. C. Joplin, Santa Ana, Cal.

**Butte City Shorthorns**, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

**Young Bred Milch Goats**, Due Fresh in the spring, \$25 each, also few matured Does. Inclose stamp for reply. M. A. Wood, 632 N. 3rd St., San Jose, Cal.

**Registered Shires**—Blackhawk Stock Ranch. Importers and Breeders. Easton & Ward, Burlingame, Cal.

**For Sale**—Eleven weanling mules. Chas. Hubbard, Riverdale, Cal.

## TURKEYS

**Our Geese and Turkeys Win Again**—Grand Champion Sweepstake Special for best pair of birds in show. For size vigor and quick maturity, our stock are best. East or West. Stock and eggs in season, also Collie pups. Correspondence solicited. John G. Mee, St. Helena, Cal.

**Giant Bronze Turkeys and Eggs**—Choice breeding stock. M. M. Reiman, Planada, Cal.

**For Sale**—Mammoth Bronze turkeys. The Best In The West. Geo. A. Smith & Son, Corcoran, Cal.

## What Next?

Written for California Cultivator By Jean A. Koethen

**T**HE beginning of the season of 1918 is upon us. What are we poultry folks going to do about it? We cannot single handed lower the price of feed or raise the price of eggs, but we can get in touch with all the other poultry keepers on the outside through existing poultry organizations or something better, and we can quietly and steadily on the inside, improve our own flock till we have something we can hold up to the gaze of an admiring world as "the best ever" in some one particular.

Ben Franklin's joke about "hanging separately if we don't hang together" is no joke at all to the poultryman. Everybody else has combined — bakers, grocers, butchers, orange growers, walnut growers. What is to become of the poultryman if he sulks in a corner and refuses to play?

In planning to improve our individual flocks the coming year, we must aim at more eggs, more and better meat, more nearly standard bred stock.

## Better Layers

We need more eggs. It costs anywhere from \$3.00 to \$6.00 a year to feed a laying hen just now. If she lays less than 12 dozen a year her eggs will cost more than they bring. Hens that do not lay must be sold to the butcher or to the neighbors, anything to get rid of them. The very life of the industry depends on getting rid of these unprofitable loafers.

Principles and methods of selecting the best layers in the flock have been given so often in this column that I need not repeat them farther than to say, find the best layers somehow. Trapnest, cull by color of legs and beak in November, or according to lateness of molt or according to the capacity of the hen as shown by the condition of her "lay" bones, or by all together, or if you can do no better, take a month off and sit down in your hen yard and watch to see what hens go to the nest oftenest, which lay at the earliest age, which have the reddest combs and the loudest voices. Find the best one, anyhow. One hen will do to breed from, if only she is a good one. When she has been found mate her to the best cockerel (I should have said the hen must be in her second year) you can find, the son of a high producer, if you can find him, a good crower, alert, not undersized, of fair color and obvious vigor. If he is a fighter, so much the better. Raise a few chicks from such a pair as this and you will have made a start toward improvement in egg production.

## More Meat

But we want meat as well as eggs. Can the same breed be made to produce both? Easily, if it is the right breed. In many of our laying contests Leghorns have come out first, that is, as a class, but in nearly all cases where

the average of Leghorns has been higher than that of any other breed, some single Red or Rock or Wyandotte stood at the head of the list. This does not prove that Rocks or Reds or Wyandottes are better layers than Leghorns, but it certainly does prove that there is no reason why the American breeds, with proper selection and breeding, should not be exactly as good layers as Leghorns.

The dual purpose fowl has this great advantage, that it is a producer not only of eggs but of meat, and meat is what the world stands in the greatest need of. Cockerels need not be rushed to market, as Leghorns are, as soon as they reach broiler size. They are better as fryers and just as good as roasters, and some experts hold that the roaster size is the most profitable. The hens, when they have completed their two years as layers, used to sell for what it cost to raise them. They hardly do this now, but the margin of loss is much less than that involved in the marketing of old Leghorn hens. The eggs of dual purpose hens are larger, as a rule, than those of Leghorns, and pullets of many of these breeds lay a full sized egg from the start. The heavier the hen, the larger egg she lays. My Light Brahma pullets this fall have nearly every one laid an egg that passed as a full sized hen's egg from the start. When these pullets are a year old they will lay extras. It may be that we shall never see Leghorns supplanted by Rocks and Reds and Wyandottes on commercial farms, but I believe we shall see the coming year a decided increase in the popularity of the heavy breeds as farm and back-lot fowls. More of my neighbors in our little suburban town are raising chickens or planning to keep a few than have ever been interested before. And the birds these people keep are invariably heavy hens. They want the meat and the large eggs.

## Breed to Standard

Can a productive flock be a standard bred flock? Why not? Standard bred fowls are not necessarily exhibition birds. They are birds that have been bred with due regard for the standard of perfection as well as for utility qualities. In such a flock birds that are decidedly off color or undersized are discarded. Breeders are selected not only for fecundity, but must pass in color and size and type as well. The best layers are not the largest birds in a flock, but many birds fully up to standard weight are excellent layers. An undersized hen with a big egg record is hardly likely to be as good a breeder as an average sized hen with a slightly lower record. Phenomenal layers for some reason rarely pass on their qualities to their descendants. The hen to be relied on as a breeder is the vigorous, well developed heavy layer, but not the phenomenal layer.

Egg production has been regarded

as the foundation of the poultry industry. In normal times this was probably the case, but now, when war time efficiency is demanded everywhere the hen that produces only eggs is having trouble to show as good a reason for existence as the hen that produces both eggs and meat, and the mongrel has no show at all. Let us make our slogan for 1918 "Meat and eggs; plenty of both, and good looks besides."

## DRAFT CLASSIFICATION

The next draft, or rather the next quota, will be selected on an entirely different basis from that of the first liberty army. All former exemptions are wiped off the slate, and a new classification, as given below, will obtain. To enable those in charge of the call to classify those of draft age a questionnaire is being sent out. The classification is:

Class one will comprise unskilled laborers or those without dependent relatives.

Class two will comprise skilled laborers with only slightly dependent relatives.

Class three will comprise technical experts, county or municipal officers, municipal firemen and policemen, workmen in arsenals, armories, and navy yards, assistant managers of agricultural and industrial enterprises, and those having aged, infirm or invalid dependent relatives.

Class four will comprise the heads of necessary agricultural and industrial enterprises, merchant mariners and those upon whose daily labor wives and children are dependent.

Class five may cause a smile because it includes "officers of states or the United States," clergymen and theological students, together with "persons physically, mentally, or morally unfit." The list also includes all persons in the military or naval service, licensed pilots, aliens and alien enemies.

## LADIES AUXILIARY

At the last meeting of the California Association of Nurserymen, October 10, 11, 12, 13, a ladies auxiliary was organized.

The purpose of this society is to promote sociability among the ladies attending the annual meetings of the California Association of Nurserymen and to encourage a keener interest in the art of horticulture, thereby working for the uplift of the nursery business to which this society is allied.

Secretary Mrs. L. H. Elmer of San Jose is sending invitations to ladies of the households of the members of the Nurserymen's Association to become members of the Auxiliary. This

will doubtless add to the social pleasures and to the profitableness of the nurserymen's meetings.

## PROOF POSITIVE

"I will produce just one undeniable fact which shows woman are more practical than men," says Bum Bunkster. "When a man's hair begins to grow scanty, what does he do? He buys some patent medicine hair grower that was never yet known to produce hair. When a woman finds it necessary to increase her hirsute adornment what does she do? She buys hair?"

Fear is more contagious than most diseases, and more fatal.



## The Best Feed on the Market

Has the highest protein at the lowest price \$2.80 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At your Dealers or

The Globe Mills, Los Angeles

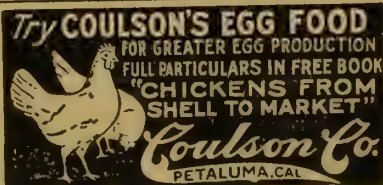
## Bargains Bargains

## Mandy Lee Incubators

We are selling out our line of Mandy Lee Incubators. While they last we will offer the 140 egg Mandy Lee Incubator for \$16.00, F. O. B., Los Angeles. These machines are a snap at this price. Six patented and distinctive features. Absolute satisfaction guaranteed. A few of the other sizes for sale. WRITE FOR CATALOGUE.

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913 East 3rd Street  
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## 540 EGG SIZE "PIONEER" INCUBATOR

\$20 Down, then \$10 per month for three months. No interest

We have 35 machines to sell on these terms. Act quick if you want one. We pay freight. Ship on approval. This is the incubator used in 48 Western Hatcheries. Send today for big catalog.

## Pioneer Hatchery Co.

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coming to farmers from the rich wheat fields of Western Canada. Where you can buy good farm land at \$15. to \$30. per acre and raise from 20 to 45 bushels of \$2. wheat to the acre it's easy to make money. Canada offers in her provinces of Manitoba, Saskatchewan and Alberta

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and other land at very low prices. Thousands of farmers from the U.S. or their sons are yearly taking advantage of this great opportunity. Wonderful yields also of Oats, Barley and Flax. Mixed Farming is fully as profitable an industry as grain raising. Good schools, markets convenient, climate excellent. Write for literature and particulars as to reduced railway rates to Sept. Immigration, Ottawa, Canada, or to

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Canadian Government Agent.





## Somewhere in America

Laying submarine cable, hundreds of miles of it, to scores of isolated lighthouses is one of the telephone tasks made necessary by the war. The Bell System has also built lines connecting some two hundred coast guard stations.

It has built complete telephone systems for fifteen National Army cantonments and fifteen National Guard camps, each a city in size, and also at many naval, officer's reserve, mobilization and embarkation camps and at army and navy stations.

It has provided an enormous increase in long distance facilities throughout the country, that satisfactory service may be maintained between cantonments, training camps, guard outposts, military supply stations, war industries, the National Capital and other centers of Government activity.

The Government facilities at the National Capital have already been increased three-fold and there has been a tremendous increase in local and toll facilities.

Fifteen thousand miles of telephone wire have been taken from other use for the exclusive service of the Government and some 20,000 miles of telegraph facilities also provided.

Meanwhile the Bell System has given generously of its man power, until over seven thousand men are in service or recruited for military duty.

Members of the Bell System whether they have already gone to France or whether they have stayed at their posts to help mobilize the country for victory, are equally in the service of the Nation.



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AND ASSOCIATED COMPANIES  
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You will find just the colors and patterns you wish at your own dealer's.

HALL, HARTWELL & CO., Makers, Troy, N.Y.

## Household Department

### CHRISTMAS IN CALIFORNIA Written for California Cultivator By Ida M. Blake

I wish I might send the sunshine,  
Or a bit of the sky's own blue,  
And just a breeze of the mountains  
From California to you.

If you only could see the roses  
Blooming everywhere  
And breathe the perfume of oranges  
In the balmy summer air,

See the golden heart in the poppy,  
Beside the country road,  
And pepper trees so graceful,  
With their crimson berry load.

Best of all the grand old mountains,  
Beautiful indeed to behold,  
And folded within their bosoms, the canyons  
Whose wonders are yet to be told.

Just to think it really is winter,  
And the East is frozen and cold,  
While we are basking in sunshine  
In the land that ne'er grows old.

So I'm sending you Christmas greetings  
With wishes fond and true,  
And hope e'er the New Year is ended  
California may charm you too.

### A REAL CHRISTMAS

**H**ER name was Philippa, a royal name for such a very small, poor English maid, but she had always been called "Flip," and she lived in Duchess row. Duchess row makes you think of something stately; but, alas, here it meant just a row of narrow, grimy houses standing in a dark and dreary street, where the sunshine never seemed to come—a place of poor people in the heart of toiling London. Flip lived at 9 Duchess row with her mother, a widow. They had the topmost room of the house, and of all the poor people in Duchess row I do not think any were quite as poor as Flip's mother, who had to work day and night to earn a scanty living by making buttonholes in coats and waistcoats for a ready made clothes warehouse. It was a hard life for the two, but Flip possessed a brave and stanch little heart beneath her threadbare frock and when she came out of school each afternoon would sit until her eyes were burning and her poor little fingers raw and aching, helping her mother.

And it was so she sat one afternoon a week before Christmas day trying to catch the last gleams of murky daylight which came through the window of their room. It was a bitterly cold, cheerless day, not a typical Christmas with frost and snow, but leaden skies and a biting east wind made all folks shiver and long to be home by a cozy fireside. But fires are a luxury in Duchess row, and there was but scant warmth in the room where Flip and her mother sat, working hard.

"If we can get these finished tonight you can run out with them, an' when you come back we'll 'ave a bit more coal, an' I'll git a bit of fish from round the corner, an' you shall 'ave a nice 'ot supper, deary," said the pale mother with a loving look.

"That'll be just splendid," replied Flip, "an' then we'll set before the fire, an' you'll tell me about them real Christmases you used to 'ave when you were a girl."

"I don't like talking of them days," said the mother with a sigh as she folded up the last bit of work. "'Ere you are deary. Jest put on yer 'at an' run with these." And in another minute or two the light little figure, laden with a large bundle, was speeding up the great busy thoroughfare.

Sometimes, with all the good will in the world, the constant journeying to the warehouse seemed to her long and weary, but tonight her thoughts of Christmas made her forget all fatigue.

"Ow lovely it would be," she thought, "if we could 'ave a real Christmas, with plum pudding an' 'olly an' presents! Fancy if I could give mother a present! I know what I'd like to give 'er—one of them cases to 'old needles and thimble an' a bodkin which I saw at 'Amilton's bazaar. But it ain't much good wishing." And here her reflections came to an end, for she found herself at the warehouse.

She had soon delivered her parcel to the fat manageress and received the poor payment due and, threading her way cleverly back through dusty corridors and down winding stairs, soon found herself in the jostling

street again. She turned her footsteps home, when a gleam of something bright on the dirty pavement caught her eye. She bent down. It wasn't—no—yes, it was—a silver sixpence! She picked it up. Could such luck be true? A silver sixpence found on the ground and therefore her very own, to do what she liked with!

"Why, now I'll be able to git mother a real Christmas present. It's jest like a fairy tale," she thought, her blue eyes shining with excitement, "an' I know what I'll buy, an' I'll get it, too, before I go 'ome, 'cause it won't take me a minit."

Hamilton's bazaar was not very far away, and, sure enough, in five minutes Flip was gazing steadily in at the brilliantly decked and lit window at a needlecase in red velvet and gold, an article which for all its gorgeousness was marked but fivepence three farthings.

"I want a needlecase with a thimble an' a bodkin an' a reel of cotton, like them up there," said Flip, with all the dignity of a possessor of wealth.

"Well, you must wait a bit!" snapped the assistant, turning to another customer, a stout, cheery looking man, accompanied by two rosy, well dressed children.

"I bin waitin' a long time. Why can't you git me one down?" replied Flip, with the perseverance of the east end child.

The girl impatiently detached one of the needlecases.

"Where is your money?" she asked. "Ere, of course. Wot d'yer think?" said Flip, handing her the coin.

The saleswoman took it, looked at it once carelessly, again narrowly.

"Why," she exclaimed, "this is not a sixpence at all—it is only an imitation one!" And, turning quickly, she beckoned the tall, imposing looking shopwalker, who stood near. "This child is trying to pass false money," she said as she gave him poor Flip's treasure trove.

He examined it and then, taking hold of the child's thin arm said:

"Come, come; where did you get this money from? Tell the truth now."

Flip's face went red and then very white. She did not realize or understand her offense. She only knew that if the sixpence was bad she could not buy the dearly coveted gift. Her heart seemed ready to break, and she burst into a flood of tears as she sobbed out:

"I found it in the street—it's true, it is. But I can't buy the present now."

The shopwalker hesitated, and then the cheery looking customer who had been waiting his turn to be served broke in by saying in a voice that had a strong country twang in it:

"Don't you cry, lassie. You don't mean any harm, I guarantee. Le me see that coin," he continued, turning to the shopwalker, who did as he was desired, for he was being addressed by an old and valued customer.

"Well, I don't know," said the cheery man. "It is not a sixpence, I agree, but it is a half sovereign and a very good one too." And in the twinkling of an eye he had deftly exchanged the imitation sixpence for a gold coin from his waistcoat pocket.

"There, my lass, take your money and run home."

Was it a dream? Flip pinched herself when she was in the chill street again. No, it was all true—a happy reality to find a bad sixpence and then see it transformed into a golden half sovereign. She had forgotten the velvet needlecase; she had but one thought—to get home—and home she soon was, where her anxious mother heard all her wonderful adventures.

So, after all, it was a real Christmas in the top room.—Exchange.

### HOPELESS

A three-hundred-pound man stood gazing longingly at the enticing display in a haberdasher's window. A friend stopped to inquire if he was thinking of buying the marked-down lavender silk shirt.

"Gosh, no!" replied the fat man wistfully. "The only thing that fits me ready-made is a handkerchief."

Use honey, corn syrup, dark syrup or maple syrup with hot cakes and on bread and muffins.

## The California Cultivator

Weekly—24 to 32 Pages One Dollar per Year



## The Cultivator Patterns



8426—Ladies' Waist. Cut in sizes 36, 38, 40 and 42 inches bust measure. This simple waist has a large hemstitched collar cut square in the back and rounded toward the front.

8618—Misses' and Girls' Cooking Outfit. Cut in sizes 6, 8, 10, 12, 14 and 16 years. This pattern includes the apron, cap and cuffs.

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PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

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Write your name and address plainly in full, give correct number and size of each pattern you want, and send 10 cents in coin or (1 or 2 c) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department  
California Cultivator  
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### LIBERTY BREAD TO SAVE WHEAT



TESTED recipes which enable cut in use of wheat flour. These recipes are used in cooking classes in our schools.

One and one-quarter cups milk and water, one tablespoon sugar (or water), one tablespoon fat, one-half teaspoon salt, two and one-third cups flour, one cake compressed yeast, or one cup liquid yeast, one-quarter cup warm water, two-thirds cup corn meal.

Add sugar, fat and salt to liquid and bring to boiling point. Add corn meal slowly, stirring constantly until all is added. Remove from fire, cool mixture, and add compressed yeast, softened in one-quarter cup of warm water. Add flour and knead. Let rise till about double its bulk, knead and put in pan.

When light bake in moderate oven for at least an hour.

### Oatmeal Bread

Next to corn in popularity have come oats. This is a new oatmeal yeast bread, not unlike Graham bread in appearance, having a sweet nutty flavor much favored by those who like dark breads.

One cup milk and water or water, one teaspoon salt, one tablespoon sugar, one cup rolled oats ground through meat chopper, 2½ cups flour, one-half cake compressed yeast or its equivalent, one-quarter cup lukewarm water.

Scald liquid and pour it over the rolled oats, sugar, salt and fat. Let stand about half hour, until lukewarm. Add yeast softened in warm water. Add flour and knead. Let rise until double its bulk. Knead again and place in pan. When very light bake in moderate oven from 45 to 90 minutes, depending upon the size of the loaf.

### Barley Yeast Bread

In modern times it is little known, although it has all the properties to recommend it to the family larder.

One cup milk and water, one tablespoon sugar, one tablespoon fat, one teaspoon salt, one-half cake compressed yeast, one and one-sixth cups barley flour, two and one-third cups wheat flour.

Soften the yeast in part of the liquid. Combine ingredients. Mix into a dough. Knead and let rise till double its bulk. Knead again and put in pan. When once more double its bulk, bake about 45 minutes. This makes a dark bread and is best when made into crusty, small buns.

### Rye Bread

Rye, also generally grown, is less pleasing to the majority of people, in breads, but here is a rye yeast bread for variety:

One cup milk and water, one tablespoon sugar, one tablespoon fat, one teaspoon salt, one-half cake compressed yeast, softened in two tablespoons water, 2¼ cups rye flour, 2¼ cups wheat flour.

Combine ingredients. Mix into dough and knead. Let rise until double its original bulk. Knead again. When again double its bulk, bake 45 minutes.

### Potato Yeast Bread

One-half cup milk and water or water, four tablespoons sugar, four tablespoons fat, 1½ teaspoons salt, four cups boiled potatoes, mashed fine, eight cups flour, one-half cake compressed yeast, one-quarter cup warm water.

This makes three loaves.

### LIBERTY SWEETS

Should candy be omitted from the Christmas box for the soldier in camp, and from the little ones' stockings? Yes, if we are to create a surplus for the millions of men on the firing line, the United States Food Administration for California says: A clever combination of fruits and nuts made with brown sugar and syrups of various kinds, however, may be substituted for candies. Such sweets keep well, are universally liked, and are wholesome.

### Popcorn Candy

For making popcorn candy either honey, maple syrup, molasses, or corn syrup may be used. To one cup of syrup allow one tablespoon of vinegar. Boil together until syrup hardens when dropped into cold water. Pour over freshly popped corn and

mold into balls or fancy shapes for the Christmas tree.

### Bitter Sweets

An attractive variety of candies may be made by dipping sweet fruits in bitter chocolate. Use for this purpose dates, citron, candied orange peel or crystallized fruit. Melt unsweetened chocolate in a double boiler. Keep the chocolate just warm enough to prevent solidifying. With a silver fork drop pieces of fruit in the chocolate. See that each piece is completely coated, then remove to waxed paper to harden.

### Stuffed Dates

Remove the stones. Fill with peanuts, walnuts, hickory nuts or any nuts available. Peanut butter makes a good filling that is different. Press the dates in shape and roll in granulated sugar, chopped nuts or a mixture of cocoa and powdered cinnamon.

### Chocolate Dainties

Put through the meat chopper a half cup each of dates, figs, and nut meats. Add one tablespoon orange juice, a little grated orange peel, and one square of melted unsweetened chocolate. Mould into balls and roll in chopped nuts or granulated sugar. This mixture may be packed in an oiled tin, put under a weight until firm, then cut in any shape desired.

### Maple Creams

Boil one cup maple sugar with one cup water until it forms a soft ball when dropped in cold water. Remove from the fire and stir rapidly until it becomes creamy. Form into balls the size of marbles and put nut meats on either side. Lay on wax paper to cool.

### Fruit Paste

Put through the meat chopper enough cherry, peach or quince preserves to make a half pint with the juice. Heat fruit and add two tablespoons of gelatine, previously softened in a very little cold water. Stir well, and continue stirring until it begins to cool and thicken, then pour into oiled dish to make a layer one inch thick. Let dry slowly, sprinkle with sugar and place in box with waxed paper between the layers. A mixture of dried apricots and dates may be used for this paste. Wash apricots and soak over night in enough water to cover. Pour off water, bring to a boil, pour over apricots and let

stand till cool. Put apricots and dates through a meat chopper and proceed with the proportions as given.

For dessert serve a fruit salad or fruit omelet; cream cheese with honey or fine preserves; fruit desserts with honey or just enough white sugar to bring out the fruit flavor.

A useful gift from a thoughtful giver

President Suspenders for comfort

and for Christmas

The universal favorite—3,000,000 pairs sold last year—so free and easy and great for wear—the best suspender quality at any price. A safe purchase because we

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Eliminates the out-house, open vault and cess-pool, which are breeding places for germs. Have a warm, sanitary, odorless toilet right in your house. No going out in cold weather. A boon to invalids. Endorsed by State Boards of Health.

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For baby's bath

Protects him from chill—keeps him comfy. Instant heat. Easily carried. Fuel consumed only when heat is needed—no waste. No smoke or odor.

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## Los Angeles Market

Los Angeles, Dec. 12, 1917.

## BUTTER

Produce Exc. Quotations.  
 California extra creamery  
 Dairy Exch. prices past week.  
 Dec. 5 6 7 8 10 11  
 '17 ... 42 43 45 45 46 46  
 Rcts. wk. ending Dec. 11, 256,500 lbs.

## CHEESE

Brokers prices:  
 California fresh, lb. ....26  
 Eastern Daisies .....29  
 Oregon Longhorn .....29  
 Tillamook Trip .....27  
 Domestic Swiss .....34

## EGGS

Exchange quotations. Prices include  
 cases and fillers valued at 35c. Prices  
 to retailers 4 cents above Exchange.  
 Fresh extras .....49  
 Case Count .....47  
 Pullet .....43  
 Dairy Exch. prices past week.  
 Dec. 5 6 7 8 10 11  
 '17 ... 51 51 49 49 49 49  
 Rcts. wk. ending Dec. 11, 610 cases.

## POULTRY

We quote to producers:  
 Broilers .....34  
 Fryers .....27@28  
 Hens—Leghorns .....22@26  
 Roasters, 3 lbs. and up. ....27@28  
 Ducks, lb. ....17@22  
 Squab, doz. ....4.00@5.00  
 Rooster, old .....15  
 Turkeys .....26@28  
 Geese, lb. ....17

## LIVESTOCK

We quote cwt. f. o. b. L. A.  
 Corrected Wednesday morning Decem-  
 ber 12, by the Cudahy Company.

Cattle—  
 Beef steers, av. 1000 to 1100 lbs. 8.50@9.00  
 Heifers, good .....6.00@6.50  
 Cows, good .....5.50@6.00  
 Cannors .....4.50@5.00

HOGS—  
 Av. 125 lbs. ....14.50  
 Av. 150 lbs. ....15.50  
 Av. 175-200 lbs. ....16.00  
 Rough, docked 20 lbs.; piggy sows, 40  
 lbs., stags, 40 per cent. ....9.50@10.00  
 Prime wethers .....9.00@9.50  
 Lambs .....14.00@14.50  
 Yearlings .....10.50@11.00

## POTATOES

Wholesale selling price:  
 Locals, cwt. ....2.20@2.25  
 Northern Burbank, cwt. ....2.40@2.60  
 Russets .....2.20@2.25  
 Sweet, cwt. ....3.00@3.25

## ONIONS

Wholesale selling price:  
 Brown .....1.50@2.25  
 White .....2.25@2.35  
 Garlic .....2.25@2.35

## VEGETABLES

Wholesale prices:  
 Artichokes, doz. ....1.25  
 Beans—Wax .....13@14  
 Lima, lb. ....13@14  
 Ky. Wonder .....13@14  
 Beets, sk .....1.00  
 Brussels Sprouts, lb. ....8@12  
 Cabbage, lb., 2; sk. ....1.35  
 Carrots, doz. ....35  
 Cauliflower, doz. ....1.25  
 Celery, cr. ....2.75@3.50  
 Cucumbers, bx. ....2.00  
 Hothouse, doz. ....1.25  
 Egg Plant, lb. ....7@8  
 Horseradish, lb. ....15  
 Lettuce, doz. ....35  
 Leeks .....30

Mint .....40  
 Onions, green, doz. ....25  
 Okra, lb. ....13@14  
 Peas, lb., Telephone .....14  
 Peppers, Chili, lb., 6@7; Bell .....8@9  
 Parsnips, doz. ....40  
 Parsley, doz. ....20  
 Pumpkins, lb. ....2  
 Radish, doz. ....20  
 Rhubarb—Strawberry .....1.25  
 Romaine, doz. ....50  
 Spinach, doz. ....25  
 Squash—Crookneck .....70@75  
 Hubbard, lb. ....2  
 Tomatoes, cr. ....1.25  
 Turnips, doz. ....35

## FRUITS

Wholesale prices:  
 Apples—Bellflowers .....1.35@1.50  
 Greenings .....1.75  
 Jonathan .....1.80@2.25  
 King David .....1.75@2.00  
 Spitzenburg .....2.40@2.75  
 Y Newton .....1.40  
 Avocados, doz. ....6.00@9.00  
 Bananas, lb. ....5½@5¾  
 Casabas, lb. ....2  
 Cranberries, bbl. ....17.00  
 Grapes—Carnichon .....1.60@1.65  
 Red Emperors .....1.65  
 Grapefruit .....3.50@3.75  
 Peaches, lug .....1.25@1.35  
 Pears, lug, 2.00; bx .....2.75  
 Persimmons, lb. ....7@10  
 Pomegranates, ½ bx .....1.80@2.00

## CITRUS

Lemons, 4.50@6.00; juice .....2.25  
 Grapefruit .....3.00@3.50  
 Idms, basket .....1.00  
 Navels, New, bx .....4.00@4.25  
 Valencias .....4.00

## DRIED FRUITS

These are not prices to producers but  
 prices made by wholesalers to retailers.  
 (25-lb. bx., faced, 50s, ½c less.). Ap-  
 ples, evaporated, 50s, 16; extra ch., 16½;  
 apricots, ch., 16; extra ch., 17½ fy., 18;  
 pears, 12½; peaches, ch., 12; fy., 12½;  
 peeled, 15; citron, 30 lb.; lemon peel, 25;  
 orange peel, 25; prunes, 20-30s, 16½; 30-  
 40s, 12½; 40-50s, 11; 50-60s, 10; 60-70s,  
 9½; 70-80s, 9; 90-100s, 8.  
 Figs—Bulk, 25 lb. bx., blk. \$3.00, wh.  
 \$2.75.

## NUTS

Almonds—Not growers' prices but prices  
 of wholesaler to retailer.  
 I. X. L. ....22½  
 N. P. U. ....21½  
 Hickory Nuts, lb. ....10  
 Peanuts, raw .....13½  
 Pecans, lb. ....19  
 Walnuts—Cal. Walnut Growers' Associ-  
 ation named prices Oct. 1:  
 No. 1 Soft Shell, lb. ....20  
 No. 2 Soft Shell, lb. ....16  
 Budded, Diamond Brand .....24  
 Budded, Standard Brand, (same size  
 as No. 1 Soft Shell) .....21  
 Prices delivered in East 1½c higher.

## HONEY

Prices of wholesaler to retailer:  
 Extr. White, lb. ....12@14  
 W. W. lb. ....13@15  
 Comb, case, W. ....4.00@4.50  
 W. W. case .....4.80@5.00

## RICE

Wholesale quotations:  
 Cal. ....7.50  
 Broken .....5.60@6.00

## BEANS

These are prices made by wholesaler to  
 retailer.  
 Lady Washington .....13.00@14.00  
 Lima .....13.50@14.00  
 Pinks .....9.00  
 Pinks .....9.50@10.00  
 Manchurian Reds .....9.25  
 Baby Mex. ....9.00  
 Garbanzos .....10.00

Small White .....13.00@14.00  
 Blackeyes .....9.50  
 Tepary .....9.00@10.00  
 Lentils .....25.00

## HAY

Quotations by Nichols-Loomis Com-  
 pany. Prices to growers f. o. b. L. A.  
 carlots:  
 Tame Oat .....25.00@27.00  
 Volunteer Oat .....18.00@20.00  
 Wheat .....20.00@23.00  
 Barley .....23.00@26.00  
 Alfalfa .....22.00@25.00

The Alfalfa Growers Association of  
 Southern California quotes:  
 Alfalfa, \$27.50 per ton f. o. b., where  
 the \$1.50 freight rate applies, and \$26.50  
 f. o. b. where the \$2.50 freight rate ap-  
 plies.

## GRAIN AND FEEDSTUFFS

Wholesale cwt. f. o. b. L. A.  
 Alfalfa Meal .....1.95  
 Alfalfa Molasses .....2.00  
 Barley, Rolled .....2.85@2.95  
 Barley, Recleaned, Whole .....3.00  
 Barley, Hulled .....3.55  
 Beet Pulp .....2.00  
 Bran, Heavy .....2.15  
 Coconut Meal .....2.50  
 Cottonseed Meal .....3.40  
 Corn, Yellow .....4.45  
 Corn, White .....4.55  
 Corn, Cracked .....4.50  
 Corn, Feed Meal .....4.55  
 Corn, Egyptian .....3.40  
 Middlings .....3.05  
 Milo .....3.15  
 Oat Chop .....1.90  
 Oats, White .....2.85  
 Oats, Rolled White .....3.05  
 Oats, Hulled .....4.75  
 Oats, Rolled Chicken Groats .....4.85  
 Oilcake Meal .....3.65  
 Wheat, No. 1 .....4.00@4.05  
 Wheat, Cracked, No. 1 .....4.40  
 Red Millet .....4.65@4.75  
 Rye .....4.00  
 Blood Meal .....5.00@5.10  
 Bone, Green .....2.75@2.85  
 Bone, Dry .....2.95@3.05  
 Charcoal, 50-lb. sk. ....3.00  
 Clam Shell .....70@80  
 Grit, Granite .....75@85  
 Oyster Shell .....1.45  
 Sunflower Seed .....5.25  
 Soya Bean Meal .....3.60  
 Scratch Feed .....3.80@3.90  
 Gritless .....3.90@4.00  
 Rice Bran, ton .....40.00  
 Middlings, ton .....45.00  
 Rice Polish, ton .....49.00

## San Francisco Markets

San Francisco, Dec. 11, 1917.

## BUTTER

Dairy Exchange quotations, lb.:  
 Fresh extras .....45  
 Dairy Exc. quotations past week and  
 year ago:  
 Dec. 4 5 6 7 8 10  
 '17 ... 42 42 43 44½ 44½ 45  
 '16 ... 35½ 35½ 35½ 35½ 34½ ..  
 Rcts. wk. ending Dec. 10, 336,500 lbs.

## CHEESE

Dairy Exchange quotations:  
 Cal Flats, 21@22. Y. Am. ....25  
 Ore. Young Am. ....25  
 Jack cheese, full cream .....24@25  
 Half skim .....18

## EGGS

Extra .....49  
 Selected, Pullets .....40  
 Dairy Exc. quotations past week and  
 year ago:  
 Dec. 4 5 6 7 8 10  
 '17 ... 52½ 53½ 52 49 48½ 49  
 '16 ... 45½ 42 40 39½ 40 ..  
 Rcts. wk. ending Dec. 10, 7655 cases.

## POULTRY

We quote from producers, lb.:  
 Hens, large, 25@26; Leghorns .....24@26  
 Small colored .....24@26  
 Broilers, 1-1½ lbs., 40; 1½-1¾ 35@38;  
 1½-2, 25@27; 2-3, 30@33.  
 Capons, lb. ....38@40  
 Roosters .....26@28  
 Squabs, doz. ....3.00@4.00  
 Ducks .....14@20  
 Geese .....19@20  
 Belgian Hares, live .....18@20  
 Turkeys, lb., live young .....27@29  
 Old, live, 25@26; dr. young .....28@32  
 dr. old, 3 cents under

## LIVESTOCK

Prices gross weight:  
 Cattle: The following prices are for  
 grass fed stock. Hay fed brings ½ to ¾c  
 more.  
 Steers, lb. 9¼@9½; undesirable, 6@8;  
 cows and heifers, 6¼@7½; undesirable,  
 4@6; calves, 7½@9½.  
 Hogs—Hard grain fed, weighing 100 to  
 150 lbs., 14½; 150 to 300 lbs., 15¼@15½;  
 300 to 400 lbs., 14¾@15.  
 Sheep—Wethers, 12@12½; ewes, 9½@  
 10.

## POTATOES

Wholesale selling prices at wharf:  
 Salinas Burbank, cwt. ....2.50@3.00  
 River .....1.35@1.90  
 Sweets, cwt. ....2.50@2.70

## ONIONS

Wholesale selling prices on wharf:  
 Australian Brown, cwt. ....1.00@1.75  
 Garlic, lb., new .....4@6

## VEGETABLES

Wholesale selling price.  
 Artichokes, doz. ....40@70  
 Beets, sk. ....1.25@1.50  
 Beans, string, lb., 7@12; Lima .....8@10  
 Brussel Sprouts, lb. ....4@6  
 Cauliflower, doz. ....65@85  
 Carrots, doz. ....65@85  
 Celery, doz. ....1.50@2.00  
 Cucumbers, lug .....1.50@2.00  
 Hothouse, sm. lug .....1.70@2.00  
 Lettuce, cr. ....1.00@1.50  
 Egg Plant, lb. ....6@7  
 Onions, bx .....85@100  
 Peas, lb. ....6-15  
 Parsnips, sk. ....1.00@1.25  
 Peppers, Bell, lb., 7-10; Chili, lug. 75@1.00  
 Pumpkins, sk. ....1.10@1.25  
 Rhubarb, bx. ....1.25@1.50  
 Squash—Marrowfat, sk. ....1.10@1.25  
 Cream, lug .....75@1.15  
 Hubbard, sk. ....1.10@1.25

Tomatoes, lug .....50@1.00  
 Turnip, sk. ....65@85

## FRESH FRUITS

Berries—Strawberries, 9.00@11.00 ch.  
 to trade; raspberries, 15.00; huckleberries,  
 lb., 15@17½; cranberries, bx., 4.00@5.00.  
 Pears—Winter Nellis bx., 1.25@2.00;  
 winter pears, 1.00@1.50.  
 Apples—Bellflower, 1.15@1.35; Spitzen-  
 burg, 1.00@1.85; Red Pearmain, 70@1.00;  
 W. W. Pearmain, 1.10@1.50; Newton  
 Pippins, 1.00@1.50.  
 Melons—Casabas, cr., standard, 65@85;  
 doz., 65@75.  
 Citrus Fruits—Lemons, bx. according  
 to size, fy. 4.50; ch., 4.00@6.00; lem-  
 onettes, 1.00@2.50; grapefruit, fy., 3.00@  
 3.25; ch., 2.25@2.50; Tulare seedless limes,  
 small bx., 1.75@2.00. Oranges, bx.: Na-  
 vels, fy., 3.50; Mandarin oranges, cr., 1.75  
 @2.00; half orange bx., 2.75@3.00; Tan-  
 gerines, 1.50@1.75.  
 Tropical Fruits—Bananas, Hawaiian,  
 5@5½ lb.; pineapples, doz. 2.75@3.50.  
 Pomegranates—One-half orange bx.,  
 1.50@1.75.  
 Persimmons—Bx.: 75@1.25.  
 Olives, ton, 160.00@200.00.

## DRIED FRUITS

Not producers' prices but prices of  
 wholesaler to retailer.  
 Peaches—Unpeeled, lb. standard, 9½;  
 choice, 9½; extra choice, 10; fancy, 11.  
 Figs—In 50-pound boxes, per pound.  
 White Adriatic, standard, 8½; choice,  
 9½; extra choice, 10½; fancy, 11½; Cal-  
 myrna, fancy, 15½; extra fancy, 16½.  
 Apricots—Bulk basis: Standard, 13½;  
 ch., 15; extra ch., 15½; fy., 16½; extra fy.,  
 17½; fy. Moorpark, 17½; extra fy., 18½.  
 Prunes—60s to 90s, 6½ basis; 50s to  
 60s, ½c premium; 40s to 50s, 1½ prem-  
 ium.  
 Apples—In 50-pound boxes, lb.: Fancy  
 14½; extra ch., 14; ch., 13½.  
 Pears—Bulk basis, lb.: Fancy, 11½;  
 extra ch., 9½; ch., 8½; standard, 6½.  
 Raisins—Cases: Sun Maid, seeded, 16-  
 oz. cartons, \$4.20 for 48s and \$3.15 for 36s;  
 fy., \$4.20 for 48s and \$3.15 for 36s; do, 12-  
 oz. 45 to cs. \$5.25; ch. 16-oz. cartons, \$3.00  
 for 36s; do, 12-oz. cartons, 45 to cs. \$3.10.  
 In bulk: Sun Maid, \$1.75; fy., \$1.90; ch.,  
 \$1.75.  
 Sulphur-bleached Thompsons, extra fy.,  
 \$5.37½; fy., \$5.12½; ch., \$4.87½; soda-  
 bleached, \$4.75.  
 Loose: One-crown, \$4.15; 2-crown,  
 \$3.40; 3-crown, \$3.65; 4-crown, \$3.20.

## NUTS

Almonds—Cal. Almond Growers' Exch.  
 Gross prices: Nonpareils, 21½; I. X. L.,  
 19½; Ne Plus, 18½; Drakes, 16; hard  
 shell, 11½.  
 Peanuts .....11@12½  
 Pecans, lb. ....18@19  
 Pine Nuts .....19@20

## HONEY

Comb, W. W., lb., 15@18; Amber ..12@15  
 Extr. W. W. Alfalfa .....14@15  
 W. W. Sage .....16  
 Lt. A. Alfalfa, 14; do Sage .....15  
 Amber Sage .....11½@13½  
 Beeswax, lb. ....38@40

## BEANS

Jobbers' prices, cwt., new crop, re-  
 cleaned.  
 Limas .....12.75@13.00  
 Bayous .....9.00@9.25  
 Small Whites .....12.00@12.85  
 Mexican Reds .....9.00@9.25  
 Large Whites .....11.50@11.75  
 Pinks .....8.00@8.25  
 Blackeyes .....8.25@8.40  
 Red Kidney .....13.00  
 Cranberry .....12.00@12.25

## HOPS

Per lb.: California crop of 1917, 28@  
 33; on contracts, spot, 1916 crop, 18@22;  
 old, 8@15.

## RICE

California rice, new crop, cleaned, 100  
 pound head rice, 6.50; brewers, 5.25;  
 screenings, 5.37½.  
 Rough rice, 100 lbs., 3.50@3.60 to grow-  
 ers at shipping points

## HAY

Under date of December 8, Scott,  
 Magner & Miller says:  
 Arrivals during the past six days were  
 only 712 tons. These light arrivals were  
 occasioned only by the stringent car situ-  
 ation which is worse now than it has  
 been of late. Inquiry in the interior of  
 the state is now becoming active and  
 sales are being made daily at higher fig-  
 ures than are quoted here in San Fran-  
 cisco. In fact there is a decided under-  
 current of strength in the entire hay situ-  
 ation in the western part of the United  
 States which appears to justify the  
 higher basis of values in our own state.  
 Livestock has been suffering recently on  
 account of the shortness of old pasture,  
 and in some sections they are compelled  
 even now to use hay to carry the stock  
 along.

The situation in the southwestern part  
 of the United States where the hay crop  
 was nearly a failure, (this particularly  
 applies to the states of Texas as well as  
 Oklahoma) will, no doubt, necessitate  
 drawing on California.

Fancy Wheat Hay  
 (light 5 wire bale) .....29.00@30.00  
 No. 1 Wheat or Wheat and  
 Oat Hay .....26.00@28.00  
 No. 2 Wheat or Wheat and  
 Oat Hay .....23.00@25.00  
 Choice Tame Oat Hay .....27.00@27.50  
 Other Tame Oat Hay .....23.00@25.00  
 Wild Oat Hay .....22.00@24.00  
 Barley Hay .....24.00@26.00  
 Alfalfa .....24.00@27.00  
 Stock Hay .....20.00@22.00  
 No. 1 Barley Straw .....60@80

## GRAIN

Grain Exchange prices, cti.  
 Corn, Cal. Yellow, cwt. ....4.00@4.10  
 W. Egyptian .....3.15@3.20  
 Barley, Feed & Brewing, cwt. 2.52½@2.57½  
 Oats, Red Seed .....2.90@3.15  
 Feed .....2.72½@2.77½  
 New Black .....3.10@3.40  
 White .....2.87½  
 Wheat—Government prices: Common  
 white hard, base price is \$3.50 per cental,  
 or \$2.10 per bushel of 60 pounds deliv-  
 ered in terminal warehouses in bulk; soft  
 wheat, base price 2 cents per bushel less,  
 or \$2.08 per bushel; white club (including

## Let the Things Needed in the Home Be Your Christmas Gift

A selection this Christmas of a useful and beautiful gift for the home not only emphasizes your own discrimination and good taste, but it convinces those to whom the gift is presented that you fully appreciate their sense of the fitness of things. Such a gift constantly reminds them of the splendid sentiments which inspire a sensible gift at this time when a frivolous one has no place in the thoughtful person's plans.

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When you visit Los Angeles on your Christmas shopping tour, don't fail to visit Barker's Store for innumerable suggestions of what is best to give for the home. If you can't come to the city, just write our Mail Order Department about what you wish. Secure the services of our expert shoppers who will select for you with complete satisfaction.

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Leveled, checked and in stand of Alfalfa.  
 Also first-class Orchard, Bean and Sugar Beet land, with plenty of water  
 for irrigation. For sale in tracts of 20 acres and up.

**BRENTWOOD IRRIGATED FARMS,** Sixty Three Miles from San Francisco in Contra Costa  
 County. For Prices and Descriptive Matter Address  
**BALFOUR, GUTHRIE & CO., LAND DEPT., 350 California St., San Francisco**



Sonora), \$2.06 per bushel. If wheat, after cleaning, weighs 60 pounds or more to bushel, base price stands; if 58 to 60 pounds to bushel, 3 cents per bushel reduction; if 56 to 58 pounds, 6 cents per bushel less; if less than 56 pounds, grain becomes sample grade and sells on its merits up to within 1 cent per bushel of 56-lb. wheat. Sacked wheat 4 cents per bushel more, less tare for weight of sacks.

## FEEDSTUFFS

Wholesale prices per ton:

Bran	.....	\$8.00@40.00
Cornmeal	.....	81.00@82.00
Cracked Corn	.....	81.00@82.00
Cocunut Meal	.....	45.00@46.00
Middlings	.....	51.00@54.00
Alfalfa Meal	.....	30.00@32.00
Rollod Barley	.....	51.00@53.00
Shorts	.....	41.00@42.00

## SEEDS

Prices in round lots, lb.:

Millet, re-cleaned	.....	4 1/2 @ 5
Alfalfa	.....	20 @ 21
Flax	.....	6 @ 6 1/2
Rape	.....	2 1/2 @ 3

## Citrus Fruit Market

Los Angeles, December 12, 1917.

Extreme cold in many Eastern markets has lessened the sales of citrus fruit, and this has resulted in slight depression in the market. However, Navelis are held firm because extreme shortage in supply of Navelis not only in Southern California but Northern and Central is just beginning to be appreciated by Eastern trade. Central California has probably shipped more than a half of its season's output and will probably have yet to ship not more than 700 cars. Southern California has shipped practically nothing as yet. Shippers have tried to send some fruit which would not pass inspection. Lemon markets remain firm.

## Shipments

Shipments of citrus fruit from Southern California since November 1, 1917: Oranges, 1947; lemons 362, total 2309. To same date last season, oranges 1687, lemons 558, total 2245. From Central California, oranges 1132, lemons 39, total 1171. To same date last season, oranges 2183, lemons 93, total 2276. Shipments from Northern California, oranges 112. To same date last season, oranges 586.

## AT THE AUCTIONS

December 5  
New York: 11 cars, higher. Val. \$2.45-\$4.80.

Boston: 11 cars. Val. \$1.65-\$3.70, Lem. \$5.30-\$7.45.

## December 6

New York: 14 Val., 2 Lem. Val. \$1.95-\$6.45, Lem. \$4.50-\$6.75.

Boston: 11 cars. Val. \$1.60-\$3.35, Lem. \$3.45-\$7.20.

Philadelphia: 8 cars. Val. \$2.10-\$4.25.

Lem. \$5.15-\$5.85.

St. Louis: 3 cars. Val. \$2.95-\$3.85.

Lem. \$2.75-\$3.80.

## December 7

New York: 9 Val. 2 Lem. Val. \$2.30-\$5.70. Lem. \$5.15-\$6.00.

Cincinnati: 2 Val. 1 Lem. Val. \$2.75-\$3.15. Lem. \$3.50-\$4.25.

St. Louis: 4 cars. Val. \$2.35-\$4.00.

Cleveland: 1 car. Val. \$2.05-\$4.00.

Pittsburg: 3 Val. 1 Lem. Val. \$2.45-\$3.90. Lem. \$4.80-\$6.15.

December 10

New York: 29 Val. 1 Navel, 5 Lem. Lower. Val. \$1.55-\$4.60. Lem. \$3.85-\$5.95. First car Navelis in auction from Lindsay ran from \$3.90 to \$4.70.

Boston: 12 cars. Val. \$1.95-\$3.10. Lem. \$3.90-\$6.65.

St. Louis: 1 Lem. \$3.25-\$4.35.

Philadelphia: 5 cars. Val. \$2.10-\$3.10.

December 11

New York: No sale of oranges because big benefit sale account of Italian sufferers.

St. Louis: 1 car. Val. \$1.95-\$3.20.

Boston: 4 Val. 1 Lem. Val. \$2.70-\$3.15.

Lem. \$3.30-\$4.75.

## MARKET NOTES

San Francisco reports a much lighter tonnage of barley in warehouses and on wharves on December 1, than same date last year; 1917, 33,821 tons; 1916, 58,777 tons. Wheat in hand this year, 26,815 tons, last year, 14,834 tons.

Watsonville is prevented from shipping apples as freely as desired this year because of car shortage.

The supply of casabas, Christmas melons and the late keepers seems to be shorter than previous years.

Bakers of Los Angeles announce that they are compelled to stop the baking of fancy bread loaves and hereafter will bake only four standard loaves weighing, one, one and a half, and two and four pounds.

The immense government requirement in condensed milk is creating serious conditions in cheese and butter production. Eastern cheese makers are now paying \$3.20 to \$3.50 per hundred pounds for milk and condensaries are offering as high as \$3.70. The cheese makers assert they cannot pay any such prices with cheese remaining as it is.

Shipments from California for the week ending December 10 are: Lettuce, 42 cars, mixed vegetables, 65; celery, 194; grapes, 10; raisins, 167; cauliflower, 25; sweet potatoes, 7; dried fruits, 73; mixed fruits, 11; apples, 10; onions, 5; potatoes, 48; tomatoes, 3; cabbage, 1; artichokes, 3; pumpkins, 1.

Governor Cantu of Lower California has appealed to cotton growers who have lands over the line for funds to send a commission to Washington in an endeavor to secure a modification of the order stopping free and unrestricted passage between the United States and Mexico.

## NEED OF MINERAL SALTS

The problem of the selection of food grows more complicated as prices advance and the available food materials decrease. One of the most vital points in which the diet is likely to fall short is in the mineral salt content and in the shortage of growth promoting substances called vitamins.

The following suggestions are given for conserving these essential nutrients by the Ohio Council of Defense:

1. Water in which vegetables are cooked should be either served with the vegetable or used in making of soup.

2. Potatoes should be cooked in the skins regardless of the final method of serving. This is also true of many other vegetables and fruits.

3. Unhulled or brown rice is greatly to be preferred to the polished rice from which much valuable material has been removed.

4. Fine patent flour is deficient in both mineral salts and vitamins. The milling of a higher per cent of the wheat kernel into flour would remedy this deficiency.

5. Milk should be the last thing excluded from the diet of children, because of its many advantages as a tissue-building and growth promoting food. "A quart of milk a day for every child is a good rule."

6. Skim milk, despite its shortage of fat, is as valuable a source of vitamins as whole milk.

7. Ordinary "greens" are an excellent source of mineral salts.

Linn County, Oregon, will ship out ten carloads of beans this year. Though the yield was very light on account of the dry summer, it is 100 per cent in excess of last year's.

## THE CASE AGAINST RATS AND MICE

Rats and mice are among the worst animal pests in the world, according to biologists of the United States department of agriculture.

From their home among filth they visit dwellings and storerooms to pollute and destroy human food.

The rat carries bubonic plague and many other diseases fatal to man and has no doubt been responsible for more untimely deaths among human beings than all wars of history.

In the United States rats and mice destroy each year in homes, in factories, stores, and warehouses, in cars and on ships, crops, poultry, and other property valued at more than \$200,000,000—an amount equivalent to the gross earnings of an army of 200,000 men.

Grain eaten and wasted by rats and mice on many farms would pay all the farmers' taxes.

Rats and mice breed from six to ten times a year, producing their destructive kind at an alarming rate.

They are parasites without a single redeeming characteristic.

## A GREAT CATALOGUE

The Selma Cling has place of honor on first cover page of the most complete and instructive nursery catalogue we have ever seen. The Selma Cling is a mid season canning peach, following the Tuscan, and one long wanted by canners of California. This peach has been grown in the state for nearly 40 years, but of the peach more may be learned on page 22 of the great catalogue which we refer to. There are, in the catalogue including cover, an even 100 pages, and with fine type and illustrations it is literally packed with information invaluable to the orchardist. This information is brought together almost entirely by Mr. Roeding himself.

Regarding it the Fancher Creek Nur-

sery says: "Although Mr. Roeding's views are rather pronounced and he is regarded as a radical by a great many people, we wish to say that his own orchards and vineyards comprising 1000 acres in several counties in the state, embracing a number of varieties of fruits, all of which by the way are profitable properties, are a sufficient demonstration that his methods of pruning, culture, etc., are based on sound principles. Mr. Roeding is fortunate in possessing an open mind. He is not so wedded to his own ideas that he is unable to learn from others. No one probably realizes more forcibly than he that results are the only things that count."

This statement is easily verified by people who have come in contact with Mr. Roeding during the last 32 years of his connection with the nursery business. The service which comes from this long experience is to be had for the asking by any patron of this nursery. We will refer directly to the catalogue again and call attention to pages four, five and six where explicit information as to systems of planting orchard trees may be found, not only given from Mr. Roeding's own experience but from carefully worked out plans of a practical civil engineer. Charts and explanations are given which show the methods and advantages in the square system, the quincunx, the hexagonal and the alternate systems. As noted, there are not only full instructions given in the books, but charts or diagrams make exceptionally plain every step in the work of laying out an orchard. Methods of pruning and how to shape the young trees are made plainer with literally dozens of photographs from trees pruned and unpruned.

Every prospective planter should write at once for this great catalogue to Fancher Creek Nurseries, Fresno.

## WEATHER CONDITION

San Francisco, Cal., Dec. 8, 1917.

	Rainfall—		Temp.	
	Wv.	Season.	Norm.	Max. Min.
Eureka	.00	7.26	11.51	58 36
Red Bluff	.00	1.90	6.64	70 36
Sacramento	.00	.76	4.44	64 38
San Francisco	.00	.83	4.97	66 46
San Jose	.00	.95	3.81	68 34
Fresno	.38	.39	2.36	64 34
San Luis Obispo	.00	.57	3.96	76 36
Los Angeles	.40	.42	2.77	78 48
San Diego	.00	.25	1.61	78 48

## Gifts of Real Merit and Value

Sold on Easy Payment Plan

Frantz Premier

\$35.00

The Eden LINE

\$115.00

For Sale by all Good Dealers Everywhere



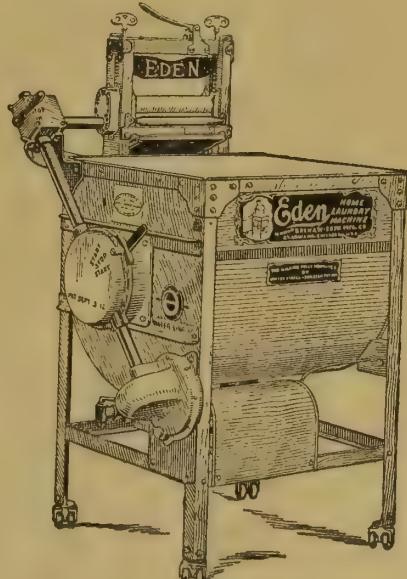
## President Wilson Has Said:

"Now is the time for America to correct her unpardonable fault of wastefulness and extravagance"

Buy Wisely; Give Wisely; Give USEFUL gifts—PRACTICAL PRESENTS—which will ENDURE—will LAST—will SERVE.

Consider how the gift you give THIS YEAR will be looked upon A YEAR HENCE. How will it prove in the test of time—of daily usage?

You won't have to apologize LATER if you make THIS an ELECTRICAL CHRISTMAS. Your friends will commend your good judgment.



\$5.00 down, \$4.00 a month

\$9.00 down, \$8.75 a month

From the White House, from the halls of Congress, from the press—even from the pulpit—goes forth the appeal to Americans to Economize.

Economy is the watchword of the land. It is the slogan, the demand of the nation.

But it's a new kind of economy—this 20th century, war-time kind, which demands the elimination of waste and lost time, through increased efficiency.

In every home in Southern California, there is

a splendid opportunity to economize and every housewife will do well to pattern her house organization after the plan of successful business firms which install, wherever practical, labor-saving devices.

A Frantz Premier Electric Vacuum Cleaner and an "EDEN" Electric Washing & Wringing Machine, properly and consistently used in the home, will save from \$1.00 to \$2.50 per week by lessening the work, doing it better and with a saving to the clothes and carpets.

THE WOODILL & HULSE ELECTRIC CO.

111-13 East 3rd Street, Los Angeles

Just around the corner from Third and Main



# Every genuine Red Top has this identifying mark



The name Red  
Top is registered  
in the U. S. Pat.  
Office

IT assures your getting the only tire with red tread that is backed by Fisk quality and the Fisk policy of satisfaction to users.

Look for it. It is your protection and insurance that you are getting the real Red Top—the tire with the record for the greatest dollar-for-dollar value in mileage—the only one with the durable “button” tread that gives complete non-skid protection all ways—the only one with the right to be called Red Top.

It is important to you that you realize the significance of this identifying mark, the mark which means—

*This is the Real*

# FISK

## RED TOP



CA

# CALIFORNIA CULTIVATOR

*THE LIVESTOCK* *Combined* *CALIFORNIA*  
*and DAIRY JOURNAL* *with* *CULTIVATOR*

An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

December 22, 1917

SAN FRANCISCO





# Plant Germain's SELECTED SEED GRAIN

Wideawake growers are planting selected seed grain this year.

In these days of conservation, Hooverizing and high priced grain, no farmer should take chances. The government wants 100 per cent crops. Insure best results by planting Germain's selected seed grain only.

Write or call for information.

**Germain**  
Established 1871  
**Seed & Plant Co.**  
326 328 330  
SOUTH MAIN STREET  
LOS ANGELES, CAL.



## New Record Book for California Producers

The California Cultivator has just published a new and most useful Record and Account Book for California Fruit Growers, Farmers, Live Stock Men, Dairymen, Beet Growers, Poultrymen, and all other California Producers,—something that has long been needed but never before attempted, to suit the peculiar diversity of products of this state.

Among the special pages provided are the following:

"Fruit Crop Record," "Live Stock Record," "Poultry Record," "Daily Record of Labor," "Individual Tree Record," "Dairy Record," "Farm Crop Account," "Live Stock Account," "Household Expenses," "Field Expenses," "Cash Receipts," "Inventory," and others that form a complete, easy-to-keep record system.

There is nothing complicated about this Account Book but it is complete and will be of great value to anyone wishing to know "where the money goes," which crops pay and which do not, who owes you and how much, and many other things to which you may quickly refer.

A copy of the California Cultivator Farm Record and Account Book will be sent to any address prepaid and a year's subscription to California Cultivator, new or renewal will be credited upon receipt of \$1.25. Send all orders to

**California Cultivator**

115-117 No. Broadway

Los Angeles

## Can You Spare a Few Hours Each Week to Handle a Profitable Local Agency?

We need a representative in each county to put the Fruit Growers, Live Stock Men, Farmers, Dairymen and Poultrymen in touch with the money-making ideas, results of experiments and real farm and live stock information of value to be obtained from California Cultivator.

Only a small part of your time is needed each week to make money under our plan. We want to secure the services of men and women who can present a meritorious offer. You don't have to have previous experience. If you can do as well as others who had no more training than yourself, you can make splendid wages just for your spare time.

Our proposition interests every producer. There is an opportunity here for you—if this fits your case. If it does write to

**Sales Department**

**California Cultivator**

115-117 N. Broadway

Los Angeles

## Conejo Ranch

### Hampshires

Our Hampshire herd headed by Grand Champion Boar Dukes Allen.

The most popular strain of pure bred breeding stock for sale at all times. Our exhibit won 43 ribbons at the California State Fair, 1917, majority of which were Champions and Firsts.



### Duroc Jerseys

Our Duroc Jersey herd headed by the sensational yearling Councilor, sired by Critic D, which was Reserve Champion of California State Fair.

### Conejo Ranch

Address: Newbury Park  
Ventura County, California

Ranch located on Ventura State Highway, 40 miles northwest of Los Angeles.

Los Angeles Office, care Janss Investment Company  
4th Floor Metropolitan Bldg., 5th and Broadway



## SHORTHORNS

### Paicines Ranch Company

Offers for Fall Delivery, both Registered and Unregistered

### Weanling Bulls and Heifer Calves

ENTIRE HERD TUBERCULIN TESTED

For further particulars and prices apply to

### PAICINES RANCH COMPANY

Railroad Terminal: TRES PINOS. P. O. Address: PAICINES  
Telephonic and Telegraphic Address: HOLLISTER, CAL.

DAVID J. STOLLERY, 320 Sharon Building  
SAN FRANCISCO, CAL.

## Prize Winning HAMPSHIRE

The farmer who wants a hog that puts on 200 lbs. of firm meat at six and a half months of age buys the Hampshire.

F. A. Langdon  
Manager



Liano Vista Ranch, Perris, Cal.

Boars, gilts, bred and open, for sale from the P. I. E. Champion Hampshire stock, just as nearly perfect as they make them.

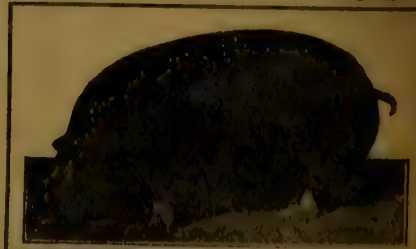
F. V. Gordon  
Owner

## Poland Chinas, Medium Type

Choice breeding stock, both sexes, from Panama-Pacific International Exposition prize winning strain; 12 firsts, Junior Champion and Reserve Grand Champion Boar, Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

**M. Bassett**

Hanford, Kings County, Cal.





# California Cultivator

XLIX No. 25

LOS ANGELES: December 22, 1917

One Dollar Yearly

## Arizona Method of Cleaning Irrigation Ditches

Results at Salt River Valley Experiment Station Show Sheep to be Admirably Fitted for the Work. Other Experiments.

**E**XPERIMENTAL work in the extermination of Johnson grass begun last year has been continued. One field that has been plowed and harrowed at frequent intervals for nearly two years, without any irrigation, still shows a considerable growth of Johnson grass.

One field that was equally as badly infested was planted to cotton in the spring of 1916. This was cultivated through the season, somewhat more than ordinary tillage methods being given. Considerable hand-hoeing was given the field, the effort being to keep the grass from getting a start. The cotton was planted late and cut short by an early frost, yet despite this handicap it paid for the extraordinary labor and showed a good profit.

The history of the field this season proves that this is the practical method of getting rid of this weed. The cotton was followed with Tepary beans in the spring of 1917. Only a few scattering shoots of grass have shown this season, and as Superintendent Wood says, "No more cultivation is required the second season to keep down the grass than should be given to any cultivated crop by any good farmer."

This would seem to settle the question of the best way to exterminate Johnson grass; proves that the old way advocated by many of keeping the water off and fallowing is not practicable, and incidentally disposes of the bugaboo which Johnson grass has been supposed to be.

I remember a few years ago some farmers got alarmed because they said that "Bermuda grass was running out their alfalfa." Pretty soon, observing, thinking farmers began to notice that a Bermuda sod turned under was the best sort of a preparation for almost any crop, and the explanation was that the soil was supplied with much needed humus. Now some farmers are beginning to find that Johnson grass supplies a tremendous amount of humus, and already I find that there is a change of sentiment towards this pest (?).

One of our clear headed farmers told me a few days ago that he would like to buy a quarter section that was well set in Johnson grass because he felt that he could control it and handle it so as to make it even more profitable than the same acreage of alfalfa.

A useful plant out of place becomes a weed. In our impatience to exterminate some of these plants that persist in growing where we want some other plant to grow we overlook the opportunity to use the weed.

In New England we used to fight the ox-eye daisy, or white daisy, as it was frequently called. My father spent many weary hours in digging out any stray daisy plants that got started. It was an invariable rule never to pass by a daisy plant on the old farm. We had to stop and dig it up or mark the

spot and return to it at a more favorable time.

One day a new man moved into the neighborhood, right on to the poorest, worst daisy infested farm in the district. We wondered how he was going to get rid of the daisies. Well he didn't try, just went ahead with his

ing the scattering of weed seeds. Among the first to use sheep for this purpose was the Salt River Valley experimental farm, although hundreds of farmers now have their ditches fenced.

Sudan grass is becoming a very important crop in the Salt River Val-

state highway near Mesa and about 15 miles east of Phoenix. There is considerable need of a dairy herd and of barns and silos on the farm. These no doubt will come in time, and in the meantime the work which is being done is proving of great value to the valley farmers.



Sheep on the Ditch Bank

The hired men that work without pay, board themselves, and pay for their board Salt River Valley Experiment Farm.

farming and paid no attention to them. He had found that if cut early they made the best milk producing hay to be had. So he cut his daisy hay early, fed it to good cows, fertilized his fields, reseeded from time to time, gradually built up the farm to a high

ley. At the station farm it is found that Sudan grass sown in May produces about two tons the first crop and about four tons additional in the three following cuttings. A new use is being made of Sudan grass in the Salt and also in the Yuma Valleys.



An Irrigation ditch which has "gone to grass."

An Irrigation ditch which is kept free from vegetable growth by sheep.

state of fertility, and got rich, not exactly in spite of the daisies but because he found that it proved better to use the weed than to fight it.

I think that we are gradually coming to the more intelligent use of weeds rather than spending too much energy in a one-sided fight of extermination. The work which the experimental station is doing will help to show that the most economical way is after all the simplest.

Speaking of weed control, one of the most potent factors of weed distribution is the irrigation ditch. This is hard to keep clean and free of grass and plant growth. To keep it cut out by hand is a slow, expensive job. Fencing the ditches and grazing sheep in the ditches and on the ditch banks is by far the most satisfactory and the cheapest way of keeping the ditches in good condition and prevent-

This is to thoroughly disk alfalfa fields immediately after the first crop is cut in the spring and seed to Sudan grass. At the station farm it is found that with the best stands of alfalfa the Sudan grass is choked out, but in fields of old alfalfa where the stand is not quite perfect, the Sudan comes up and remains in a semi-dormant condition until hot weather. Then it shoots up and two cuttings can be made which are mostly Sudan with a little alfalfa; then the fall cutting will be nearly all alfalfa.

The practice of the best farmers has long been to seed barley in the old alfalfa fields in the fall, making lots of winter pasture and a big cutting of grain and alfalfa hay in the spring. I expect to see the seeding of Sudan grass in the spring practiced almost as universally.

The station farm is located on the

### INCOME TAX

**Y**OU won't have to figure out your own income tax all by yourself hereafter. The government is going to send out men to help you. It will be up to you to hunt up these men, who will be sent into every county seat town, and some other towns besides, to meet the people. Postmasters, bankers and newspapers will be able to tell you when the government's income tax man will be around and where to find him. He will answer your questions, swear you to the return, take your money, and remove the wrinkles from your brow. Returns of income for 1917 must be made between January 1 and March 1, 1918.

"The government recognizes," Collector of Internal Revenue Carter of Los Angeles, said today, "that many persons experience a good deal of difficulty in filling out income tax forms. The government recognizes that taxpayers at points where collectors' offices are not easily accessible find it hard to get proper instruction in the law. Next year, when every married person living with wife or husband and having a net income of \$2000, and every unmarried person having a net income of \$1000 for the year 1917 must make return of income on the form prescribed, there will be hundreds in every community seeking light on the law and help in executing their returns. My own and every other collection district in the nation will be divided into districts, with the county as the unit, and a government officer, informed in the income tax, assigned to each district. He will spend hardly less than a week in each county, and in some counties a longer time, very likely in the court house at the county seat town. In cities where there are collector's branch offices, he will be there, and in other cities possibly at the city hall. My office will in due time advise postmasters and bankers and send out notices to the newspapers stating when the officer will be in each county. It will be unnecessary for prospective taxpayers to ask my office for forms on which to make returns. The officer who visits their county will have them."

It may be stated as a matter of general information that "net income" is the remainder after subtracting expenses from gross income. Personal, family, or living expense is not expense in the meaning of the law, the exemption being allowed to cover such expenses.

The new exemptions of \$1000 and \$2000 will add tens of thousands to the number of income taxpayers in this district, inasmuch as practically every farmer, merchant, tradesman, professional man and salary worker and a great many wage workers will be required to make return and pay tax.

The law makes it the duty of the taxpayers to seek out the collector. Many people assume that if an income tax form is not sent or a government officer does not call, they are relieved from making report. This is decidedly in error. It is the other way round. The taxpayer has to go to the government, and if he doesn't within the time prescribed, he is a violator of the law, and the government will go to him with its penalties.



# Kirkman Nurseries

Established 1888

Wholesale Growers of

## High-Grade Nursery Stock

DECIDUOUS AND CITRUS FRUITS  
OLIVES AND GRAPE VINES  
SHADE AND ORNAMENTAL TREES

Twenty-nine years of continuous and consistent service to the Western fruit growers.

There is a shortage of trees this year. To make sure of getting just what you want, place your order now.

Address Main Office

2522 Tulare Street  
Fresno, Cal.

## "THE BOSS" TREE PROTECTOR



Made of Yucca Palm.

Is cheap, durable and quickly put on the tree. It prevents rabbits from destroying your trees. A sure protection against frosts, sunburn, grasshoppers, or dry winds. Can be easily removed, will last for years. Send for samples.

### Prices

	Per 1000
10 in. long, 7 in. wide....	\$10.00
12 in. long, 7 in. wide....	11.00
14 in. long, 7 in. wide....	12.00
16 in. long, 7 in. wide....	13.50
18 in. long, 7 in. wide....	15.00
24 in. long, 7 in. wide....	18.00
30 in. long, 7 in. wide....	21.00

YUCCA MANUFACTURING CO.  
1880 Willow St., Los Angeles, Cal.

TEAGUE QUALITY

## CITRUS TREES

Orange, Lemon, Pomelo and Lime, bud selected (pedigreed) trees, subject to immediate delivery. Correspondence invited and prices cheerfully quoted.

Founded in 1889

R. M. Teague Citrus Nurseries  
SAN DIMAS, CALIFORNIA

## Fish Fertilizer

We are the Largest Handlers on the Pacific Coast.

Prices Furnished on Application

Rogers Brown & Co.

1307 Baker-Detwiler Building  
Los Angeles, Cal.

## Diseases of the Citrus Tree

By Prof. H. E. Stevens, Florida Experiment Station



SEVERAL well-known fungus diseases are commonly found in the citrus groves of Florida. Some of these are widely distributed and cause a large amount of injury to trees and fruits each season. Others are less regular in occurrence and perhaps more restricted in distribution, but during favorable seasons they are frequently responsible for serious losses in fruits and no little injury to the trees. There are certain diseases of this group that attack only the main parts of the tree, such as the roots, trunk and branches. Others are found chiefly on the fruits or foliage and a few attacks all parts of the tree, the fruit included.

These diseases, along with the insect pests, usually share the growers' annual returns from his grove, and in some cases they may take a large part, if not all, the profits, and perhaps make heavy inroads into the principal of his investment. It is not uncommon for 25 to 50 per cent of a citrus crop to be lost through the ravages



A Fine Cluster

Bunches of dates sometimes weigh 50 pounds, and the effort is to secure bunches that ripen as nearly as possible at the same time. With some varieties artificial incubation is necessary.

of a single disease, or a much higher percentage may be rendered inferior or worthless from attacks of one or several of the more common citrus troubles. I have seen cases where fully 90 per cent of the fruit in a grapefruit grove were affected by citrus scab, and perhaps half of this fruit would have been graded as culls. A similar condition frequently occurs where melanose is severe. Stem-end rot may cause from a fourth to one-half of the fruit to drop, and it has been estimated that in the past season eight to ten per cent of the fruit shipped out of the state each season was lost through decay. The combined injury of these various diseases causes losses that will amount to a very large sum each season. They levy an annual tax on the citrus growers of the state, the magnitude of which is not fully realized. All along the line, from the time the tree is planted until it is producing; from

the time the fruit appears on the tree until it arrives on the market, these diseases are responsible for losses that directly affect the growers in dollars and cents. They are parasites in a double sense, affecting not only the vitality of the citrus tree, but the growers' pocketbook as well. If the citrus growers of Florida were taxed a sum by the state each year, equal to the total losses caused by diseases, such action would be vigorously resented and immediate steps would be taken to remedy such a condition. But with the diseases, in a great many cases, they are allowed to continue on from season to season, imposing an enormous tax, which the grower perhaps only feebly protests against or accepts as a condition that cannot be avoided.

If such conditions could not be remedied the outlook for the citrus industry would be far from promising. It appears to me that the remedy lies in a better understanding of these diseases and the method for their control by the citrus grower himself. A great deal of information of a practical nature is available on this subject and a great deal of advice and instruction along this line has been given out in the past, but unless this is accepted and applied faithfully and intelligently, very little progress can be made in the direction of disease control. Disease control is one of the problems connected with the growing of citrus fruits. It is one that must be fully recognized and mastered, if success is to be expected. Disease control is probably more important than any other single operation connected with the production of citrus fruits, and it is the one of which the least attention is usually given. This is amply illustrated in the depleted condition of many grove trees throughout the state and in the large amount of worthless and inferior fruit that is grown each season. Such conditions to a very large extent might well be avoided.

A grove may be suitably located, well cared for regarding its culture, judiciously fertilized, and it may produce ample crops of fruit under these conditions, but if this fruit is unsalable or if it rots before it can be disposed of, the grower has accomplished nothing for his efforts. His time, money and energy have been wasted, which he might perhaps have spent to much better advantage in some other direction. There are many citrus growers working under conditions similar to these today. They give close attention to the use of fertilizers, to the cultivation of their groves, and the production and marketing of a large crop of fruit, which is highly commendable, but they usually neglect disease control, which may be the main factor determining the value of such a crop after it is produced. It costs just as much to produce an unsaleable fruit under these conditions as it does one of perfect quality, and there is certainly a wide difference in the return from these two classes of fruit. The same will apply to grove trees. A diseased tree is a dead expense and only tends to reduce the profits from those that do pay.

## "Substantially Colored"



STATE Commissioner of Horticulture Hecke is sending out a "substantially colored" orange, that is, an illustration in colors indicating the orange which will pass as "substantially colored". This provision of the standardization law has caused no little comment, even friction on the part of the growers in some of the citrus sections. On the back of the color card is given the text of sections 11 a and 11 b which specify the standard for the fruit. We quote these sections as follows:

Section 11a. It shall be unlawful for any one to sell, offer for sale, ship or deliver for shipment any citrus fruits, which are immature or frozen to the extent of injuring the reputation of the citrus industry of the State of California if shipped, and for any one to receive any such citrus fruits under a contract of sale, or for the purpose of sale, or for shipment, or

for delivery for shipment; provided, however, that nothing in this section contained shall be construed to prevent the sale or shipment for sale of frozen or otherwise defective fruit to a by-product factory, or the manufacture thereof into citrus by-products; nor shall this section apply to the sale, or contract for sale, of citrus fruits on the trees, nor shall it apply to common carriers or their agents who are not interested in such fruits and are merely receiving the same for transportation.

Section 11b. An orange shall be deemed properly matured for sale, or to be offered for sale, for shipment, or to be offered for shipment, under the provisions of this act, either when the juice contains soluble solids equal to, or in excess of, eight parts to every part of acid contained in the juice, the acidity of the juice to be calculated as citric acid without water of crystallization, or when the orange

is substantially colored on the tree. The foregoing provisions shall not apply to shipments of oranges to foreign countries other than the Dominion of Canada, during any season provided such shipments are made after the first day of November.

### SHIPPING REGULATIONS

Effective December 1, shippers of oranges and lemons will be required by food administration regulation to load refrigerator cars seven boxes wide and two high the entire inside length of the car, either under ventilation or refrigeration.

Shippers of vegetables and deciduous fruits are requested to advise the limit of safety to which they may increase the carload above minimum, so proper regulations may also be issued at once. It is absolutely necessary that everything reasonably possible be done to increase the efficiency

# Nitrate of Soda

California soils need available nitrogen. Get it as cheap as you can. Write us for "Cost of Available Nitrogen."

DR. WM. S. MYERS  
Chilean Nitrate Committee  
P.O. Box 248, Berkeley, Cal.

# Holiday Excursions

Reduced fares between stations

on Southern Pacific Lines,

account Christmas and

New Years

Tickets on sale December

21-22-23-24-25-28-29-30-31

and January 1

Return limit on all tickets

January 7, 1918

The Road of a Thousand

Wonders will take you 'most anywhere

**Southern Pacific**

—See the Apache Trail of Arizona



of refrigerator cars and the railroad power handling perishable commodities, in order that the present refrigerator car supply may handle perishable traffic for the year just beginning.

There is little hope of the car shops being able to fill railroad orders for additional refrigerator cars to any extent during the coming year, because of being employed on priority government war orders.

A careful survey of the entire transportation conditions just made, we believe justifies that conclusion that

of getting results. The organized farming interests of the state are squarely behind this committee which will meet immediately and plan to cooperate with other organizations in solving our problem."

The names of the labor committee were given in last week's Cultivator on Page 611.

CALIFORNIA BULLETINS

Another bunch of valuable bulletins and circulars has been issued by the University of California college of ag-



Dates at Mecca, Riverside County

This engraving is used by courtesy of the Coachella Valley Submarine. This is an imported plant offshoot of a date grown in Algiers. It has been planted for eight years in Mecca. The date industry of the Coachella Valley has grown very rapidly, and it is believed that it will add greatly to California's wealth. The imported date offshoots are the smallest feature in the date industry, for success has been had with many seedlings grown in the valley. This has been necessary because the demands have far exceeded any possible importation.

with maximum cooperation, the railroads will be able to handle perishable traffic without serious delay.

LABOR COMMITTEE

Commissioner Hecke has issued the following statement: "No more important question is before the people of California today than that of farm labor supply. The farmers must do their part in feeding our Allies and in keeping down the cost of foodstuffs to the consumer at home, and therefore they must be given a dependable supply of labor to harvest greatly increased acreage. The testimony of the best informed farmers in the state is to the effect that without additional labor the 1918 crop will fall below the production of 1917. For this reason the farmers and fruit growers at the fiftieth fruit growers' convention instructed me to appoint a labor committee which would take up with the state and government authorities this vital question of a labor supply. This committee has been appointed after mature deliberation and consultation with the various farming interests of the state, and I feel certain that no better committee could be selected at this time, nor one that would be surer

riculture. Every one touches topics of present day interest. They are: "Home Pickling of Ripe Olives" by Frederic T. Biloletti; "Prevention of Stinking Smut of Wheat and Covered Smut of Barley" by W. W. Mackie; "Utilization of Idle Lands for Wheat" by Chas. F. Shaw; "Poultry on the Farm" by J. E. Dougherty, Circular 186; "Infectious Abortion in Cows" by F. M. Hayes, Circular 183; "Extending the Area of Irrigated Wheat in California." by Frank Adams, Circular 182; "Selecting Corn Seed," Ernest B. Babcock, Circular 180; "Potash from Tule, and Fertilizer Value of Certain Marsh Plants," by P. L. Hibbard, Bulletin 288.

THE TWO SIDES

"There are two sides to every argument," said the ready made philosopher. "Yes," replied the gloomy person, "but it makes a difference which side you choose. There are two sides to a piece of fly paper."

The devil has so many people working for him that he can loaf most of the time.

# Farm for Profit

## and Help U. S. Win the War

Authoritative tests have proved that as high as 50 per cent increase in crop production may be expected from proper use of fertilizer. Do you realize what that increase means? Fertilizer is the basis of crop production, and compared to the prices of the crops they help to produce, fertilizers were never so cheap as they are today.

## MORE CROPS

will be raised in America this year than ever before. Make every acre you own or rent, produce to the limit. Fertilize your land—the increase in yield and price of crops will more than pay all the fertilizer expense—it will enable you to farm with profit. Don't spend your time working worn out land. Make It pay—Fertilize with Hauser's Organic Fertilizer.

## HAUSER PACKING COMPANY

9th and Mateo Sts. **PHONES** 10336-Bdwy, 5600 Los Angeles, Cal.



## Tree Protectors

### THAT REALLY PROTECT

FITTED WITH GALVANIZED WIRE TIES WHICH GO ALL THE WAY AROUND THE TREE

10 Inch.....\$ 9.00 per 1000	18 Inch.....\$12.50 per 1000
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## Angelo & Son

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SAN FRANCISCO

DEALERS: Write us for our sales proposition

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## We Are Headquarters for Fruit Bearing Trees

We have an exceptionally fine stock this year — trees are thrifty and well-rooted — grown under ideal conditions. Demand this season promises to be heavy. Get your orders in early.

## Fresno Nursery Co.

Address FRESNO, CAL.  
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# Persimmon Trees

Get Genuine Varieties Selected  
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Wholesale and Retail 250,000 Orange, Lemon and Grapefruit Trees 1, 2 and 3 years old. Florida Sour Seedling Stock—300,000 trees one year old. Trees Planted and Guaranteed on Contract.

Phone Alhambra 731-W

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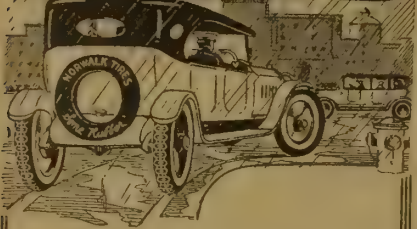
San Gabriel, Cal.

Make the reading of advertisements in the California Cultivator a habit. They will broaden your knowledge of the manufacturing improvements.



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No need to worry about skidding if your car is equipped with Norwalks. They hold even better than ordinary tires equipped with chains. The wonderful Norwalk tread makes this possible. Every Norwalk user to a man will tell you that Norwalks are absolutely the most efficient non-skid casings ever produced. Eliminate the risk of wrecking your car, eliminate the use of chains, obtain thousands of miles of extra service by using Norwalks. Let us demonstrate the many remarkable Norwalk features.

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1211 Van Ness Ave., San Francisco  
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"Coates  
French  
1418"



**Pure French Prune Dries 32 to the Pound**

Grafting Wood for Sale—25 cents per foot; \$15.00 per 100 feet; \$100.00 per 1000 feet, and grafting wood of "1401" and "1403" at half these prices. See catalogue for full description. Order at once, or it may be too late.

**Leonard Coates Nursery  
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"Kero-Oil" Engines

Immediate Shipment—All Styles—2 to 22 H.P.—No Waiting—Big Factory—Big Output—Prices most favorable. Write for my terms and prices—Cash, Payments or No Money Down.—Ed. H. WITTE, Pres.  
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I Save  
You \$15  
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## THORNLESS

### Blackberry

Free from thorns as a grape vine. Fruit of enormous size, delicious flavor, few seeds, very productive, earliest berry to ripen. Our descriptive price list tells you all about it. Send for it.

**Ekstein Nurseries**

Modesto

California

Better service is assured by the advertiser if when writing you mention the California Cultivator.

## A New Persimmon



IN THE illustrations may be seen the Tamopan persimmon. It is the newest introduction to California, brought here by a returned missionary, K. M. Gordon now living in Los Angeles County. Regarding this fruit Mr. Gordon says:

"The writer arrived at Tientsin, North China, in November, 1904, just after the persimmons were well on the market. He has spent all, except two, of the intervening years in that interesting land. The first day in China he bought some persimmons, and liked them very much and has enjoyed them more than any other fruit ever since.

"When he returned to America on furlough in 1911, he succeeded in securing some of the Tamopan (meaning big grist stone because of their large size and flat shape) persimmon trees from a region noted for producing large and fine flavored persimmons of this variety. He was fortunate enough to secure good, healthy trees which were planted in Fresno County. The trees began to bear fruit in 1913.

"We have been asked, how are these persimmons superior to those already on the market? As the Valencia and Washington Navel are the leading commercial oranges of California, as the Eureka is the leading commercial lemon, as the Bartlett is the leading commercial pear, and as other varieties of fruits have leading commercial varieties, so the Tamopan is the leading commercial persimmon of North China. We believe that it is destined to be the leading commercial persimmon of North America.

"The Tamopan persimmon tree is

meaty and of excellent flavor. It is large, measuring from three to four inches in diameter and weighing from six to ten ounces each. The skin is rather thick and tough. This enables fruit dealers in North China to store the fruit in a cool room so as to have it on sale from October until April. The writer and many other Americans



Persimmon Vender in Tientsin  
This Chinese street merchant is selling Tamopan persimmons brought down from Manchuria.

and Europeans residing in North China always had this fruit on the table every day so long as it could be secured at the market."

### PISTACHE EXPERIMENTS

G. P. Rixford, physiologist of the bureau of plant industry, writes: "The article on 'Pistache Experiments' by Claude D. Tribble in your issue of No-



Primitive Plowing

This photograph was taken in a persimmon orchard north of Pekin near Ming tombs.

hardy, adapting itself to extreme hot and cold weather. In North China, its native home, the mercury frequently rises as high as 113 degrees and drops as low as 15 degrees below zero. It is a large tree, having a tendency to grow tall. It is seedless and is propagated by grafting. The writer does not know the life of the tree. He has seen some certainly more than 50 years old. These old trees bear several hundred pounds of fruit each crop.

The fruit is seedless. The flesh is

venember 24 requires some correction. He mentions the Carpellate variety as proving to be a very small variety and worthless. This variety has fruited at the United States Introduction Garden, Chico, and produces large nuts with green kernels, a large proportion of the shells of which are naturally split, an advantage when treated with salt, as almonds are treated, as it allows the brine to enter. The Carpellate, so called, probably because Thomas H. Kearney of the United States department of agriculture, who secured the variety, with others, at Bronte, Sicily, failed to get the local name. The variety is first class in every particular, and David Fairchild, chief of the office of foreign seed and plant introduction, proposes to call it "Bronte," an appropriate name under which it will probably be distributed hereafter.

"The printer probably made Mr. Tribble call the 'Koz,' the 'Kog.' This variety, with the Large Red Aleppo, was presented to the department by an ex-missionary, a resident for 30 years in Syria near Aleppo. The Koz, known in that country as the 'Walnut Pistache,' turned out to be a male when blossoming at Chico and on the grounds of Mr. Tribble."

### APPLE SCALD

There has long been trouble with cold stored apples scalding where left in storage room for a long period. It has now been discovered by experts Brooks and Cooley of the department of agriculture that stocks of apples in closed room generate quantities of carbonic acid gas. The lack of air movement and the depositing of moisture on the fruit are also factors in this scalding. The reduction of the high humidity and the changing of the air in the storage occasionally is said to reduce and even prevent entirely this trouble. The department says:

Well aerated apples remained free from scald, while in all cases poorly aerated ones handled in the same way from the time they left the tree throughout storage, became badly scalded.

Scalded fruit was found to be more mealy and poorer in flavor than unscalded. Scald, in addition to rendering the fruit unsightly and reducing its market value, rendered the apples extremely susceptible to certain storage rots.

Apples were apparently little harmed by several weeks' storage under poorly ventilated conditions if better aeration was provided before the fruit reached a certain critical period in its storage ripening. The maximum length of time that the fruit can re-



## Cann's Seed Potatoes

Certified under State law inspection. Cleanest and best seed potatoes you can buy.

Twenty-one different varieties. Sure to grow — and produce big crops of the choicest potatoes.

Oregon-grown. Ready for December delivery.

POTATO CATALOG FREE —tells you all about potato growing.

**ARTHUR CANN**

Seedsman

197 S. First San Jose, Cal.

## Apples for Home Orchards

No home orchard is complete without the apple, and there are varieties that will give satisfaction even in the hot valleys. Particularly is this true of DELICIOUS for fall and early winter, and LIV- LAND for earliest summer. In quality each stands at the head of its class.

**Loma Rica Nursery**

Pear Specialists

A. L. Wisker, Mgr. Grass Valley, Cal.

If you like a good cup of coffee, rich, full-flavored and fragrant, go to the Best grocer in your district and get Jevne's Coffee. There are three distinctly different blends of Jevne's Coffee. One of these will suit your particular taste.

—remember, Good grocers everywhere sell Jevne's products

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**IRRIGATION**  
SUPPLIES  
PUMPS, ENGINES,  
SPRINKLERS, HOISTS ETC.  
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**Smith-Booth-Usher Co.**  
LOS ANGELES



main in poorly ventilated storage without incipient injury, however, has not yet been determined for many varieties. Final recommendations in regard to the frequency of ventilation, therefore, can not be given as yet, but the investigators state that the fundamental fact that ventilation will prevent the disease has been established, and advise storage men to avoid taking chances of smothering the fruit.

Scald, it was found, increased with an increase in temperature from 41 to 68 degrees Fahrenheit. Higher temperatures were unfavorable to the development of the disease and with certain varieties such as Grimes Golden 32 degrees was more favorable to the development of the disease than 41 degrees Fahrenheit.

Investigations of this disease by the department specialists are still going on, but the facts already obtained indicate the necessity of important changes in storage methods.

#### LOS ANGELES COUNTY FARM BUREAU ORGANIZED

At the mass meeting last week for the formation of a Los Angeles County farm bureau there was a membership reported of about 2240. At the original meeting called by the Los Angeles County council of defense 48 paid-up subscribers were secured. At that time a temporary organization was effected of which Senator Cogswell was the chairman. This temporary organization, with Dr. H. J. Webber of the university aiding, has secured an additional membership of 1891. Japanese committees were appointed to work among the Japanese farmers, and this committee reports a Japanese membership of not far from 300.

The next step will be the organization of local centers in every section of the county. These centers will elect delegates to the central or county bureau, and these delegates will have power to perfect the county organization. Meantime the matter has been presented to the board of supervisors of the county, and without any question the board will recognize the demands of the times and at once appropriate the \$7,000 necessary for the first year's expense of the one county agent and his five helpers.

It is unfortunate that there seems to have developed a line of cleavage between "farmer" and "horticulturist." Membership in local centers was secured with the expectation that the constitution and by laws as given in the state bulletin should be adopted, but at this meeting a new constitution was presented, differing in an important respect from this constitution. A director from each farm bureau center was allowed to stand as in the original, but instead of four directors at large to be elected in the annual meeting, the new constitution provides that two women directors at large be chosen by the directors. As the representation from fruit growing sections will be greatly in excess of the representation from general farming sections, the "farmers" feel that there is opportunity for discrimination.

The minimum number which a county of the size of Los Angeles can have and receive aid from the government by the appointment of one of its officials for this work is about 1600. As this has been exceeded by some six or seven hundred, it is plain to be seen that Los Angeles is answering the call to produce "more and better."

#### COOPERATION IS INSURANCE

Writing in the Sun-Maid Herald Dr. Shahbazain, a raisin grower of Fresno County, says:

"You must expect to work for success," he said, "and work does bring success. You must also use good judgment in handling vineyard problems. The raisin business is best in the hands of the association. We are our own market masters, and by working together we bring success to each other.

"Cutworm, frost, sunburn, drouth and unseasonable rain are natural losses which can be minimized by the careful grower. The greatest loss of all comes after the raisins are in the sweat box. If the price of raisins gets below the cost of production we have hard times, as everyone knows. The association of growers is our insurance that the raisin price does not go below the cost of production."

## Standard Barrel



FROM the bureau of standards, department of commerce, is received a circular with rules and regulations promulgated under the authority of the federal barrel law. In a letter regarding it the bureau says:

"You will note that a standard barrel is provided for, together with three specified subdivisions thereof, namely, the three-quarter, one-half and one-third barrels. These standards are mandatory ones and must be exclusively used for all purposes within the purview of the law. If a barrel of other size containing fruits or vegetables or any other dry commodity is sold or offered or exposed for sale anywhere in the United States, or if any such barrel is shipped in interstate commerce, the provisions of the law are violated, and any person guilty of a willful violation is liable to

the penalties provided for therein. The only dry commodities which may be sold in other sized barrels are cranberries, for which special size barrels are provided by this act; lime, the sale of which is regulated by the provisions of the federal lime barrel law; and such dry commodities as are within the proviso of section 3, namely, those sold exclusively by weight or numerical count. This proviso is a commodity exemption and not an exemption of an individual shipper. If a commodity is sold exclusively by weight or numerical count, then the commodity is not within the purview of the law. If it is not sold exclusively by weight or numerical count, and this is a matter of fact, then the commodity is within the purview of the law and everyone is required to sell it in the same manner, namely, in the barrels and subdivisions standardized.

There are no fruits or vegetables commonly sold or shipped in barrels,

which are exclusively sold by weight or numerical count, and therefore, to all of these the law applies."

The standard barrel must contain 105 quarts or 7056 cubic inches, three-quarters barrel 78 3-4 quarts or 5292 cubic inches; a half barrel 52 1/2 quarts or 3528 cubic inches; one-third barrel 35 quarts or 2352 cubic inches. Of course there are other provisions giving the diameter, distance between heads, circumference of bulge, length of stave and other items. The bureau does not demand absolute exactness, but we note in the diameter, the "tolerance" is only one quarter of an inch, also one-quarter of an inch tolerance as to distance between heads, with a tolerance of one and three-eighths inches in the circumference of bulge and half inch in the length of stave. The entire text is given in the bulletin. We doubt not it may be secured by writing Director S. W. Stratton, Bureau of Standards, Department of Commerce, Washington, D. C.



"The Fancher Creek Nursery Catalogue is the one that I depend upon to guide me"

Every Fruit Grower  
Should Have This  
Book

## Grow Apples For Profit

CALIFORNIA is a great Apple growing state. There are thousands of acres of good apple land, which can be bought reasonably, at elevations from 2000 to 4000 feet which are splendidly suited to the growing of apples.

The local markets can readily consume all of the good, high quality apples that are produced in California. In addition to this, the export trade is rapidly increasing.

#### Apricots

As a commercial proposition, California, particularly, has a monopoly in Apricot culture. We can supply trees budded on Peach, Apricot and Myrobalan roots. The Tilton, Blenheim and Hemskirke have proven wonderfully profitable varieties.

#### Cherries

The enormous profits realized from Cherry orchards, the popularity of the fruit in the East, the very excellent keeping qualities, present a series of reasons for extending the field for the planting of Cherries in all sections of the state suitable to Cherry culture. Our stock of Cherry Trees was never finer.

#### The following varieties of Apples

are good sellers and good keepers:

Stayman's Winesap Winter Banana  
Arkansas Black Black Ben  
Jonathan King David Delicious  
Rome Beauty Mammoth Black Twig

#### Plums

Few plums are grown in the East, so that California Plums find a ready market. The Plum is easily grown in all parts of the state, and will do well in a wider range of soil and climatic conditions than almost any other fruit. Failure of crop is almost unknown.

#### Notice:

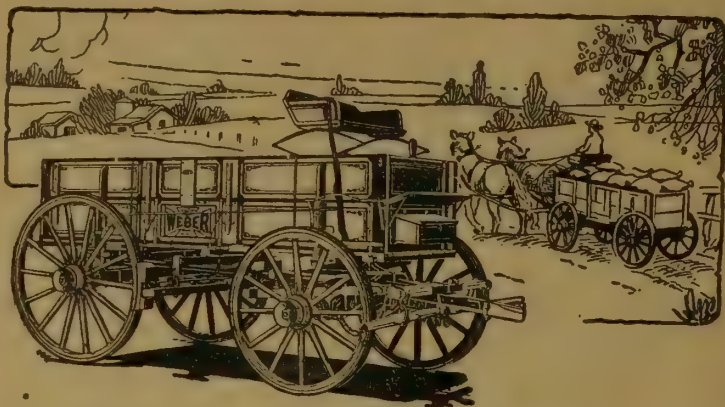
Our stock of deciduous and citrus trees is very large, and, of course, cannot be covered in a single advertisement. Our stock comprises fruit and nut bearing trees, ornamentals, berries, shrubs, vines and roses.

**Important:**—Write for Catalogue and Planters Guide, Today

**Fancher Creek Nurseries**  
206 Holland Building Fresno, California.



## Old But Always New



Since Henry Weber began to build his good wagons more than seventy years ago, the Weber wagons that today go out all over this land under the International Harvester warranty have become a farm necessity.

Yet Weber wagons are not the same now as then. They are always new and better. Improvements are always being added, some of them patented, and therefore exclusive Weber features.

The famous International fifth wheel which distributes the strain on the front bolster and sand board steadies the bolster and prevents bending or breaking of circle iron and king bolt—the new folding end gate which is split proof, stays securely in position, and locks easily—the convenient center link end rods, the tool boxes, the binder rods, are some of these improvements.

Each of these features, designed to give greater strength and longer life, more convenience and better service, makes Weber wagons better now than ever before. Buy your next wagon from a dealer who sells the Weber.

### International Harvester Company of America

(Incorporated)

Crawford, Neb. Denver, Colo. Helena, Mont. Los Angeles, Cal.  
Portland, Ore. San Francisco, Cal. Spokane, Wash. Salt Lake City, Utah

## Ornamental and Fruit Trees

For More than Fifty Years We Have Been Growing and Selling Nursery Stock

Bartlett Pears on Quince root double-worked on Beurre Hardy are more and more in demand—double the number of trees can be planted to an acre.

Let us have your order early for Cherry Trees and Resistant Grape Vines. The demand for all varieties of trees this year promises to be big.

Illustrated Catalogue on Request

California Nursery Co.  
Niles, California.

### Tree Protectors for Winter Use

#### PREVENT Moderate Freezing

Sunburn, rabbits, squirrels, barking by sand storms and cultivation.

Easy to put on and cheaper than gunny sacks.

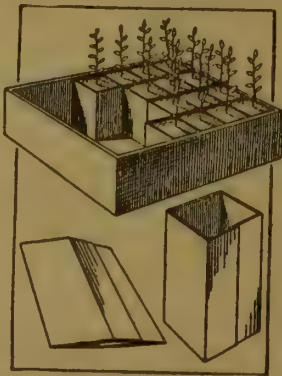
#### COLLAPSIBLE PLANTING POTS

Why not raise your early Tomatoes, cabbage, chili and egg plants for home use or for market. Do you know that you can start

Cucumbers, cantaloupes, melons of all kinds in these pots in flats until they have three and four leaves then plant pot and all, have melons two or three weeks earlier for market. Just the thing for DATE propagating.

Write for samples and prices of both Pots and Protectors. State which you are interested in.

THE EXPAN CO., 935 E. Central Ave., Redlands, Cal.



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—usually the hardest job on the place—make it the easiest and save time and help-hire besides by using

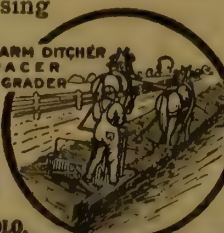
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TERRACER  
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All Steel—Lasts a Lifetime

Simple and practical. Cuts V-shaped ditch up to 4 feet deep; cleans old ditches; grades roads; builds terraces, dykes and levees; works in any soil, wet or dry. 2, 4 and 6-horse sizes; large size fine for tractor. Write for catalog and list of users near you. No charge. No obligation.

OWENSBORO DITCHER & GRADER COMPANY, Box 18, DENVER, COLO.



## High Cost of Gardening

Written for California Cultivator By Ernest Branton

**E**XPENSIVE gardening is not always the best or the most satisfying. It is not so much a question of garden as of gardener. It is his attitude that counts for most. He who grows plants best through personal care and culture gets the greatest benefit whether he grows plants each worth one cent or one dollar. If one gardens for pleasure he is most satisfied, reaps the most profit.

If catalogs reek and teem with high-priced novelties the garden owner may have to exercise a little self denial, but he may be consoled by the thought that others are experimenting with these plants, and if they be found really good they will soon be cheap enough for all. Only those grossly selfish covet those plants his neighbors cannot afford. Someone has to pay exorbitant prices for novelties or they prove slow or late, or even impossible of introduction. Such plants are not necessary to a beautiful garden, often not even desirable.

He who wishes an abundance of flowers at little cost must not seek the new or rare, and luckily there exists no such need. Seed stores and plant depots everywhere are filled with good standard stock of low cost. The chief reason nearly all plants of merit are low in price is because they are so desirable that everybody wants them and therefore all dealers handle them. From this one would assume that the best seeds and plants are of moderate cost, and such is really the case. They are most common because proven most desirable, and generally most easy of culture for a fair degree of success.

A large part of the success found in gardens rests upon the expenditure of intelligent care of soil and crops. But if one has to labor too much the pleasure is lessened and cost increased. It is therefore necessary to grow that class of plants that will prove permanent and productive with least change of position or condition. As we are prattling of flowers rather than of plants, it is highly pertinent to remark at this stage that herbaceous perennials have no superiors in this line. And it is not necessary to buy these for many may be grown from seeds, and the few difficult of home production may be purchased. Even these need be procured in but small quantities, for if properly handled they may by division soon become many. The best home gardens are owned by those most interested in plants and flowers, all other conditions being equally favorable to all considered. Make your garden beautiful and you will learn to love it.

### Heavy Soils

Temperature is not the only factor affecting the hardness of plants, at least not the prevailing atmospheric temperature. During winter many plants that are hardy in a light sandy soil will be found injured by cold in a heavy clay soil even though thermometers register the same temperature in both places. The chief source of trouble seems to be lack of drainage, for soil moisture does easily escape from heavy soils and may even lie about the crown of the plant and there freeze, a condition impossible in a well drained soil. In the worst of these soils, during a long, wet winter tender plants will rot away yet

pass the season unharmed on a light soil in the immediate neighborhood. If humus and sand could be mixed in heavy soils to a good depth, not only the trouble noted would be removed but the soil would thereby be rendered much more fertile by reason of availability.

### Petrified Forests

In several parts of Western America there are some remarkable examples of petrified forests, or trees turned to stone. Most notable are those of Arizona. Of similar material and formation is one at Calistoga, Napa County. In Elysian Park, Los Angeles, workmen have lately found some remarkable sections of preserved trees in stone, so true to nature that the grain of the wood, the finest markings in the bark, knots, broken stubs of branches, etc., all are as plain as in the living timber. As one of the park commissioners of Los Angeles it has been my privilege to handle and examine these sections closely, and I have a fine piece a foot long and six inches in diameter that is as natural in appearance as though taken but today from the trunks of a cypress. As perfectly preserved sections of Cupressus MacNabiana have been found in the now famous asphalt beds, I believe the petrified cypress may be the same species, though none now live closer to Los Angeles than Oregon.

### Natural Beauty.

The natural is beautiful, and in nothing is this fact accentuated more than in gardening. Do we need any proof of this beyond our own observation? Why is the ancient Greek statuary so noted if not for its fidelity to nature? Why does the noted and successful artist occasionally throw down his chisel or his brush in despair and not resume work until the "spirit" moves? It is because for the time he feels powerless to reproduce nature and has to leave the work until his tired nerves have had a rest from the great strain of what? Trying to produce something "original" or "distinctive"? Not at all! For those tasks are easy. The supreme problem is: to reproduce nature.

It is through failure to grasp this point that landscape designers and planters fail. Too many think no reputation can be gained until they shall produce something "strikingly original." As though such a thing were possible. Success is measured by the multitude according to the number of tongues set to wagging over their work, and they fail to distinguish notoriety from fame. The former generally springs from failure, if measured by the proper standard, but fame comes only from success. In nothing is this more true than in landscape design and garden building. To the layman of good taste a painting or a piece of sculpture may be seen to be good or bad at once, but with gardening his judgment is not so good, for it is too large and too far from his grasp, being a higher and finer art than painting or sculpture and one that time alone can finish. For in gardening only the eye of a fellow artist can see the beauty and finish and sufficiency, or the vision, of the yet-to-be. Seldom does the well-planned and well-planted garden appear sufficient to any but the far-sighted artist who designed it.

## Resumption of French Sugar Production

By Commercial Attache C. W. A. Veditz, Paris, in Sugar



**I**N VIEW of the high price and the shortage of sugar in France, which necessitated the issuance of sugar cards some six months ago, considerable interest attaches to the fact that in the French territory recently evacuated by the enemy there are more than 40 sugar manufactories, not including those which, although no longer in territory held by the enemy, are too near the army front to make their operation possible. A recent semiofficial report covers conditions discovered in 37 establishments,

of which two were in the Oise Department, seven in the Aisne; six in the Pas-de-Calais, and 22 in the Somme.

The repair and the resumption of productive operations in these works is, of course, tied up with the question of the possibility of cultivating the soil in the vicinity and of raising a sufficient crop of sugar beets to provide the necessary material for making sugar. It was therefore necessary to consider both the agricultural and the industrial point of view in studying the question of renewed sugar production in these regions.



**Conditions Near Soissons**

In the zone between Soissons and the neighborhood of Nesles-Athies the sugar factories were found to be relatively little damaged, requiring but slight repairs, and therefore readily able to resume operations. The soil, moreover, was generally fit for cultivation, and at several points farm tractors and agricultural machinery furnished by the Ministry of Agriculture were at work. But the residence of the population had suffered great damage; many houses had damaged roofs and walls and others were largely destroyed by the fire. Frequently doors, windows, flooring, and furniture were lacking or completely destroyed.

The agricultural machinery and tools previously in use were, whenever any remained, damaged and out of repair. In the court-yard of the sugar works at Athies (Somme) the investigators found a collection of plows, mowers, thrashers, etc., which had previously served for farming in the immediate neighborhood and which had apparently been brought there by the Germans for repair. As in most of the industrial establishments in the recovered area, the Germans had removed from the sugar works all machinery of copper and bronze. They carried off parts of steam engines, the copper parts of evaporating vats, of cooking reservoirs, electrical machinery, and dynamos. They also removed most of the machine tools in the repair shops—lathes, planing machines, etc. As a rule, moreover, the chimneys had been mined, and in falling had demolished part of the plants.

**Great Devastation in Arras-Peronne Section.**

The region comprising Arras, Bapaume, Albert, Foucaucourt, and Peronne is the most completely devastated. Fields and farms are cut up by trenches, shell explosions and mines, and covered with zig-zag lines of barbed-wire fences and obstructions. On the hillsides are numerous subterranean shelters dug by the enemy. In many of the fields the lower strata of the soil have been brought to the top, and the upper arable layers are often invisible. Throughout large areas the trees that bordered the roads and surrounded the houses have been cut down by the enemy. Others are shattered or burned, leaving only charred, broken trunks. The enemy also exploded mines at the more important road crossings, leaving funnel-like holes 60 to 80 feet in diameter and 20 to 30 feet deep. Most of these holes, however, were promptly filled with bricks and stones.

In this region entire villages have been so completely destroyed that their sites are almost indeterminate—among them Estrees-Damecourt, Saily, Le Sars, and Coucellette. In other villages (Villers-Carbonel, Briesur-Somme) of the houses there remain only parts of the walls, with partly unsupported roofs. Next to nothing is left of Peronne, Chauny, Bapaume, and other towns that have figured in the official communiques. To level and clean up the soil in these regions will alone require considerable labor, and unexploded shells and grenades make this task precarious. Many of the industrial establishments are totally destroyed, and in the others all copper and bronze and all machine tools have been removed by the enemy.

**Conditions Better North of Arras**

In the region west and northwest of Arras the fields have suffered less damage and can be cultivated within a short time. The factories at Bihucourt and Dainville can be restored and repaired. Some of the others have been destroyed by mines. Twelve sugar manufactories are reported as admitting readily of sufficient repairs to make their operation possible within a relatively short time. Even here, however, considerable work must be done before the neighboring farms can again be cultivated.

Pending the reconstruction of homes, temporary shelters will be required for both the farming laborers and the industrial employees. As draft animals will be scarce the use of tractors will be necessary on as large a scale as possible. The work of sorting and classifying such machinery, tools and building material as can still be used will be undertaken promptly and it is believed will facili-

tate the resumption of productive operation, although of course it will be necessary to obtain elsewhere in France, or from abroad, much of the manufacturing equipment indispensable for the normal operation of the sugar manufactories, as of other industrial plants, in these regions.

**CONDITION OF TRUCK CROPS IN CALIFORNIA**

By R. G. Risser, Bureau of Crop Estimates

The condition of truck crops, December 8, is as follows: Artichokes 87 per cent, cabbage 85 per cent, carrots 90 per cent, cauliflower 72 per cent, celery 80 per cent, lettuce 78 per cent, onions 86 per cent, peas 87 per cent, strawberries 90 per cent, tomatoes 92 per cent.

Forty five hundred acres cabbage Los Angeles, Orange and San Diego

Counties affected by dry weather. A few early cars shipping next week. Heavy movement March and April. Fifteen hundred acres carrots Los Angeles County producing well.

Five thousand acres cauliflower Los Angeles County badly in need of rain or heavy fogs. Big acreage offset by unfavorable conditions. Heavy shipments will follow change of weather and continue through winter. Fifty and fifty-five cents per dozen paid to growers.

Five thousand and five hundred acres celery not materially injured by recent frosts. Thirty-five cars rolling per day, 20 per cent of the crop shipped. Big movements expected in December and January. Continuance of wilting winds may temporarily check shipments.

Thirty-six hundred acres lettuce Los Angeles County all stages of growth. Shipments brisk but quality and firm-

ness of heads reduced by weather conditions. Growers paid ninety-five cents to dollar fifteen per crate.

Twenty-five acres lettuce Imperial County, growing rapidly. First car December tenth seven weeks earlier than last year. Early plantings soft and making seed stalks due to warm weather. Eighty per cent stand. Big movement January and February, 250 per cent increase over last year.

Fifteen hundred acres peas Imperial County growing well.

Eight hundred acres tomatoes Imperial County up and protected. Weather favorable.

General prospects for thirty per cent increase in shipments of winter and spring vegetables.

Weather continues warm and clear with drying winds last of week. Car shortage not acute this week. Acreage figures subject to revision.



# And Now He Cultivates With Dynamite

The man who was wise enough to plant his orchard with the aid of Hercules Dynamite is also wise enough to keep it in proper shape by cultivation of the soil around the roots of the trees. He enlists the help of Hercules Dynamite in this work too.

In the Fall of the year he blasts holes between the rows of trees, at the ends of the roots, shaking and loosening the soil, and giving the roots new food and softer earth through which to grow.

## HERCULES DYNAMITE

you see, not only helps to start an orchard right but also helps to keep it right.

The man who plants an orchard with Hercules and then cultivates with Hercules will obtain full crops of splendid, healthy fruit—fruit that can be sold at the highest prices. And because his trees are in good condition he will obtain such crops year after year.

If Hercules Dynamite is not already working for you put it on the job at once. As a first step fill out and mail the coupon below. You will receive by return mail a copy of "Progressive Cultivation," a 64 page book which tells of many ways in which dynamite may be used to advantage in the orchard and on the farm.

 **HERCULES POWDER CO.**   
690 Market St.  
San Francisco California

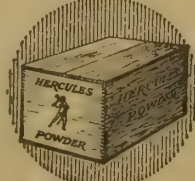


Hercules Powder Co.  
690 Market St., San Francisco, Cal.

Gentlemen:—Please send me a copy of "Progressive Cultivation." I am interested in dynamite for \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_





Established 1877 Forty-first Year

## The California Cultivator

A Journal of Horticulture, Agriculture and Live Stock

Rural Californian, Established 1877  
 Combined with California Cultivator 1914.  
 Livestock and Dairy Journal, Established  
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 Cultivator 1916

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Saturday, Dec. 22, 1917

## OUR ADVERTISERS RELIABLE

We guarantee our subscribers against loss through dishonesty of any advertiser in the Cultivator. We do not attempt, however, to adjust trifling differences between subscribers and honest, responsible advertisers, nor will we pay the debts of honest bankrupts. Notice of complaint must be sent us within 30 days from date of the transaction, and the subscriber must have mentioned the Cultivator when writing the advertiser.

## THIS WEEK'S COVER

Cedrus deodara, one of the most striking—and the most beautiful—tree on earth, especially in the springtime when the silky and silvery tassels are reflecting the light from every angle. A hardy tree, if planted on the mountains and neglected it still clings to life and responds quickly when given better treatment. A native of the Himalayas, it has taken to California conditions with as much satisfaction as the eucalyptus from Australia. The tree does not do well in northern and eastern states.

The avenue shown on the cover is, so far as we know, the longest and finest of any planted to this tree, and the Cultivator camera has been used to bring to our readers a few of these wonderful trees. We are not certain, but we believe these trees were secured from the old-time nurseries of John Rock, now the California Nursery Company.

Increase the beauty of the California landscape by planting some of these cedars. They do not look well on a narrow street, but where conditions are right nothing can be planted which will add more to California's beauty.

## MERRY CHRISTMAS

In this season of peace on earth and good will to men the true pacifist is becoming more and more militant, for he realizes that true and lasting peace comes only when it is a just peace. We believe it is coming and hope it will be soon. There are many hopeful signs to make this Christmas season a bit cheerier. While we are all saving and all answering the many demands, let us keep sweet and be as cheerful as possible.

A Merry Christmas to every reader of the Cultivator.

## RED CROSS

This is Red Cross week. We hope every subscriber of the Cultivator will be a member of this great organization. An effort is being made in the hope that more than 467,000 new members may be secured in this state and in Arizona and Nevada. The minimum number of members desired in the United States is 15,000,000.

## WAR SAVINGS STAMPS

The drive is on for \$2,000,000,000 in gold to aid in the war, this to be supplied in part by the pennies, nickels and dimes in the toy banks of the boys and girls of the United States. There is an excellent probability that the boys and girls will answer as promptly as did their elders in the liberty loan drive.

## INCOME TAX

As noted in another column, internal revenue collectors will visit different communities as soon as possible and aid in giving information as to the making of returns to the revenue office. These returns are more or less complicated, and as thousands of people who have never before paid an income tax will now be called upon to do so, everyone must inform himself, for, bear in mind, ignorance will be no excuse for the making of improper returns. We have found officers of the department anxious to be of service and give information. Meantime those who are too far away to consult the revenue officer should use the Cultivator or any other source of information. Write of your problems.

## SUGAR!

District Attorney Woolwine of Los Angeles and a number of sugar beet growers are in Washington hoping to secure justice to the sugar beet growers and to have them put in a position where they can aid in the production of more sugar, but so far as a getting together of the growers and manufacturers is concerned there is no more prospect of that than at the adjournment of the meeting described in the last Cultivator. There have been several stories started that the entire matter was settled, but the growers are generally refraining from signing up, and some have already planted other crops. The situation is certainly most unfortunate, and while there is yet time for a getting together of the two factions, there should be swift work.

Meantime the waitress at the restaurant says: "One or two lumps please?"

## NEW CHIEF

Alonzo D. Melvin, for many years at the head of the bureau of animal industry of the United States department of agriculture, died at his home in Washington early this month. Dr. Melvin has built up a great organization in this bureau and has advanced the live stock industry. He will be succeeded by Dr. John Robbins Mohler. There are more than 5000 employees engaged in the work of this bureau. These men are located in every state, and in almost every county, of the Union and have been given special powers since this country entered the war. Inspectors of meat and meat products are under the direction of this bureau.

Dr. Mohler, the bureau's new head, is a native of Philadelphia and has been connected with the department

since 1897. He has worked up from a field inspectorship until he became in 1902 assistant chief.

## HIGHER RATE

"Safety First" is the slogan of the farm loan bureau, and with all interest rates increasing the only way to secure safety for investors in bonds of the farm loan banks was to add one-half of one per cent to the interest rate. Loans so far as actually made have borne the five per cent rate. It will now be five and a half, which is still far under the commercial rate paid by farmers. Ultimately when the absolute solvency and security of the farm loan bank has been established in the minds of investors it is to be presumed that the rate will be materially lowered. It is possible it may go as low as four per cent, but probably it will be long before this can be brought about.

## WHY NOT

A subscriber of the Cultivator has suggested that we have in our larger cities, at least in San Francisco and Los Angeles, an agricultural club, this not necessarily of the type of the ordinary farmers club, but one having to do with the larger questions of agriculture and working much along the lines of the present City Club, Municipal League, and other similar organizations which have to do with the uplift of civic life. It might have permanent headquarters or it might have weekly gatherings at luncheon or dinner tables. All cities have a large number of those who are interested in agriculture, many of them directors in agricultural concerns. This is true in California to a far greater extent than in any other section. From toy shop owner to banker, business men usually feel that they are not fully equipped unless they have a place in the country. It is too often true that these places are not as great a factor in food production as they should be, but this is not so widely true as it was formerly.

Why may not these people meet and discuss their problems?

## RAIN

"What rain?" is the question. It is the rain that has not come yet that we are discussing. Everybody is talking about it, and, like the question as to when the war will end, everybody's opinion is perfectly worthless. It is going to rain, and we believe a-plenty, which, as noted above, is an opinion entirely worthless.

Live stock men are seriously concerned. Worse, they are feeding valuable concentrates and high priced hay. At best it will be weeks before pasture or new crop will be of any use. The only suggestion which can be given is that everything be done to take advantage of the downpour when it does come. May it be soon.

Appeal comes for still greater production of food. Last month this one state shipped East over 55,000 tons of food. Other months the demand will be as great. We must trust to the weather and to labor. There's the rub. But councils of defense and committees are at work. With the results of their efforts and labor saving implements we must succeed.

"Diligence is the mother of good luck."

There are 4,200,000 automobiles in service in the United States and approximately 1,750,000 of these are owned by farmers. The auto is no longer "a pleasure car" exclusively.

## This Week's War News

The proposition to establish a free market at Camp Kearney has been abandoned.

Roumanian forces have practically ceased all activity. Future action may be controlled by conditions in Russia.

General Allenby is still holding Jerusalem and has advanced his forces far to the north and east of the city.

The sinking by the Germans of a number of Norwegian vessels in the North Sea has angered more than ever the people of that country.

The governor's mansion at Sacramento was dynamited on Monday night; part of the rear of the house was blown off, but no one injured.

The senate military committee is asking pungent questions as to why department red tape is not cut and more munitions supplied to the American army.

The fake story that the Y. W. C. A. was to promote and support a dance hall in Camp Lewis has been denied and shown to have been promulgated by enemies of the country.

There has been great activity in northern Italy, and while the Huns have made slight gains it has been at fearful cost. French and English artillery and infantry are aiding the Italians.

The first American vessel to go down under U-boat attack was the torpedo boat destroyer, Jacob Jones. Over 50 men were killed by the explosion of the torpedo. Only a small portion of the crew were saved.

A bill has been introduced into congress taxing congressmen's own salaries in excess of \$6000. This under the excess profits tax section of the law. Apparently the congressmen consider themselves still in a separate class.

It is rumored that the aid given by Germany to the Austrians in driving the Italians from Austrian soil has stopped much of Austria's peace talk. On the other hand, German laboring classes are circulating pamphlets "Done with the War. Down with the Kaiser."

New "offer" of peace is anticipated from the kaiser at Christmas time. This probably for home consumption purposes. He will recommend that the whole matter be referred to a commission or to any body until he and the Prussians can have time to recuperate. The Allies will answer "Unconditional surrender."

There has been constant and terrific bombardment in eastern France, and expectation of greater activity on the part of the Teutons. It is now thought that this threatened activity may be to induce the Allies to withdraw forces from Italy. Such attacks as the Teutons have made have been defeated by the barrage of the Allies' artillery. The feeling prevails that when attack is made it will be at its fiercest in the sector held by the American forces.

Russia and the Central Powers have signed their armistice. So far as known its provisions are most humiliating, and probably will mean great losses to the Russians. The German propaganda with the Bolsheviks seems to be supreme. Unless there is another revolution it is probable the armistice will lead to permanent peace and release of 2,000,000 German prisoners. The Germans, however, will retain Russian prisoners and say to them "Wait until the termination of the war."



# Agricultural News Notes of the Pacific Coast

## Northern California

Napa County is installing extensive drainage systems.

There will be quite general planting of chestnuts in Butte County.

Oroville reports its crop of Navel oranges as 25 per cent of normal.

Mendocino County is now assured that it will soon have a farm adviser.

Growers of hops are discussing pooling their interests and holding for 50 cents.

Reports from New York show California grapes in drums bringing long prices.

Auburn, Placer County, is shipping out a greater number of olives than any preceding year.

Apple packers from Medford, Oregon, have been brought to the orange packing houses of Butte County.

The Surprise Valley irrigation district of Modoc County means many thousand acres more of food crop.

All phases of bean culture were discussed at a bean convention held recently at University Farm, Davis.

The Glenn County Fair Association has elected directors for the coming year. Date for next fair not yet set.

Colusa and Butte County warehouses have been filled with rice, and Sutter warehouses are now taking some of the surplus.

Professor Flossfeder recently gave instructions to vine growers of Butte County, touching upon methods of growing, pruning, etc.

Hindus who cleaned up a small fortune on Butte County rice fields last year are now headed for India where they will be "some capitalists."

Butte County says that her "substantially colored" oranges are now even better color than the law demands. The packing season is now in full swing.

The California Tractor and Implement Association voted to hold a great tractor demonstration at the University Farm, Davis, four days preceding the annual 1918 picnic.

The Humboldt County Dairymen's Association met recently in Ferndale, made nominations for officers for the coming year and appointed a committee to prepare for an annual banquet to be held in January.

Sacramento Valley farmers are planning to attend a public hearing conducted by the department of agriculture in San Francisco, December 15. The meeting is to determine as to federal standards for shelled corn and various wheats.

The state railroad commission has authorized the Grangers Business Association, which has a number of warehouse along the Sacramento River, to raise storage rates. Prices now are, for 30 days or less, 50 cents per ton; 60 days or fraction, 75 cents; over 60 days and up to May 31, \$1.00.

The Yolo County farm bureau recently discussed the matter of Chinese labor. It appeared that farmers were practically unanimous in a wish to have Chinese labor introduced but took no definite action until the wish of the federal government should be learned. The first point with the Yolo farmers was patriotism. Incidentally a discussion showed practically unanimous opinion as to the advisability of closing saloons in order to secure more efficient help.

## Central California

Stanislaus County produced in excess of 300,000 sacks of beans.

Rice growers of Kern County are erecting a rice mill at Wasco.

Tulare County reports the major port of its Navel crop already shipped.

Fig growers recently met at Ceres and discussed growing and marketing problems.

The State Automobile Association is conducting a campaign for 5,000 new members.

Cattlemen of Tulare County state that cattle on the hill ranges are suffering for feed.

Sanislaus County employment bureau reports labor a plenty for this period of the year.

A \$30,000 olive packing plant is completed at Lindsay and has begun work on this season's pack.

Dairymen of Riverdale, Fresno County, have formed a cow testing association which began its test December 15.

"125,000 acres by February 1", under the new contract is the slogan of the California Associated Raisin Company and thousands of raisin growers.

Tulare County hog producers have been auctioning cars of fat stock, receiving pay according to dressing test as reported from the packing house.

Two irrigation districts of the Lindsay-Strathmore and Terra Bella districts in Tulare County are completing work which will bring 27,000 acres "under the ditch."

University hogs made an exhibition of themselves for the benefit of San Joaquin Valley swine breeders recently. Five hogs of the same age showed different methods of feeding.

In the discussion of growing beets in San Joaquin County recently a sugar beet grower asserted that as a rule beet growers are losing money at the prices which have prevailed.

At a mass meeting of dairymen in Fresno, resolutions were adopted pledging "ourselves to give hearty and earnest support and cooperation to the Associated Dairymen of California."

The Grange of the Patrons of Husbandry at Aromas, San Benito County, has elected officers for the coming year. This Grange has been especially active in the organization of farm centers.

The committee having charge of Raisin Day observation closed its year with several hundred dollars in the treasury. After New Years a new committee will be appointed to boost 1918 Raisin Day.

The Kern County farm bureau is contemplating the organization of a county mutual fire insurance concern. The success of other county insurance associations is proof of their advantage to the farmer.

The San Joaquin Valley Milk Producers' Association held an all day meeting at Fresno last Saturday. President Henderson of the Associated Dairymen of California and Market Director Weinstock were speakers.

At a recent meeting of bean growers of San Joaquin County to discuss the general situation in regard to beans a committee of three was appointed to take steps toward forming an association of bean growers for that county.

## Southern California

Vegetable growers of the South are appealing for a large dryer or dehydrator.

The Hemet Orange Growers' Association is planning to ship out a carload of Christmas oranges.

The Tournament of Roses at Pasadena New Years day promises to be the biggest and finest ever.

Citrus growers in all sections of Southern California report trees showing wonderfully thrifty growth.

The Covina Citrus Association disbursed over \$540,000 last year. Its average to growers was \$1.11 per box.

The Azusa Citrus Association shipped during the past year 150,000 boxes of oranges and returned about \$240,000.

Great fleets of kelp cutters are working off Southern California shore cutting kelp from which potash is secured.

The farm adviser of San Bernardino County recently gave a pruning demonstration to fruit growers of Chino and Ontario.

Many ice cream manufacturers advertise that they are using honey instead of sugar for the sweetening of their product.

Celery growers of Southern California recently held a meeting at El Monte and decided to organize a co-operative marketing association.

The Riverside Chamber of Commerce is planning for a meeting at Riverside which will discuss the advisability of a farm school in the south.

Citrus growers in all sections of Southern California recently held a meeting at El Monte and decided to organize a cooperative marketing association.

Imperial Valley farmers are elated at news from Washington that Secretary Lane has given to Imperial permission to take waters from Colorado River at Laguna Dam.

The board of trustees of Fullerton has passed an ordinance which makes it a misdemeanor to use milk bottles for canning fruit or any other purpose for which they were not intended.

The state board of horticultural examiners held an examination this week in Orange County for the purpose of qualifying candidates for the position of horticultural commissioner.

At the recent annual meeting of the Covina Orange Growers' Association A. R. Evans was chosen president; L. L. Ratekin, vice-president; H. M. Houser, treasurer; C. E. Crawford, secretary-manager.

Southern Pacific car shops of Los Angeles are now turning out nine freight cars every eight hours. These shops will complete in excess of \$5,847,000 worth of rolling stock within the next few weeks.

The contention between beet producer and sugar manufacturer is yet unsettled and the Los Angeles County district attorney and members of the growers' association are in Washington presenting the matter to Hoover.

A. J. Stalder of Rosamaines Ranch near Riverside is credited with being the first man to employ goats to tramp down his silage. Being short one man he borrowed three goats, which performed their task to the entire satisfaction of Mr. Stalder.

## The Coast and General

Baker, Oregon, is making heavy shipments of sheep.

The Idaho Rabbit and Pet Stock Association has been organized in Boise.

Fruit growers of Minnesota will meet in annual convention in St. Paul, January 1.

A federal specialist in cotton classification is now in Yuma, Arizona, to assist farmers.

The Hawaiians export to the United States, mostly in tropical fruits, \$6,000,000 worth of products.

The Ohio state corn show will be held at Columbus, January 28 to February 1. Corn, small grains and potatoes will be entered.

Americans conducting business enterprises in Mexico have formed the American Chamber of Commerce of Mexico in Mexico City.

The Oregon Dairymen's League has organized. Its aim is to start a dairyman's educational campaign and later take up marketing problems.

Nine thousand dollars worth of horses and mules have been gathered in the vicinity of Ashland, Oregon, for the use of the American army.

Two thousand boxes of apples for the soldiers will be placed on board trains carrying troops East, by fruit growers of Washington County, Idaho.

The United States food administration has made a ruling regarding salmon packers that the taking of unreasonable profits will not be permitted.

The American Automobile Association has resolved to withdraw all racing until the close of the war. The association is also encouraging enlistment of all qualified auto and truck drivers.

The Washington State Dairymen's Association met at Sequim, Clallam County, December 13 and 14. Creamerymen, dairymen and inspectors of the state also met at Sequim at the same time.

The report persists in the daily press that President Wilson will bring before the present session of congress the proposition to take over the running of the railroads of the country for the period of the war.

An absolute embargo on shipments of corn and oats into eastern territory was made effective on Saturday, December 8. The main purpose of the embargo is to give opportunity to move soft corn to the markets as rapidly as possible.

All exemptions granted under the first draft rulings are revoked. Beginning the 15th all men of draft age were placed under new classifications, given on Page 619 of last issue. The privilege of enlisting also has ended for all men who have been drafted.

Evaporators of Payette, Idaho, are running night and day shifts in an endeavor to handle all the apples that are pouring in on them, and it is reported that all barns and warehouses are overflowing with apples waiting shipment when the transportation situation clears.

Owing to early frosts, also to the late planting in some sections, the corn crop for the past season shows a large percentage of soft corn and the food administration is appealing to the farmers to use great care in securing hard and fully ripened seed for next season's planting.



## MORE WORK FROM YOUR HORSES

Heavy spring work takes the surplus flesh from the horse. His collar no longer fits. His neck and shoulders chafe and gall. He can't do his full share of work and you lose money. Prevent these evils by using TAPATCO Pads.

### A NEW AND BETTER HOOK ATTACHMENT

Consisting of wire staple, reinforced with felt washer (note where arrows point). This gives the hook a better hold and prevents pulling off. The weakest point is made strong and life of pad greatly lengthened.

Found Only on Pads Made by Us.  
Look For The Felt Washer.

SOLD BY DEALERS EVERYWHERE

The American Pad & Textile Company  
GREENFIELD, OHIO

Canadian Branch: Chatham, Ontario.



Pat. In U. S. Dec. 1, 1914.  
Pat. In Can. Apr. 6, 1915.

## Our Spring Pigs Are Mighty Good Buys

We have for sale a limited number of specially selected spring pigs, sired by Mayhews Leader 6th, a son of the \$3000 Grand Champion of the World, Grand Leader 2nd.

These pigs are well developed and are excellent value at their prices. All are cholera immune. The guarantee of Anchorage Farm is behind every pig.

Write today for full information to

ANCHORAGE FARM  
ORLAND, CALIFORNIA

Home of STAR LEADER,  
Premier Berkshire Boar of the  
Pacific Coast.



## Santa Anita Rancho

Anoakia Breeding Farm

**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by Imported Stallion the are the choicest thoroughbred mares on Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahruss, world renowned imported desert saddle stallion, and Don Castano, a five-gaited Kentucky saddle stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted State Record Cows. Write for details.

Correspondence Invited

Anita M. Baldwin

W. H. TAYLOR, Superintendent

Santa Anita, Cal.



Lady Beatrice

Senior and Grand Champion cow at the 1917 California State Fair and a big winner in the English show yards. Record 8538 pounds.

## INNISFAIL MILKING SHORTHORNS

Our herd consists of animals from the leading herds of England and the United States. All milk records from females are official. Average records 8000 pounds and over. Young bulls for sale suitable either for dairy or beef herds.

Alexander & Kellogg

Farm on Grisy Island SUISUN, CALIFORNIA

## SERVICE TO THE BUYER TO THE SELLER

Economy of time, effort, and money is only one of the many services our organization is delivering to both sellers and buyers of registered livestock in public auctions. If you want to consign cattle for public sale, or disperse your herd to best advantage, write us about it.

California Breeders' Sales and Pedigree Co.  
C. L. HUGHES, Sales Mgr. SACRAMENTO, CAL.

To keep thoroughly posted subscribers should read every advertisement in the California Cultivator columns.

## Who's Who

With the issue of August 11 the Cultivator started its series of "Who's Who" articles to bring before its readers some of the livestock producers of California who are responsible for the large development of the industry. Where did they come from and how long have they been engaged in California development, also how do they look, so pencil and camera are to be used, and some homely, everyday photographs and notes regarding them will bring us closer together. Bear in mind we say "homely photographs" and not photographs of homely people. The idea we wish to convey is that so far as possible we will secure photographs in everyday surroundings at the homes of the livestock producers.

Written for California Cultivator By F. F. Stonerod

W. J. HIGDON



TULARE County stands fourth in dairy production in the state. She probably stands first in the advancement of the cooperative idea. W. J. Higdon of Tulare is one of the prominent figures in the county who has done as much or more than any other one man to write Tulare in red letters. He was one of the organizers of the Dairymen's Cooperative Association, a concern which has always received a premium of five cents per pound for butterfat over Los Angeles quotations. This association has paid

lare. He went East and selected the herd, but before it was loaded aboard the cars for shipment the quarantine was clamped down, and it was many months before he was able to get his cattle to California. Meanwhile he became interested in Holsteins and while waiting for his Guernseys to arrive he got busy and bought a herd of the White and Blacks. He went right into the herd of a noted Washington breeder and selected a bunch of his best heifers bred to a son of a world's record cow. Then he picked up a few more good ones at the large sales and bought a few at private sale. One of his best investments was the great young son of Prince Gelsche Walker, Prince Riverside Walker.



W. J. Higdon

dividends to the stockholders from its inception, and its success is as much due to its secretary, W. J. Higdon, as it is to the cooperation of the individual members.

Mr. Higdon is a native Californian and although not born in Tulare County he has been living there for many years. He got into the pure bred live stock business on a large scale about three years ago. Always an admirer of the Guernsey he decided to purchase a high class herd and put them on his fine ranch on the edge of Tu-

## Field Notes from the Live Stock Men

A. A. Jenkins, Tulare County, reports the sale of a young bull sired by Gertie's Son's Victor out of an R. of M. dam, to Chris G. Straszacker of Tipton; also a son of Gertie's Lad to C. J. Dillon of Hanford.

F. F. Stonerod, who has visited the stock men in all sections of California during the past months for the Cultivator, has joined the 144th F. A. of the California Grizzlies Battery and is now in Camp Kearney. His battery will presumably soon be "somewhere in France" supporting the rest of the liberty army boys. This will explain why the little Ford runabout with Mr. Stonerod will not be visiting, for sometime to come, amongst our livestock friends.

R. H. Whitten owner of the Whitten Ranch, has just purchased from E. D. Frazier of Missouri, his famous herd boar, Jumbo Bob. This boar was sired by the 1106 pound Long Jumbo, and his dam was a 900 pound sow by the 1100 pound Big Bob. Jumbo Bob weighed 900 pounds as a two-year-old, has 1 1/2 inch bone. He has sired several gilts that have sold for over \$500 each, and at Frazier's last two sales open gilts sired by him brought up to \$250 and five sows bred to him averaged \$252. He is probably the greatest breeding boar that ever left the Corn Belt. He already has several sons and daughters in California, one of his best sons being a sire in the herd of W. Bernstein.

Guy H. Miller, proprietor of Venadera herd, reports the recent purchase of a fine bull calf from Meridale Farms of New York, the home of the great Meridale Jerseys. The calf is sired

by their promising young sire, the Jap's Owl, a son of Spermfild Owl's Eva and the Imported Jap. Spermfild Owl's Eva has a yearly register of merit test of 993 pounds of fat, 1168 pounds of butter 85 per cent fat. This is the second highest test of the breed, and the highest test ever made by a cow of any breed that was milked but twice daily while on test. The dam of the calf is Spermfild Perfection, a daughter of Spermfild Owl 2nd, sire of nine heifers in Register of Merit with first calves. Spermfild Perfection is now on yearly test as a junior three year old, and in the first 111 days had made 200 pounds of butter fat. It will be noted that this bull calf is strong in the blood of the great Spermfild Owl, sire of 48 cows in the Register of Merit, two with tests of over 900 pounds of butterfat and 28 with tests of over 500 pounds of butter fat in a year. Spermfild Owl is considered by many breeders the greatest sire of the Jersey breed. This calf is a big strong youngster of good conformation and I expect him to make a valued sire in Venadera herd.

The extension specialist in dairying of the New Jersey State Agricultural College gives five precautions that should be followed in washing utensils: 1. Rinse all receptacles thoroughly in luke-warm water. 2. Wash them with a good soap or alkali in water as hot as the hand will bear. 3. Rinse in hot water. 4. Sterilize with steam. 5. Expose to the bright sunlight for two or three hours.

Killing cattle ticks is cheaper than feeding them.



# TAGUS

## Aberdeen Angus

Largest herd west of Rockies. Unlimited demand for our bulls in season.

The ideal breed for baby beef, feedlot, or range.

(Beef Dept.)

**Pacific States Corp.**

Tulare, Cal.

H. C. MERRITT, Jr., Manager

## Shorthorn Cattle and Berkshires Hogs

Shorthorn herd headed by Count Glory, 126982, Grand Champion at the California State Fair, 1916. Berkshire herd won Premier Exhibitor's banner at P. P. L. E.

513 Hearst Bldg., San Francisco  
Carruthers Farms, Mayfield, Cal.

## HOLSTEIN-FRIESIAN CATTLE

From my herd of 75 registered Holsteins, can spare ten yearling heifers and heifer calves splendidly bred, closely related to 30 and 40 pound cows.

One bull calf, whose eight tested nearest dams averaged 51 pounds weekly butter record.

One service bull from 29 pound dam. One hundred and two pounds milk one day. His two nearest dams through sire yearly record average 21,000 pounds milk and 812 pounds butter.

Write me for low prices and further information.

Frank Reed Sanders, Mesa, Ariz.

## SELDOM SEE

a big knee like this, but your horse may have a bunch or bruise on his ankle, hock, stifle, knee or throat.

**ABSORBINE**

TRADE MARK REG. U.S. PAT. OFF.  
will clean it off without laying up the horse. No blister, no hair gone. Concentrated—only a few drops required at an application. \$2 per bottle delivered. Describe your case for special instructions and Book 8M free.

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Registered Shorthorns

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Marsh's Big Type Poland-China Hogs

"MODEL MAJOR" winner of three firsts and two Grand Championships is at the head of my herd of prize winning sows. My sows are the easy feeding, big litter kind that have quality. Now booking orders for June delivery of spring pigs. Satisfaction guaranteed or money refunded.

H. I. MARSH, Modesto, Cal.

## Finely Bred Holstein Bulls

from dams of the best blood lines. They are well developed, of splendid individuality and type. Our place is within one mile of the city so they are easy to see.

H. B. Cowan

Modesto, California

## Holstein Breeders Sale

Written for California Cultivator By C. L. Hughes



HE promised Holstein history was made at Sacramento on December 5 when 72 splendid registered Holsteins went under the auctioneer's hammer for a total of \$68,930, an average of \$957 per head. This is the third highest average for any Holstein sale ever held, and is the highest average ever obtained in the world where the top animal sold for less than \$7000.

The sale abounded in features, for when prospective buyers began to drop in at the sale grounds, December 4, they found a string of cattle that more than fulfilled the printed claims made for them, and the real importance of next day's event began to be realized.

Prominent breeders from as far north as Washington were present, and E. Susaeta of Chile was on hand to secure a few good ones for the large South American interests which he represents.

Sale morning dawned crisp and sunny, and by 10 o'clock probably the largest assemblage that ever attended a Holstein sale in California was on hand. Lots had previously been drawn to determine the order in which the animals were to appear in the sale, and first position fell to an outstanding three year old, West View Pearlre Alcartra, consigned by McAlister & Son, Chino. Even her outstanding excellence did not succeed in warming things up on the first animal sold, and she went to H. E. Vogel of Fresno for the very much below her value price of \$500. From here on bidding was lively throughout the entire sale which went on during the day and well up to midnight before the last animal was sold.

Every breeder who consigned to this sale is entitled to the highest praise for permitting the selection of such cattle from his herd, a fact that was emphasized in the advertising of the sale, the truth of which is better realized now that the sale is over, and space will permit the mention of only a few of the outstanding features of the sale.

The big sensation was of course King Korndyke Pontiac 20th, consigned by Santa Anita Rancho and finally secured by W. J. Higdon of Tulare for \$6500, after a bidding duel with R. F. Guerin of Visalia. This bull fits in splendidly with the herd of great females that Mr. Higdon has collected and rounds out a herd that is bound to be heard from one of these days, not overlooking the good influence upon it of the new herdsman, Harry L. Redd, who made a lot of friends during his first appearance at a California Holstein event.

A feature around which a great deal of speculation had centered was the appearance in the sale ring of McAlister's "leading lady," Korndyke Sadie Vale Star-Rena. She proved to be aptly nicknamed for she topped the females of the sale when after spirited bidding she went to Fred W. Kiesel at \$3100. Mr. Kiesel figured prominently in the bidding on top stuff throughout the sale and was fortunate enough to secure seven of the very good ones. Besides that his herd came into prominence when the \$6500 bull was sold, for he is sired by the Kiesel herd sire, King Korndyke Pontiac, and again when a yearling daughter of Prince Gelsche Walker Korndyke, the other Kiesel herd sire, sold for \$1200, one of the prominent individuals and prices of the sale.

One of the bright spots in the sale was the beautiful little heifer calf, Lady Vale Joe Karlay, which Gotshall & Magruder called "the heart of our herd." She found favor all around the sale ring, but John W. Benoit of Modesto was there to take her home, which he did on his bid of \$1400. Benoit was a keen bidder on a number of the tops and succeeded in getting the last bid on three of them.

Toyon Farm Association secured one of the real bargains of the sale when they made the last bid of \$1950 on the great 31 pound cow, Woodcroft Ybma Pietje, from the McAlister consignment, and also secured the great 32 pound cow, Jennie Terzool Hicks 4th and her yearling daughter.

J. D. Patterson bought one of the very promising heifers of the sale when his bid of an even \$1200 took

the yearling heifer, May Walker Gelsche Korndyke.

After the catalog was published Alex Whaley made a record of 32.19 pounds butter in seven days on his great cow, Winifred Hotaling 3d, and she went into good hands when W. J. Higdon took her home at \$1750. Harry Redd, under whose care the 32 pound record was made in her first seven days on test, says she is a 35 pound or better cow, and he will now have an opportunity to develop her.

E. D. Barry, Jr. wanted only a few but required some of the best and showed rare judgment in his selections. He secured a great daughter of King Mead of Riverside and took the only two daughters of Prince Gelsche Walker in the sale, keen bidding taking them up to \$1400 each at which price Barry secured them both.

Geo. A. Cressey, the Modesto banker, continued his good selection of young stock and took home two splendid heifers.

H. E. Cornwell and A. M. Bibens of Modesto figured prominently in the bidding and secured three head of top females.

H. M. Cross of Merced secured one choice heifer and a young bull that was unquestionably one of the big bargains of the sale. This young fellow, King Morco Alcartra 2nd, is sired by King Morco Alcartra and out of Miss Gelsche Walker Korndyke, 23.17 pounds butter in seven days at 28 months of age and rated one of the very best daughters of Prince Gelsche Walker.

H. A. De Wolf of Ripon succeeded in getting the last bid on several choice ones to add to the herd he is establishing.

Post-Card Ranch, Corcoran, found a soft place in the sale and took home a great young bull in King Pontiac Pietertje Ormsby, at a price that looked far below his worth.

A. B. and B. G. Comfort of Guernsey were fortunate in securing the beautiful young bull, King Riverside Mead, whose breeding will do much toward advancing the quality of the Comfort herd.

Otto McClure was on hand and got into action when he and John Benoit joined in placing the last bid of \$1225 on a daughter of the \$50,000 bull, King Segis Pontiac Alcartra, out of a 31 pound dam. This great heifer was in the Bridgford consignment.

Alex Whaley was out after some good ones and secured a few after trying for many. He succeeded in getting a daughter of the \$50,000 bull from the Bridgford consignment for \$1175 and came in for one of the bargains of the sale when he secured the McAlister heifer, Queen Beauty Juliana, for \$725.

Of the various consignments nothing need be said. The result of the sale tells the story of how well the breeders presented their best cattle in a sale in which not a single cull appeared.

Col. Ben A. Rhoades was the auctioneer on the block and never before was his splendid salesmanship better displayed than in this sale. Col. J. E. Mack of Fort Atkinson, Wisconsin, was the auctioneer in the ring and won a host of friends at the ringside by his gentlemanly and effective work. C. L. Hughes acted as pedigree man in the box.

Following is a complete list of animals sold with prices and names of buyers:

Consigned by McAlister & Son

Females: Korndyke Sadie Vale Star-Rena, \$3100, Fred W. Kiesel; Woodcroft Ybma Pietje, \$1950, Toyon Farm Association; Ybma Pietje De Kol Mead, \$825, A. W. Morris & Sons; Abbeker Korndyke Segis, \$1400, A. W. Morris & Sons, K. S. P. Golden Queen, \$800, Bridgford Company; West View Pearlre Alcartra, \$500, H. E. Vogel; Queen Beauty Juliana, \$725, Alex Whaley.

Consigned by Stalder Bros.

Females: Stanislaus Abbeker Maid, \$1375, Fred W. Kiesel; May Walker Gelsche Korndyke, \$1200, J. D. Patterson; Meadow Holland Nudine, \$750, Fred W. Kiesel.

Male: Prince Abbeker Aralla Walker, \$525, R. L. Holmes.

Consigned by Bridgford Company

Females: Miss Korndyke Mercedes, \$1050, McAlister & Son; Lady Mercedes Netherland Walker, \$920, H. E. Cornwell; Rag Apple Alcartra, \$1175, Alex Whaley; Fairmont Echo Alcartra, \$1225, J. W. Benoit, and E. O. McClure; Oakvale Jennie Korndyke, \$525, Fred W. Kiesel;

## CUTTER'S BLACKLEG PILLS

"California's Favorite" for nearly 20 years

For the Prevention of Blackleg in calves and young cattle

Their superiority is due to nearly 20 years of specializing in "Vaccines and Scrums only."

Year in and Year Out they give better satisfaction than any other vaccine made, and the cost of a few cents per dose is cheap insurance against a disease that always takes the fattest and best.

Single Pills may be used for ordinary and range stock.

Double Pills should be used for pure bred and high grade stock.

Use any Injector, but Cutter's simplest and strongest,

Prices:

10 dose pkg. Single pills \$1.00  
50 dose pkg. Single pills 4.00  
10 dose pkg. Double Pills 1.50  
50 dose pkg. Double Pills 6.00  
Cutter's Pill Injector.... 1.50

Insist on Cutter's. If unobtainable, order direct.

Write for new booklet, "The Control of Blackleg." It tells about Anti-Blackleg Serum which cures Blackleg and may be used simultaneously with vaccine to combat outbreaks and safely protect valuable stock.

The Cutter Laboratory, Berkeley, Calif.

The Cutter Laboratory of Illinois, Chicago Eastern Agent



Gertie's Son's Victor No. 123159  
Dam, Victor's Lady Kate, (R.O.M.) of 537 pounds Butter in 303 Days as a four-year-old.

135 Registered Jerseys in my herd, including 18 Register of Merit Cows. Blue Ribbon winners at 1916 Kings, Kern and Tulare County Fairs.

Invest in Jerseys and Start Right

Visitors Welcome Correspondence Solicited

A. A. Jenkins

Tulare CAL



A cow's health is not complete without a perfect udder. Caked Bag, so likely to occur at the calving period, is quickly eliminated by applying Bag Balm, the great healing, penetrating ointment.

Bored, cuts, chaps, bruises, cracks, bunches, cow pox, fever spots and other udder troubles promptly clear up when Bag Balm is used. Sold by druggists and feed dealers in large 60c packages. Booklet, "Dairy Wrinkles," free.

Dairy Association Co., Lyndonville, Vt. **BAG BALM** MADE BY THE ROW-KURE PEOPLE

## HOLSTEIN-FRIESIAN CATTLE

Registered young bulls from best families.

## REGISTERED BERKSHIRE PIGS

Masterpiece, Longfellow, Robin Belle, Rookwood, Duchess and Rival's Champion's Best Strains. Fine individuals of both sexes — we pay registration fee. Careful attention given to mail orders

Whittier State School  
WHITTIER, CALIFORNIA

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## High Protein Tankage for Hogs

Nutritious Animal Foods must contain large percentage of either carbohydrates or proteins or both. Organic food contains both but in widely varying proportions. Carbohydrates give strength and animal heat. Proteins replace wasted tissues and promote growth. A "Balanced Ration" is a feed so proportioned as to contain these substances in proper relative quantities for the requirements of the animals to be fed. As feed for hogs all grains are deficient in growth producing proteins. One pound of WILSON'S HIGH PROTEIN TANKAGE to ten pounds of grain gives a well balanced ration, makes rapid and solid growth and when feeding to sows makes heavier, stronger pigs. Feed separate or mixed, wet or dry.

Feeding Booklet sent on request.

Manufactured by



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Holly Lodge Shingle

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About 18 tons of Goat Manure of the finest quality aboard car or at yard, for \$18.00 per ton for the lot.

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## Thor Motorcycle Distributor

Will furnish you parts for any make of motorcycle. All parts mailed C. O. D. subject to your approval. New or used parts. Write for my bargain list on used motorcycles, parts and sundries.

We are agents for CYGNET REAR CARS for motorcycles. New and used motorcycles on easy terms. Rider agents wanted on Thor motorcycles.

To keep thoroughly posted subscribers should read every advertisement in the California Cultivator columns.

## We Are Going to Sell

Before February First

20 Head Registered Bred Heifers

10 Head Registered Milk Cows

These Animals We Offer for Inspection and at Prices You will Find Very Cheap

Gotshall & Magruder

Miss Pontiac Model De Kol, \$725, McAlister & Son; Miss Pontiac Nudine of Springvale, \$1400, McAlister & Son; It Hesselstje, \$1000, McAlister & Son; Josephine De Kol Mead of Riverside, \$625, Geo. A. Cressey.

Male: King Pontiac Pietje Ormsby, \$650, Post-Card Ranch.

Consigned by Gotshall & Magruder

Females: Lady Sadie Vale Joe Karlay, \$1400, J. W. Benoit; Lady Cristeria Mechthilde, \$450, J. P. Phillips; Blue Bell Karel Walker, \$600, R. L. Holmes.

Consigned by A. W. Morris & Sons

Females: Pauline Woodcrest Maid, E. Susaeta; Lady Riverside Burke, \$1000, McAlister & Son; Miss Luit Aralia Burke, \$1450, H. E. Cornwell and A. M. Bibens; Leda Hengerveld De Kol Korndyke, \$900, W. J. Higdon; Princess Hartog Walker, \$1400, E. D. Barry, Jr.; Miss Filled Korndyke Walker, \$1400, E. D. Barry, Jr.; Leda Korndyke Mead, \$725, E. D. Barry, Jr.; Lady Riverside Mead, \$675, Fred W. Kiesel; Imperial Bonita Mead, \$750, H. E. Vogel; Segis Pontiac Charlotte, H. A. De Wolf; Margaret Aralia Burke, \$650, H. E. Vogel; Changeling Tidy Abberkerk Lois 2nd, \$860, E. Susaeta; Miss Johanna Woodcroft Pietje, \$600, McAlister & Son; Aralia De Kol Pontiac Skylark, \$425, H. A. De Wolf.

Male: King Riverside Mead, \$1000, A. B. and B. G. Comfort.

Consigned by Fred W. Kiesel

Females: Ontario Blond Pietje, \$825, McAlister & Son; Ormsby De Kol Abberkerk, \$500, H. E. Spies; Natoma Verona Korndyke, \$1300, A. W. Morris & Sons.

Consigned by Palo Alto Stock Farm

Females: Jennie Terzool Hicks 4th, \$2250, Toyon Farm Association; Alta Jennie, \$900, Toyon Farm Association; Springdale Ononis Vale, Toyon Farm Association; Mousie De Kol Lady 2nd, \$500, McAlister & Son; Mousie De Kol Imperial, \$500, Bridgford Company; Rosabel Korndyke, \$675, H. A. De Wolf.

Males: Palo Terzool Korndyke, \$525, J. W. Benoit; Finderne Soldene Pontiac Valdessa, \$1150, Geo. A. Smith.

Consigned by R. F. Guerlin

Females: Gleesome Gaiety Girl 2nd, \$620, McAlister & Son; Lady Leola Hengerveld, \$710, Fred W. Kiesel.

Consigned by Alex Whaley

Females: Coloma Johanna Hartog, \$650, McAlister & Son; Coloma Beauty Butter Maid, \$800, W. J. Higdon; Winifred Hotaling 3d, \$1750, W. J. Higdon.

Consigned by W. J. Higdon

Females: Princess Wynima Pontiac, \$800, H. E. Vogel; Model Bonnie Echo, \$725, Alex Whaley.

Male: Prince Gelsche Walker Beets, \$460, D. A. McGriff.

Consigned by Santa Anita Rancho

Females: Anoakia Spofford, \$500, A. W. Morris & Sons; Anoakia Beets Walker, \$600, Bridgford Company; Anoakia Diotime Korndyke, \$1350, H. E. Cornwell and A. M. Bibens; Anoakia Pontiac Segis, \$475, A. W. Morris & Sons; Anoakia Princess Alcartra, \$450, Geo. A. Cressey.

Males: King Korndyke Pontiac 20th, \$6500, W. J. Higdon; King Morco Alcartra 2nd, \$800, H. M. Cross.

Consigned by E. J. Weldon

Females: Flossmor Corrinne De Kol, \$510, Pecho Ranch & Stock Company; Corrinne Walker Prilly, \$400, Geo. P. Robinson; K. S. V. E. Cornucopia, \$330, Pecho Ranch & Stock Company.

Male: King Sadie Vale Star-Rena, \$475, Stockton State Hospital.

Consigned by Toyon Farm Association

Females: Finderne Soldene Korndyke, \$1000, Palo Alto Stock Farm.

Consigned by the J. S. Gibson Company

Female: Inka Tritomia De Kol Burke, H. M. Cross.

Total sale 72 head sold for \$68,930, average \$957.

Holstein Bull Nets \$1500 for the Red Cross

The welfare of the boys at the front was not forgotten by the Holstein breeders during the Guaranty Sale at Sacramento, for at the suggestion of James W. McAlister, Jr. of Chino, the consignors and the California Breeders' Sales and Pedigree Company joined in the purchase of a well bred young bull from Santa Anita Rancho. At the close of the sale, well along to ward midnight, 23 breeders and the sales company donated \$50 each to a fund for the Red Cross and drew lots for the ownership of the bull. The sales company drew the lucky number and immediately offered the bull to the highest bidder with the provision that the entire proceeds would be donated to the chapter of the Red Cross designated by the purchaser. Gion W. Gibson of Williams and I. G. Zumwalt of Colusa bought the bull jointly at their bid of \$300, and this sum added to the \$1200 previously donated made the neat total of \$1500, half of which went to the Williams chapter and half to the Colusa chapter of the Red Cross.

### Holstein Breeders' Banquet

A banquet and meeting of California Holstein-Friesian Association was held at Travelers Hotel, Sacramento, on the evening of December 4. Over 100 breeders and their guests, and the entire class in dairy husbandry at the University Farm, participated. The evening was made memorable by stirring

ring talks by Judge Peter J. Shields, J. M. Henderson, Jr., E. O. McCormick, H. H. Phillips, J. E. Mack, Prof. Edwin C. Voorhies, and Robert E. Jones. The meeting and banquet was voted a huge success, and President Fred W. Kiesel was commended from all sides for his excellent arrangement of the event and his happy manner as the presiding officer.

## Hogs Doing Their Bit

A Great Pork Producing Ranch near the Boundary Between Los Angeles and Ventura Counties. Hampshires and Durocs, all of High Degree, by the Hundreds.



CALIFORNIA has thousands of little picturesque nooks traversed by its magnificent system of highways which are proving wonderfully attractive to tourists and pleasure seekers. Better, many of these little valleys are showing their beauty by producing of the earth's best, giving food to our armies and the armies of our Allies. The wonder is, as we see how rich many of these sections are, that

pens are each supplied with comfortable quarters for the sows, and the comfort is added to by the shade of live oaks which dot the entire place.

The Janss Company, with Mr. Braley as superintendent, began some years ago to fit this ranch for producing some of the finest of pure bred swine. There are also some cattle on the place, but this is purely a commercial or beef proposition, with leaning toward the Whitefaces, or Herefords.



On the Conejo Ranch

Alleyway through the farrowing pens. Farrowing houses shown in background at margins.

they have so long escaped intensive culture.

None of California's highways traverses a more beautiful section than that from Los Angeles through Hollywood, the southern edge of the San Fernando Valley and down the Conejo grade into Ventura and toward Santa Barbara and the north. Many a little

Some months ago, desiring to give more attention to pure bred swine, the East was scoured to secure a thoroughly up-to-date hog man. In the Middle West they found Mr. Manley, whose life has been spent in the breeding of Duroc-Jerseys and Hampshires. These being the favorites with the Janss people, a contract was soon



Coming to Feed

Hundreds of fine Hampshires are being bred on this ranch.

farm and live stock ranch is placed in the little valleys where thousands of live and white oaks give abundant shade for stock.

One of the finest of these is the Conejo Ranch owned by the Janss Investment Company. This is some distance northwest of the old-time "town" of Calabasas. The town, by the way, consists of a school house and a couple of stores where ice cream and gasoline may be secured. The ranch is southeast of the old Conejo grade and is made up of rocky hill-sides and rich valleys. There are somewhere in excess of 5000 acres of land in the ranch.

It lies on both sides of the state road, the ranch house, garage, silos and some of the larger buildings on one side, while the hogs are mostly corralled on other. The maternity

closed, and Mr. Manley was soon in the field, selecting and breeding both Hampshires and Durocs.

That the selection and breeding were well done is shown by some of the winnings at the last state fair. There were winnings of blue ribbons, of championships and of grand championships. True, there are hundreds—yes, more than 1600 hogs on this one ranch to select from. This great number of pure breeds makes possible selection of prize winners. Every individual not of the "bluest" of blood and finest of lines goes to the market.

On the ranch there are: Hampshires, not the old-time bacon type but a bred-for-the-block type, which will make more pounds of pork from less feed; Durocs of some of the country's best strains. We believe the stock from the Conejo will prove to be long



winners at later state and other fairs. The Janss people are capable of pushing this great property to the limit with abundant capital and the work of Superintendent H. H. Braley and Manager J. B. Manley, the former Nebraska swine breeder.

REPORT OF DAIRY COMPETITION

Prof. F. W. Woll, in charge of the state dairy cow competition, reports the following average production of butterfat per cow for the month of November in herds entered in competition for the California Cultivator prizes:

November	No. Cows	Fat
Ambort	24	36.62

Coppini & Coppini	60	27.08
Darnell	2	19.30
Beebe	18	31.87
Iverson	37	44.21
Hansen	102	26.34
Tekelsen	53	29.69
Trigg	35	35.97
Coppini, J. W.	21	36.06

The cows in the herd of L. Hess were all dry during the past month, and those owned by F. J. Kell of Stockton have been sold to D. J. Sullivan of Stockton, from whom it has not been possible as yet to secure a statement of production. As the cow-testing associations to which both these herds belonged are without testers at the present time, it is very likely that they shall have to be considered out of the race.

Farm Butchering Saves Pork Costs

**H**OG Killin' on the farm, in spite of much encouragement given it in recent years, is not yet a general practice. The custom of buying meat from local stores or hucksters is increasing among farmers in spite of the fact that meat, especially pork, can be grown and cured at home for much less than the cost of purchased meat. The cheapest meat a farmer can use is the product of his own farm. This is also true of the suburban or town farmer who fattens one or two hogs on kitchen and truck garden wastes. Many farmers, it is said, will have their own meat supply for the first time this year.

This is the equipment needed for slaughtering: An eight-inch straight sticking knife, a cutting knife, a 14-inch steel, a hog hook, a bell-shaped stick scraper, a gambrel, and a meat saw. More than one of each of these tools may be necessary if many hogs are to be handled and slaughtered to best advantage. A barrel makes a very convenient receptacle in which to scald the animal. It should be placed at an angle of about 45 degrees

at the end of a table or platform of proper height. The table and barrel should be securely fastened to prevent accident to the workmen during the scalding. A small block and tackle will reduce the labor of handling the animal.

Only hogs which are known to be healthy should be butchered. There is always danger that disease may be transmitted to those who eat the meat, while the quality of the meat is always impaired by fever or other derangements. Hogs can be killed for meat any time after eight weeks, but the most profitable age at which to slaughter is eight to 12 months. An animal in medium condition gaining rapidly in weight yields the best quality of pork. Hogs intended for slaughter should remain unfed for at least 24 hours, or better, 30 hours, and all the clean, fresh water they will drink should be provided. Temperature can not be controlled on the farm, but it is possible to kill when the weather is favorable. In the fall it is best to kill in the evening, allowing the carcass to cool over night.

Feeding Corn, Milo and Other Coarse Fodders

**W**E have an inquiry from a San Jose subscriber as to the value of corn fodder, especially for horses, how it should be harvested and fed; also an inquiry from a Los Angeles subscriber as to the feeding of dwarf milo. These questions were referred to Prof. F. W. Woll of the university farm at Davis, and he answers:

"As to comparative dairy feeding value of dwarf milo fodder and alfalfa hay, in the absence of exact experiments no definite figures can be given. It is certain that the former cannot entirely take the place of the latter in feeding dairy cows or other farm animals, for it is low in protein and supplies mainly starchy materials that go to produce heat and fat, while alfalfa hay is a high protein feed. But for maintaining stock at an even weight or, to a limited extent, for fattening cattle and sheep, milo stalks and similar feeds will prove well adapted as partial substitutes for hay, especially in these days of high prices for all feeding stuffs. Judging from the amounts of digestible components in alfalfa hay and milo or kafir stalks, we are doubtless justified in assuming that the latter have approximately one-half the feeding value of alfalfa hay for the purposes stated, and they may be utilized to advantage as part of the roughage ration for all kinds of farm stock, but especially for wintering cattle or sheep or for idle stock.

"The best way of feeding stalks of either the grain sorghums or Indian corn is to run through a feed cutter or shredder. This method will enable one to realize a maximum nutritive value from the feeds as they will then be eaten practically without waste. In the Central and Eastern states corn stalks are now commonly shredded in the fall and fed from the stack or in the barn. If one has a silo and some succulent feeds like green alfalfa available at the time of filling the silo, the dry stalks of either Indian corn or the sorghum varieties can be made into silage and a valuable and palatable feed secured. It is also possible to make at least a fair quality of silage out of these products by adding

considerable water to the cut stalks as they go into the silo or after each load.

"A 1500 pound horse will eat about 20 pounds of hay or more a day. If he is working a part of the feed must be given in concentrated form, either oats, barley, milo, etc. Ordinarily a horse doing moderate work is fed some 12 to 15 pounds of hay per head daily and about 10 to 12 pounds of grain or grain feeds. The latter may be either oats, barley or milo, or mixtures of these grains with wheat bran, cocoanut meal, beet pulp, etc., the bulk of the grain ration being as a rule made up of barley or oats. Milo is often fed heads and all to horses doing light work."

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The American Aberdeen-Angus Association, 817 Exchange Avenue, Chicago, is issuing a beautiful 88 page book, cover in four colors, "Supremacy of Aberdeen-Angus Cattle." It gives reports of many fat stock shows of Great Britain and America and many illustrations, beautiful half tones, of prize winners, also half tones of different cuts of beef from Aberdeen-Angus steers. Besides finished records quoted there are short articles touching upon Aberdeen-Angus in feed lot, for baby beef, their behavior in different sections of America, and items showing the favor in which they are held by the breeders, feeders and packers.

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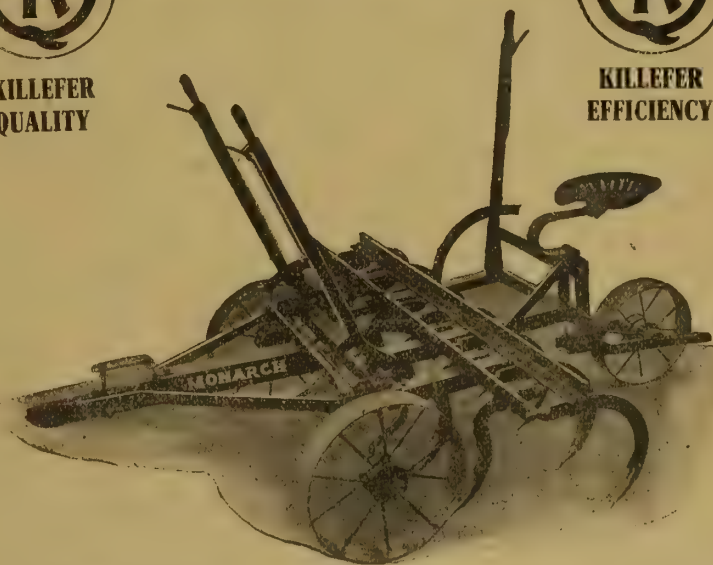


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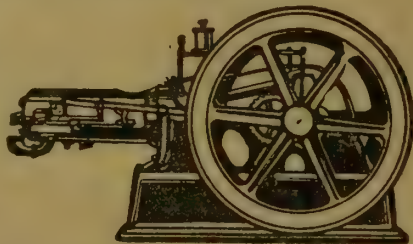
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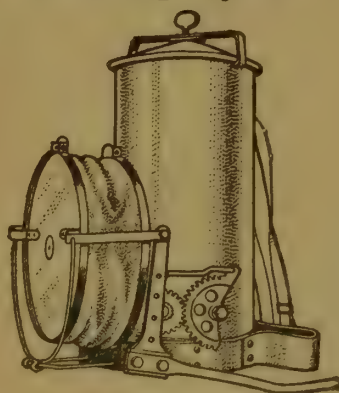
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## State Beekeepers Convention



THE executive board of the California State Beekeepers Association has issued a call for a general meeting of beekeepers of the entire state to assemble in Los Angeles in the state building at Exposition Park, December 28, 10 a. m. The principal business of the meeting will be the organization of a state beekeepers exchange. The department of agriculture, the state university and the state market director have given assurance of support for this movement, and the beekeepers will take advantage of the present conditions to put their organization on a business basis. F. A. Alexander of Ontario is president and M. C. Richter is the secretary. Other

members of the executive committee are James Kerr, Charles F. M. Stone and J. C. McCubbin. Besides the regular discussion of business and organization, President Alexander will touch upon buying and selling collectively; Harris Weinstock will discuss cooperative marketing; county clubs and other work in the past will be the subject of an address by A. W. Horne; rubbing elbows with the farm adviser by some representative from the state farm; what the department will do for the bee keeper will be discussed by E. F. Atwater, representing the bureau of apiculture; better queens and better methods, or how to get more and better honey will be discussed by Professor Willis Lynch.

## Apparatus for Bee Culture

Written for California Cultivator By E. Ralph de Ong



THE modern hive with removable frames is not just a home for a swarm of bees; it is a tool for the beekeeper. And only by its use would the large commercial apiary be possible. Sixty years ago the movable frame was unknown and the box hive or "bee gum" was a solid mass of comb and propolis (vegetable gum) with narrow runs here and there by means of which the bees could crawl through the mass. When honey was desired the hive would be torn open and a chunk of the conglomerate comb and propolis was cut out. If much brood was present the entire piece was probably thrown away, the damaged cells were leaking honey freely, and altogether it was far from being an attractive article in itself or one which could be utilized in the modern system of extracted and comb honey. Some beekeepers were so radical as to burn sulphur in the hives at night and kill every bee in the colony and then rob it at their leisure. These wasteful practices are now at an end in commercial beekeeping for two reasons especially; first, an attractive material must be put out to compete with other beekeepers, and this is possible only with a good grade of extracted honey or a pleasing comb honey package; second, the introduction of brood diseases makes it absolutely necessary to be able to examine the contents of any hive, quickly and without seriously disturbing the bees.

The desired end in both cases is reached by means of the modern hive, the Langstroth type being the standard. This consists of a four sided box, usually dovetailed together, the end boards are rabbeted to serve as a support for eight or ten frames, nine and one-eighth inches high by 17½ long, hanging freely from the top of the hive, without touching the top, sides, or bottom and separated from each other enough so that the bees can move freely between them and also allowing the frames to be removed for examination or for extracting the honey. The usual space allowed for a bee way is one-quarter of an inch. This box, the container for the frames, rests on a bottom board so made that a bee way is left when the hive is resting on this board. A telescope cover or other style of cover fits on to the top of the box, which completes the hive; if more space is needed for brood-rearing or storing of honey, the cover is lifted and another hive body, containing frames or a shallower box with sections for comb honey, is placed on top of the first one and the lid put on the top of the latest addition. In this way a hive may be built up four or five stories deep.

Besides the hive and additions there will be needed a medium sized smoker, hive tool, for loosening frames in the hive preparatory to lifting them out, the bee veil, and for those to whom the sting is especially objectionable, a long glove is very desirable. A professional beekeeper seldom wears gloves, as he has been stung so many times, an immunity has been developed so that the sting is not especially trying.

A complete hive will be needed for each colony of bees to be kept, which should be furnished with self-spacing frames punched for wiring, and a full sheet of "medium brood" wax founda-

tion for each frame, making a little over one pound of foundation for each hive. This foundation is rolled so as to give the imprint for a worker cell on each side of the foundation, if full sheets are not used, the bees will draw it out to the full size of the frame, and make considerable drone comb, which is to be avoided.

Extracted honey production will require two extra hive bodies the same size in every way as the hive body, they should also have full sheets of foundation in each frame and be wired so that the comb can be run through the extractor without breaking it. Besides the hive bodies and frames, a spool of tinned wire will be needed, an imbedding tool, uncapping knife and a two frame extractor. A ten frame hive complete with bottom board, cover, and full foundation will cost about two dollars and a half each in small lots, extra hive bodies with frames but no foundation will cost eighty or ninety cents. The extractor costs about thirteen dollars and the other materials about three dollars.

Comb honey will require two or more shallow supers per hive instead of the extra hive bodies, seven section holders per super, wooden separators or frames according to the style of section used and the section or honey box in which the honey is stored, the most common size for sections is 4¼x4¼x1½ inches wide. The cost per super with all accessories except full foundation, is about sixty cents a piece. Narrow strips of thin super foundation can be used in the sections but full sheets save much time for the bees. Different types of section presses for making up the section material may be gotten for two or three dollars a piece.

All the parts of a hive, together with frames, sections, section holders, and wax foundation are furnished in standard sizes by supply houses found in all our larger cities. It remains for the beekeeper to decide on the type of product which he proposes to furnish to the market to guide him in the selection of his supplies.

Opening the hive and handling the bees requires only the tools previously mentioned, i. e. hive tool and smoker, fill the latter with a roll of old burlap or damp excelsior, light and by a vigorous use of the bellows create a dense cloud of smoke. Blow a little into the entrance of the hive, then lift the lid and smoke them a little more, this disturbance tends to disorganize the guards and start the bees to gorging themselves with honey. As little smoke as possible should be used and the work done through the middle of the day when most of the workers are out, to minimize the disturbance to the hive. The operator should stand at the rear or side of the hive while working to avoid interference with the workers coming and going from the hive. In all manipulations avoid hasty movements and crushing of bees, the latter having a tendency to anger the colony. The work may be somewhat trying on the nerves at first but if persisted in, it will soon be found that it can be carried on with an increasing degree of comfort. It generally comes as a great surprise to find how easy it is to handle bees after the operator has learned to control himself and observe a few simple

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rules. If possible visit an apiary and work with the owner or even devote an entire summer working for a professional beekeeper.

#### ARTIFICIAL COMB

A subscriber recently called our attention to the fact that bees can now make more money by the aid of the great American steel trust. The bees have been impressed during the shortage of labor in the construction of honeycomb. It takes something like a dozen pounds of honey to produce one pound of comb, and with honey hovering between 15 and 20 cents, it is a serious factor, hence substitute made from the cast-off comb which was a great saving. Now, however, comes

another method of "helping the war" and the steel trust is making a comb which even the bees themselves take to. It is pressed from steel which when completed is dipped in beeswax, put in Langstroth frame, and it is all ready for the depositing of the honey. The comb is of a size which prevents excessive breeding of drones, saves immensely on labor of the bees, and in this state should produce tons of honey more than under other circumstances. We believe the comb is not yet out in large quantities, but method of manufacture has been simplified until now it is sure that it will soon be offered on the market at prices which will mean its general use. The inventor is Geo. MacDonald and associates.

## Six Thousand Hens on Three Acres

Written for California Cultivator By Jean A. Koethen

**T**O GO into the chicken business as a lad of 18 with a few hundred hens and no experience to speak of, and in five years to build up a flock of 6000 layers, with a business which runs into many thousands of dollars every year, is going some, but it is the achievement of Irving A. Sherlock of Burbank. At an age when most boys have not yet decided what they want to do in life Mr. Sherlock finds himself owner of this mammoth poultry plant, buying feed by carlots all over the country and managing every detail of the business with a scientific accuracy many men never attain.

Mr. Sherlock's houses and yards occupy less than three acres, the remainder of his acreage being devoted to the raising of green stuff. The long laying houses, of which there are five, are 16 feet wide and divided into sections 20 feet long, each section furnishing roosting space for from 100 to 125 White Leghorn hens. All houses front east and have low gable roofs with overhanging eaves. After some experimenting Mr. Sherlock has succeeded in developing a system of ventilation which is particularly well adapted to a windy section. Instead of the open front, which is commonly used, these houses have a front which can be entirely closed except for about six inches under the eaves. Below this and running the entire length of the house are two ten-inch openings over which are hung boards hinged on the upper side, which may be raised or lowered at will. Each section has also a heavy, sliding door. The advantage of a sliding instead of a hinged door is that in high winds it may be tightly closed or left partly open to give the hens access to the yards, and there is never any slamming. Nests are in tiers of 14 along the front of each section and are easily removed for cleaning. Automatic fountains are used. Instead of the ordinary hopper a large trough some two feet deep is used for the dry mash. "I tried all plans of hoppers," explained Mr. Sherlock, "and found that those which keep the hens from wasting the mash also kept them from eating as freely of it as they should. The open trough has this fault, that the hens getting into it with their feet, as they do, foul the mash, but at least they eat freely and no mash is wasted."

Each section is fitted with a 40-watt Mazda lamp. At this season the light is turned on at 3:30 a. m. This starts the hens to eating at least two hours earlier than they otherwise would, and the result is a considerable increase in egg production. Last fall when the lamps were installed the daily output of eggs was raised from 10 to 30 per cent in three weeks. This fall the benefit has been less apparent, a circumstance for which Mr. Sherlock blames lack of corn in the ration. Leghorns, he believes, need considerable corn in chilly weather, and this fall, because of prevailing high prices, the corn has been almost cut out of the ration. The electric lights are not turned on in the evening as they are on some plants, not because longer working hours might not be a desirable thing, but because the hens have trouble finding their places on the roosts after the lights are out.

As the hens are all layers, not a male bird being allowed on the place, they are kept on a more intensive system than would be possible with breeding stock. Each long house has

its yard the length of the house and about twice as wide, which gives abundant room for exercise but nothing more. From 15,000 to 20,000 baby chicks are bought each spring, and these are raised in four brooder houses, each with a capacity of 2500 chicks. These houses are heated by hot water pipes connected with a large gasoline heater in the lower house.

"The best dry mash," said Mr. Sherlock, "is one which contains a variety of ingredients. Price and availability must determine just what are used." The dry mash which is at present used for these 6000 layers consists of 500 pounds bran, 200 pounds fish meal, 200 pounds bone meal, 100 pounds coconut meal, 100 pounds ground barley, 200 pounds ground milo, 100 pounds ground corn, 25 pounds charcoal, five to ten pounds salt. This is kept before the hens at all times. The whole grain mixture consists of equal parts barley, oats and milo. All whole grain is soaked about 48 hours, or till the tiny white sprouts begin to show. The first 24 hours it is soaked in water, the second 24 hours it slowly drains in a box with some leaks, not too many, in the bottom. In addition to the dry mash and soaked whole grain, a moist mash is fed each morning. This is prepared in the following manner: A sack and a half of cracked barley, half a sack of whole oats and half a sack of bran are soaked all night in a cement vat with all the water they will absorb. Next morning sufficient dry mash is added to make the mixture crumbly, and to this is added extra fish meal in order that the protein content may be as great as possible. This is fed in the large troughs in the yards in which greens are fed later in the day.

On this ranch for the first time I saw hens eating spineless cactus. They like it too, like it so well that Mr. Sherlock makes it the chief item in the green feed rations of his birds. Barley, kale, mangel-wurzels and alfalfa are fed once or twice a week just for variety, but for every day dependability and cheapness of production he pins his faith to cactus. An acre, he says, will produce hundreds of tons of green. It requires no water, but cultivation must be liberal and the supply of fertilizer generous. As the cactus plot is near the runs, the droppings are carted out and spread in a thick layer over the entire plot. There is no danger of making it too deep.

This very successful poultry business has been built up on two fundamental principles: First, that the man who expects to make money from selling eggs must buy feed in large quantities and at the very lowest wholesale prices. Mr. Sherlock has \$10,000 tied up in feed right now. He buys wherever he can get the best prices, east or west, north or south, some of his corn coming even from Manchuria, and buys at harvest time when better bargains can often be secured. By this method of buying he was able last year to keep the average cost of his grain down to \$2.25 per hundred. This year it will run a little higher, probably to about \$2.60.

Substitution of machinery and labor saving equipment for man power is Mr. Sherlock's second fundamental principle. In his feed house, which is a commodious two-story building, he has installed every mechanical device for lightening labor. A six horse power engine runs the mill which grinds the grains for the dry mash, and these

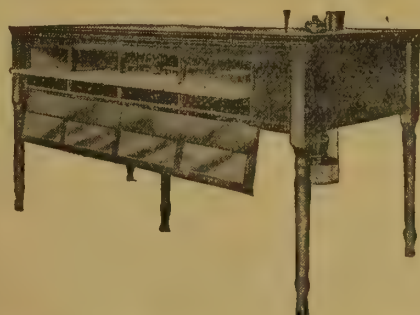
ground grains are mixed in a tumbler-mixer suspended between the two floors, which is also run by the engine. A huge hopper in the middle of the upper floor receives the whole grains which must be mixed for the day's feeding and runs them down through a canvas funnel into sacks on a wagon below which hauls them to the runs. About three-quarters of a ton of feed is consumed daily, and the preparation of it all for consumption is no small part of the day's work. By means of these mechanical contrivances Mr. Sherlock and one hired man are able to do all the ordinary work on the place with an extra man occasionally for extra jobs. Cost of labor, which is such a problem with poultrymen, is thus reduced to a minimum. One man is able to do the ordinary feeding and cleaning, and to carry on practically the whole business, which with less complete equipment would require the entire time of at least four persons. It is by such practical, business like methods as these that the poultry industry has been built from a matter of a few back lot mongrels laying in summer to a billion-dollar aggregation of bred-to-lay all the year round producers.

#### LEG WEAKNESS

Leg weakness in chicks is not yet thoroughly understood. Some of my broods of chicks have been reared this spring under conditions that ought to have given me cases of leg weakness. They have been on board floors, dry brooders, no sand or earth, indoors. Yet I have not had one chick on the floor with leg weakness. This was my same experience last year. Does the sour milk help prevent? I do not know. It is sour milk, for the chicks, right from the start. Sour milk and chick feed the first week or two; then sour milk, chick feed and my egg laying mash for the remainder of the time that heat is given the chicks. Then they go out on range. Some of my brooder flocks have been covered with sand, some with sand and alfalfa chaff, and others with chaff alone from the barn floor. I see no difference in the strength of any of the chicks.—Am. Poultry Advocate.

#### AVOID CROWDING

One of the chief causes of death in young chicks is the result of overcrowding. Chickens cannot sweat as they have no sweat glands in the skin, therefore, the impurities and moisture must be crowded out through the breath. If the chickens are overly crowded and there is not sufficient ventilation in their roosting quarters, the air becomes filled with impurities and laden with moisture, which places an unusual strain on the system of the bird in many ways, especially upon the kidneys, which results in a weakened system. If the chickens come from the coop in the morning, weak and tottering, and with no appetite, this accounts for much of the lack of vitality, which we find in many flocks.



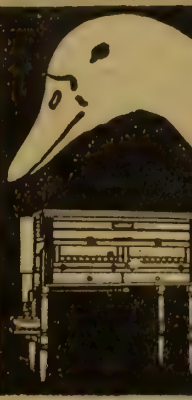
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### TREES

Here is Your Opportunity to Secure A-I citrus trees. We offer several thousand 2-year-old lemons; Eureka and Villa Franca, also Washington navel; also several hundred Valencia on sweet root. We call these good trees and we know whereof we speak. ALBERT JACKSON, Upland, Cal.

For Sale: Citrus Trees—Choice stock, young and thrifty. Selected buds, Valencia and Washington Navel, Eureka and Riole seedless lemon. Marsh seedless grapefruit; also young seedlings. W. W. Burns, 631 Security Bldg., F. 3110. Los Angeles.

Let Us Show You Our Ideal twelve hundred acre orchard from which these perfect yearling citrus trees were propagated. Healthy straight stock, budded one foot high on sour root growing in our own nursery. References: R. R. Morris, East Whittier, Cal.

Pear Trees—Offer several thousand Bartlett, 2 and 3 feet, heavy caliper at 9c each. French prunes. Trees of all kinds. No agents; we sell direct. Write for price list. Carlton Nursery Co., Carlton, Ore.

By Far the Lowest Priced means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator. The cost is only 3 cents per word per issue, with a minimum of 35 cents.

**\*\*PAYNE SEEDLING WALNUTS\*\***  
Orders taken now for spring delivery of PAYNE SEEDLING WALNUT grafting wood. Five cents per foot. R. W. Miller, Linden, San Joaquin Co., Cal.

For Sale—Valencia trees, extra fine yearlings, straight, thrifty, sour root, high buds, not fertilized, fine soil for balling. Will contract for spring planting. S. R. Coate, Anaheim, Cal.

For Sale—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better. \$25.00 f. o. b. Randall Bros. Nursery Co., Whittier, Cal.

Olive Trees—Mission, Manzanillo, Ascolano. Propagated by me from trees of known bearing qualities. Guaranteed. L. T. Schwacofer, Hemet, Cal.

Citrus Trees—All kinds, any quantity. Butler's Morning Side Nursery, Lamanda Park, Cal.

Walnut Trees—Placencia Perfection, selected grafts guaranteed stock. Wm. Pollard, South Pasadena, Cal.

Fig Trees—Thrifty, large Calimyrnas and Capris. Correspondence invited. C. A. Nelson, Exeter, Cal.

Apriots, Olives, English Morello Cherries and Arizona Ash. First class trees. C. E. Moyer, Hemet, Cal.

For Sale—French Mayette and Payne Walnut grafting wood, 5c foot. Bowman-Kuhn Ranch, San Jose, Cal.

Apricot Trees For Sale—A choice lot. Carsten Truelsen, Nurseryman, Hemet, Cal.

Citrus Nurseries, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

For Sale: Pomegranate Trees—W. R. Slaight, Lindsay, Cal.

### SEEDS AND PLANTS

Recleaned Alfalfa Seed of known purity and vitality. Grown under various soil and climatic conditions. Write us of your conditions and let us help you in selecting the proper kind of seed to plant for largest crops. Order direct and save middlemen's profit. Desk B. BOMBERGER SEED CO., Modesto, Cal.

**\*\*ORDER YOUR SEEDS NOW\*\***  
If you are going to need any seed for next season now is the time to render your order. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbuckle, Cal.

**\*\*ALFALFA SEED OUR SPECIALTY\*\***  
Strawberry Plants—500,000 Brandywine, Guar. 1st class true to name at special price to Cal. growers. 50 other varieties. Write for prices and Catalog. BUNTINGS NURSERIES, Box 200, Selbyville, Delaware.

Alfalfa Seed—Common variety, Hairy and Smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. E. F. Sanguinetti, Yuma, Arizona.

Thoroughbred Strawberry Plants, Early Ozarks, Gold Dollars, Wm. Belt, Goodella, Magoons, Improved New Oregon, \$2.50 per thousand. J. Christiansen, R. F. D. 2, Canby, Oregon.

Rhubarb Plants—Crimson Winter Burbanks \$3.00 per hundred; Victoria \$3.00, Wagner's Giant Crimson Winter \$3.00, 50 cents per dozen. Currier Bulb Co., Seabright, Cal.

Strawberry Plants—Gold Dollars, Magoons, Kellogg's Prize, Marshalls, Brandywines, and Mitchell's Everbearing. Primm Vista Gardens, R. R. 4, Arlington Sta., Riverside, Cal.

For Sale—Extra quality Defiance wheat especially released by government for seed only. Carl G. Meiners, Nordhoff (Ojai), Ventura County, Cal.

Rhubarb—\$1127.00 from one acre. A crop every month of the year. Write to me and I will tell you how you can do as well. J. M. Stone, Lodi, Cal., Route 4.

Mr. Alfalfa Grower—If you want good seed at the lowest price, write me for samples and prices. Smooth Peruvian a specialty. O. C. Nordahl, Bard, Cal.

R\*O\*S\*E\* 50 cents per dozen. Write for Catalogue, A and special prices. Kavan Nurseries, San Bernardino, Cal.

New Crop Alfalfa Seed now ready. Not the lowest in price, but high in quality. Leo Turner, Yuma, Arizona.

### HOGS

Registered Durocs—We offer for sale a choice service boar out of a daughter of Modesto King and by a grandson of Burk's Good E Nutt; young sows and boars out of Model Queen of U. F. and by a son of Golden Wonder; young sows and boars out of a granddaughter of John Orion and sired by a son of Model Col.; three young boars out of a great sow of Crimson Wonder breeding and sired by a son of King's Col. Every one cholera immune by the simultaneous method. Registered, crated free of charge. If you cannot visit us write for prices. Derryfield Farm, I. O. O. F. Building, Sacramento, Cal.

The Billiken Brand of Chester Whites—Entirely sold out of bred sows and gilts. Have a few open gilts of March and April farrows; also 6 boars, same age. Have 9 young tested sows to offer for late December shipments. These have each farrowed once and will be bred for a late March or early April farrow. Fall pigs, both sexes, now being weaned and will be ready for delivery during December. Good breeding stock is getting very scarce and rapidly increasing in value. If you want some of this easy feeding, mellow type, get busy with your orders. C. B. Cunningham, Mills, Cal.

Grape-Wild Farm Berkshires—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

20 of the Finest Boars Ever Sold to improve the herds of pork producers. High price of pork assured because of the scarcity of breeding stock. Improve your herd with a good Poland-China boar. I have them from six to eighteen months old, priced from \$40 to \$100. Saving all sows for Kings County Poland-China Breeders' Sale, February 20. Bernstein's Ranch, Hanford, Cal. Hogs shipped on approval.

Superba, World's Grand Champion Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

Berkshires—First prize junior boar; first and second senior boar pigs including junior champion; fifteen spring and fall open gilts sired by Ames Rival 115, champion boar; and two junior yearling bred sows priced cheap for immediate sale. F. D. Hall, Perris, Cal.

We Pay Cash for Hogs of All Sizes, weights and breeds. Any number from one to several thousand considered. What have you? Durbin and Forbes, 722 San Fernando Building, Broadway 4170, Los Angeles.

For Sale—Thoroughbred Poland-China weanlings, and gilts, also 18-months old boar, winner first prize Riverside County Fair. Primm Vista Gardens, R. R. 4, Arlington Sta., Riverside, Cal.

PLW. Duroc-Jerseys, the most consistent winners wherever shown. Peters, Lamson & Walker, Devore, San Bernardino County, Cal.

Big Type Durocs—Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

Most Money in Duroc-Jerseys—Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

Large Yorkshires—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Calistoga, Cal.

Large Type Poland-Chinas are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Cal.

Rancho Rubio Durocs all sold out except some choice fall boar pigs. Write for prices. Elmer Lamb, Ceres, Cal.

Greenwood Farm Durocs—"Size with Quality." H. C. Witherow, Palo Cedro, Shasta County, Cal.

Berkshires—Sired by Star Leader, the \$1,500 boar, ready for service. Kounias Registered Stock Farms, Modesto.

Carruthers' Farm Berkshire Hogs—Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

Poland-Chinas—A few good breeding boars. S. F. Williams, Orland, Cal.

### PATENT ATTORNEYS

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Patents—Copyrights, trade marks and labels registered. Solicitor of American and foreign. James R. Townsend, 712 San Fernando Bldg., Los Angeles. Phones. Home A4619, Sunset Main 347.

### AUTOMOBILE STORAGE BATTERIES

Titian Batteries for Service, get our prices before buying or having an old battery repaired. Call or write. Olive Street Electrical Co., 910 South Olive St., Los Angeles, Cal.

### FOR EXCHANGE

Pretty 6 Room Bungalow, 1 acre, choice bearing fruit trees, chicken houses, etc. Value \$3,000. Sell cheap or part exchange poultry, livestock. Box 615, Inglewood.

### CATTLE

OREGON JERSEYS  
Bull, Fussy Fern's Noble Boy, Junior Champion, his dam also first prize State Fair, R. of M., 488 lbs.; other bulls for sale, whose dams have made up to 1040 lbs. There is butter in these pedigrees. Write for one.  
Keld Stock Farm,  
Second Floor Wilcox Bldg.,  
Portland, Oregon.

Pedigreed Bull Calves, Registered \$50.00, unregistered \$25.00. Service bulls \$75 and up. Good individuals from producers. Cows with yearly records at a profit, tuberculin tested. Write or come and select. Horses. N. H. Locke Co., Lockeford, Cal.

D. O. Lively Stock Farm, Inc., 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield.

Registered Holsteins out of ARO Dams. Grandsons of Pieterje Maid Ormsby, 35.55 pounds average 5.31. Geo. Kounias, Modesto Farms, Modesto, Cal.

Venadera Jerseys, the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

Vermont Stock Farm Pure Bred Herefords. Location Plumas County. Ideal for stamina and vigor. Bulls for sale. Address H. M. Barngrover, San Jose, Cal.

Registered Holstein Bulls from high producing dams for sale at reasonable prices. Also a few choice females. McAllister Sons, Chino, Cal.

Ayrshires (registered)—A few young bulls, heifers and cows in milk at a bargain for quick sale. A. MacMinn, Phoenix, Ariz.

Young Holstein Bulls, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Cal.

Sunshine Farm Jerseys—Bulls from officially tested dams for sale. E. Greenough, Merced.

Registered Holstein Bulls of various ages for sale. Millbrae Dairy, Millbrae, Cal.

Registered Jerseys—both sexes for sale. J. R. Carhart, Fullerton, Calif.

### MACHINERY

WHY BUY NEW? SAVE HALF  
Material guaranteed. It's second-hand after used few times; but not worn out. USED AND NEW GALV. AND RED-WOOD TANKS—100-gal. with covers and faucets, \$5 to \$7; 2000, 3000, 4000, 5000, 6000, 10,000, 25,000-gal. redwood, about half-price; new 1000-gal. galv., \$35; 2000, \$48; used 5000 galv., \$75; 10,000 galv., \$150; 17,000 galv., \$250; 25,000-gal. redwood, \$95; many others guaranteed first-class or money refunded.

PUMPS, CENTRIFUGAL, rotary, single, double-acting deep well pumps. No. 2 Ames, double-acting, fine, \$145; 50 brass cylinders, all sizes; old-style pump head, 18-inch stroke, \$38; small Bulldozer, \$42.50; large size, 20-inch stroke, \$68; 24-inch Stearns pump, \$75; 2, 3, 4, 5 hor. centrifugals. No. 5 vertical centrifugal pump with shaft, frame, complete, \$95; No. 5 two-stage horizontal B. & J., good as new, cost \$400, our price, \$150; 25 others.

Engine snaps: 2½ h., \$39; 8 Foos, \$115; 18 Fairbanks, \$250; 34 Lambert, \$350. How'd this suit you for deep well? No. 2 Ames double acting pump; 150 ft. 5 in. pipe, double rods 4 in., double acting cylinder, 8 h. p. engine, belt, complete, \$475; guaranteed. 20 h. Fairbanks and No. 3 deep well Ames pump, 100 ft. 10-in. casting and rods, 9-in. double acting cylinder, plant complete, \$795. Pumps 50 inches. Many others.

WINDMILLS, SPECIALLY PRICED  
8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel.  
900-GAL. WAGON TANK AND WAGON, \$90; 700-gal. galv. wagon tank, \$48; ship. \$5; lawn mower, \$6; low down tank pump, \$6; diaphragm pump, \$16; broadcast seeder, \$13.50; 60 ft. 10-in. riveted pipe, \$25; 4 gang Stockton plow, \$28; 8-ft. orchard disc, \$37.50; 14-in. sidehill plow, \$14; weeder, \$14; power sickle grinder, \$9; 4 gang 10-in. mouldboard, \$25; 4 gang Flying Dutchman disc plow, \$95; 5 gang, \$90.

### RANCH MACHINERY

Walking plows, \$4 to \$14; old style 2 gang 12-in. mouldboard will do work of \$125 plow, \$28; two mowers, \$28, \$35; 10-ft. rake, \$22; 5-ft. Fresno, \$12 to \$14; two-wheel scrapers, bone grinders; 150 new discs for plows, half price. Harrows, cultivators, ¾-in. cable, 6c; belting; sundries. DEMMITT CO., downtown office, upstairs, 120 N. Main. Yards, 816 Yale, Los Angeles.

Gasoline Engines: the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles.

For Sale, Invincible Tractor and Dunham pulverizer, both practically new. Offered account property taken for Army Camp. P. O. Box 215, Menlo Park.

Disk Plows—Rolled Cold. Auto trailers built to order. J. O. Parrish, 359 South Garey Pomona, Cal. Phone 3132.

For Sale—25 h. p. Western in good shape, also 10 inch Lane-Bowler pump to lift at 70 foot level. C. F. Hale, Owensmouth, Cal.

### AGRICULTURAL IMPLEMENTS

IMPLEMENTS AND RANCH SUPPLIES. Samples and slightly used. Four floors. Large stock. Liberal credit. Save 50 per cent on some. No branches. ARNOTT & COMPANY, INC., The Yellow Front. Established 1892 112-118 S. Los Angeles St. Los Angeles.

### DUCKS

Indian Runner Ducks 280 Egg strain.—Baby ducks \$20, 100. Eggs \$6 per hundred. Rocks and Reds, \$15, Landred. Incubator 300 egg, \$8. Export butcher will hatch and raise every variety of poultry on shares. Satisfaction guaranteed. Box 615, Inglewood, Cal.

### FARM LANDS FOR SALE

Will Take Other Property, preferably clear and under \$5000 on portions my ranch north of this city, in silt, artesian basin of Madera County. It is generally recognized as some of the finest alfalfa, fruit and general farming land in San Joaquin Valley. Convenient to schools, modern town, creameries, cheese factory, state highway. Southern Pacific, etc. Neighbors are high type American farmers, making good livings on moderate sized acreage. I am no agent and will try and work in with your conditions. Arthur Vernon, Fresno, Cal.

Oregon, California Government Lands. Latest Green Booklet Free. Tells "How, Why, Where." Write Joseph Clark, Sacramento.

Free List of Monterey County bargains. Bohannon Realty Co., King City, Cal.

### POULTRY

White Leghorn Baby Chicks—Broilers are now 34 cents per pound. A 1½ pound bird can be raised in 8 or 9 weeks and will sell for 42 cents. 1000 chicks, January and February are worth \$110.00. Heating brooder and feed will cost \$50.00, total cost \$160.00. You can raise 850 of them, sell the whole flock at 42 cents, amounts to \$357.00, leaving \$197.00 profit in nine weeks. Raise some broilers and send beef and pork to our Allies. If we don't lick the Kaiser he will lick us. We are waiting for your order now. Broilers will not be any less this year. Lyon Hatchery, Gardena, Cal.

Order Now, pure bred White Leghorn chicks, 15c each until March 15th, then 12c. Eggs \$1.00 per 15; \$2.00 per 30; \$6.00 per 100. B. plant, best strains foundation stock, thousands of breeders, 20,000 feet under roof, green feed and fresh cut bone fed daily. Remember, the chick or egg cost is small compared to the feed cost, so get the best. Catalogue free. New ton Poultry Farm, Dept. 3, Los Gatos, Cal.

Baby Chicks from my thoroughbred and carefully selected flock of S. C. White Leghorns. Orders booked now for spring delivery at \$12.00 per 100, \$110.00 per 1000. Only eggs from my own and fully matured hens used in my incubators. Correspondence solicited. J. R. Heinrich, Poultry Yards, Arroyo Grande, Cal.

Spring Chicks—We are booking orders now. S. C. White Leghorns only selected and fully matured stock that is bred to lay used in the breeding pens, which assures strong and vigorous chicks. \$12 per 100; \$100 per 1000. H. A. Schlottbauer, Exeter, Cal., Route A. Penn's Quality Barred Plymouth Rocks are correctly bred. Blood lines that produced the WORLD'S FAIR and other noted winners BOTH in Utility and Exhibition classes. Eggs and breeding stock. Catalogue. GOLDEN RULE POULTRY FARM, St. Helena, Cal.

200-290 Egg Leghorns, Wyandottes, Anconas, Reds, Rocks, Minorcas, Orpingtons. Chicks, eggs weekly. Booking orders January, April delivery reduced prices. Cockerels that transmit laying qualities; \$3.00-\$10.00 profit per hen last year. C. Beeson, Pasadena, Cal.

Baby Chicks—We start in January to hatch those sturdy youngsters, like we had last season. We will have lots of them too, but please order early. White, Brown and Buff Leghorns, R. L. Reds, Barred Rocks, and Black Minorcas. Campbell Poultry Ranch, Campbell, Cal.

Day Old Chix—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Cal.

Poultry Wanted—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

For Sale—Rhode Island Whites, 2 dozen pullets in lots or entire lot, also a few cockerels. C. A. Pears, Box 233, Tulare, Cal.

Baby Chicks (White Leghorns) shipped on approval before remitting. No weak ones charged for. Schellville Hatchery, Schellville, Cal.

"Eastman's Bred to Lay" Barred Plymouth Rocks, Choice Cockerels, Fairmead Poultry Farm, Fairmead, Cal.

Official 200 Egg White Leghorns in Washington Contest. Charles Hudson, Escondido, Cal.

Golden, Silver, Amherst and Ringneck pheasants for sale at Rahman's Pheasantry, Santa Ana, Cal.

Special Prices—Silver Campines, Barron White Leghorns. J. D. Brubaker, Hemet, Cal.

Buff Orpington, Buff Leghorns, Bourbon Red Turkeys—Breeding stock. The Ferris Ranch, S. Reservoir, Pomona, Cal.

### MISCELLANEOUS

Famous Hairy Peruvian Alfalfa Seed—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.

Strayed or Stolen—Light bay four year old horse—unbroken—small white star on forehead—a little white on both hind feet. \$50.00 reward. A. Wiegand, Encinitas, Cal.

To Reduce the high cost of living, send for our Wholesale to Consumer Catalogue. Smith's Cash Store, 112 Clay St., San Francisco.

Quality Trees, Seed Potatoes, berry plants, seeds, milk goats. Cash Nurseries, Sebastopol, Cal.

For Sale—12 volume set of Encyclopedia Americana, brand new \$15. M. Martin, Kerman, Cal.

For Sale or Exchange one 31 months old Jack, Peacock, Guinea, Jno. H. Baker, Ontario, Cal.

### LUMBER

Lumber—Sash—Doors—Plumbing—Supplies—Building materials of all kinds. New and second hand. A. R. W. shingles 65 cents per bundle. Send list for estimate. Dan P. (Mission Street) Dolan, 1620-1680 Mission Street, San Francisco, Cal.



LIVE STOCK

Butte City Shorthorns, Shropshires, Berkshires and Ponies. Stock of all ages for sale. Can supply one or a carload. Get our prices and descriptions before buying. Butte City Ranch, Box C, Butte City, Glenn Co., Cal.

Young Bred Milch Goats, Due Fresh in the spring, \$25 each, also few matured Does. Inclose stamp for reply. M. A. Wood, 632 N. 3rd St., San Jose, Cal.

Registered Shires — Blackhawk Stock Ranch. Importers and Breeders. Easton & Ward, Burlingame, Cal.

For Sale—Eleven weanling mules. Chas. Hubbard, Riverdale, Cal.

TURKEYS

Our Geese and Turkeys Win Again — Grand Champion Sweepstake Special, for best pair of birds in show. For size vigor and quick maturity, our stock are best, East or West. Stock and eggs in season, also Collie pups. Correspondence solicited. John G. Mee, St. Helena, Cal.

Giant Bronze Turkeys and Eggs—Choice breeding stock. M. M. Reiman, Planada, Cal.

For Sale—Mammoth Bronze turkeys. The Best in The West. Geo. A. Smith & Son, Corcoran, Cal.

For Sale—Bourbon Red and White Holland Turkeys. E. A. McKinley, Ukiah, Cal., R. D.

WANTED

Wanted, by established California company, ten men with rigs preferred to solicit and collect in Central, Southern and Northern California, prefer resident agents who can work part or all time, good pay and several weeks work to right parties. Address J. H. Yetter, 115½ North Broadway, Los Angeles.

Wanted—Working foreman for mountain apple orchard. Steady work, comfortable location, good pay. State age, experience, references. I. Ford, 915 West Cypress Ave., Redlands, Cal.

Wanted—Position as manager of breeding and beef herd by graduate veterinarian who knows how. Address Park, Care Cultivator.

Wanted—To hear from owner of farm or unimproved land for sale. O. K. Hawley, Baldwin, Wisconsin.

ENGINES

Several New and Slightly Used Engines, ARNOTT & CO., Implements, 112 S. Los Angeles St., Los Angeles.

GEESSE

Mammoth Geese, the kind you want Stock for sale. Chas. McNeely, Alpaugh, Cal.

Legal Queries

Louis B. Stanton, attorney, 243 Wilcox Building, Los Angeles, will answer legal queries in this department.

Immediate mail replies cannot be given except where fee to Mr. Stanton is paid. When replies are wished in Cultivator address query to 115½ N. Broadway, Los Angeles.

Term of Lease

In 1905 A leased a dairy from B for two years with option of renewal for ten years more. At the end of the two years A refused to tie himself up for ten years. B suggested another two years. They arranged it by scratching out the original date "October 1, 1905" and redating the original lease "October 1, 1907," and both parties resigned the old lease. Does this second date hold good? B claims that the lease runs 12 years from 1905; B claims 12 years from 1907 and has made no arrangements to move.—Subscriber.

It is very clear that on October 1, 1907, the minds of the parties fully met on a term of two years thereafter with the option of ten years from 1909. In fact they made a new lease at that time and economically made use of the old paper. The lease runs to October 1, 1919.

Title

A bought lots and paid taxes thereon for many years, then stopped. Her brother subsequently obtained the tax title, after having acted as her agent in paying the taxes. A died, the brother sold the lots to C, who sold to D. D finds an error in the tax title. If all of the heirs of A sign quit-claim deeds will it be sufficient to give a clear title?—Subscriber.

Circumstances might be such that the action of the brother who admittedly was the agent of A in paying the taxes would constitute him a trustee for A and thus in himself gain no equitable title. The quit-claim deeds, if signed by all heirs of A, should be sufficient to give a practical working

title, but there would always be a certain cloud thereon until the statute of limitations had fully run on all possible claims of heirs unknown. The only way the cloud could be cleared is by an action of some sort—either probate of the estate of A and transfer by the administrator, or an action to quit title and judgment thereon against all heirs. The difficulty is that there is no record evidence that all of the heirs have conveyed their rights nor who the heirs of A are. The judgment is the only way that it can be cleared up until the statue of limitation has run against all claims.

Boundary Line

A owns several acres which are fenced with the land of B, either on account of some verbal understanding or done when people were not sure of surveys or so particular about ownership of small parcels as now. Do years of claiming the land give B any right to it? Is there such a thing as possessory title? How shall A proceed to get possession of the land? — Subscriber.

The question is indistinct about the very points which it is necessary to know. A valid agreement between adjoining owners establishing a doubtful or disputed boundary is binding on themselves and those claiming under them, whether it is the true line or not. This is especially true where the adjoining owners enter into respective possession and improve the lands according to the line agreed upon as it would be manifestly inequitable to permit one of the parties to repudiate the agreement. But, on the other hand, if this location of the line was made subject to the subsequent establishment of the true line it is not binding when the true line is found to be different from that established and it is found that they were mistaken in their idea of the true line unless there are other equitable reasons that the locaton should remain undisturbed. The statue of limitations does not necessarily apply because one requirement of that is that a party pay taxes upon the land for five years and if the description on the taxes does not include the land in dispute then he has not paid the taxes on that land. The important thing, as you will see, is the exact facts concerning the establishment of the line; the presumption, of course, is that the party holding the property rightfully holds it. It would be upon A therefore, to show the strength of his claim. This can be done by bringing an action for ejectment against B from the land.

Yamhill County, Oregon, less than two years ago had sixty silos; that year it built 54 and during the past year 115 more. This makes practically 100 per cent increase every year.

Queries

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

Twig Borers.

Am sending twig from a diseased French prune tree. Can you tell me what is wrong with it and the remedy? —Subscriber, Anaheim.

The twig seems to have been infested with the twig borer which has left his burrow in the twig and over the wound a tree gum has formed. The adult form is a beetle which deposits the egg on the twig. When it hatches it tunnels into the wood and bores in different directions. It is not a serious pest and there is no very satisfactory remedy.

EXAMINATION FOR INSPECTORS

The California state civil service commission announces examinations for inspectors for the quarantine division of the state commission of horticulture on January 19. The last day for filing applications will be January 12. Those wishing to make application should write state civil service commission, Forum Building, Sacramento. Examinations will be held in Sacramento, San Francisco and Los Angeles. The salary range is from \$100 to \$125 a month.

Duties include inspection of importations of plant products, inspection of baggage and personal belongings of passengers arriving from Hawaiian ports on domestic vessels, inspection of horticultural material found by the United States customs officers in the baggage of passengers arriving from foreign ports, and search for contraband fruit and vegetables on vessels arriving in California ports.

Candidates must have lived or worked on a farm or orchard, and must have a general knowledge of plants so as to distinguish the commoner varieties by their appearance, a working knowledge of insect pests and plant diseases and their connection with known hosts, and familiarity with the state horticultural laws, quarantine regulations and restrictions, and with the nature of bills of lading, manifests and certificates.

The examination is open to all American citizens residing in California, who have reached their twenty-first but not their fiftieth birthday on the date of their examination and who meet the above requirements.

Six hours will be allowed for the written test, from 9 a. m. to 12 m., and from 1 to 4 p. m. Candidates who fall below 70 per cent in either subject will be considered as having failed in the examination.

SCARING BIRDS

Here is a suggestion from an exchange from New South Wales, Australia to keep birds from fruit tree buds. Suspend above the tree an effigy of a hawk. The editor asserts that in trial there it completely scared the small birds away.

RELATION OF SOILS TO BLASTING

By J. R. Mattern

Many people pay no attention to the kind of soil the stump stands in when they go to remove it with powder. This is a mistake, because different treatment is required in light and heavy soils and in wet and dry soils, to insure the best results, and even to insure success.

The ideal blasting conditions are a water soaked clay, when the temperature is high. Powder will do its maximum under such conditions. As the soil character departs from this and becomes light loam or sand, and becomes drier, the powder is placed more and more at a disadvantage, because it has no firm support back of it. If you consider that the gases act a good deal like a pry to which a solid foundation is necessary, you will comprehend how essential is a solid earth backing for the powder gases when they are to remove the roots of stumps.

In wet clay you can use the smallest charges and place them close to the wood. If the ground is lighter or drier, you must place the charges somewhat deeper in order to hold the gasses to their work instead of passing to the air above right through the earth. Consequently they must be larger. In light ground that is dry several light charges fired at the same time with an electric blasting machine are likely to be much more effective than one heavy charge. If the roots are far underground, in dry ground, the charge should be placed right against them, but when the roots are near the surface under these conditions the charge should have a considerable depth of earth between it and the wood.

It should be remarked that the most economical and easiest stump blasting always can be done when the ground is water soaked. Not only does the powder work more efficiently but the holes are easier to make and the roots come out with less force.

Anyway, there is one feature which most autos in California do not have to consider, and that is the effect of zero weather on the cooling system. Owing to the thinness of the radiator cells bursting by freezing is common in cold weather countries. Of course, it is well known that alcohol will not freeze, and some who are blooded enough have used alcohol instead of water during the winter season. However, with alcohol at \$1.25 a pint, it is presumed the California auto owners will use but little of that in their cooling system. The more common usage of the East is to add calcium chloride to the water used in the cooling system. Two pounds per gallon will lower the freezing point to 18 degrees above zero; three pounds per gallon to 1.5 above zero; four pounds per gallon to seven below zero; and five pounds will prevent freezing at below zero.

Beaverton, Oregon, has a factory for making starch from potatoes. The factory guarantees 50 per cent per hundred weight with additional percentage of wholesale price of the starch.

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- 8624—Ladies' Waist. Cut in sizes 34, 36, 38, 40 and 42 inches bust measure. The front of the waist is all in one piece, and the neck is cut in U-shape.
- 8143—Ladies' Shirtwaist. Cut in sizes 36, 38, 40 and 42 inches bust measure. The back is cut to extend over to the front giving the effect of a shoulder yoke.
- 8607—Ladies' Russian Blouse Dress. Cut in sizes 34, 36, 38, 40, 42 and 44 inches bust measure. The dress has a very military effect if it is made with a high collar and trimmed with braid.
- 8595—Ladies' House Dress. Cut in sizes 36, 38, 40, 42, 44 and 46 inches bust measure. The waist is in plain shirtwaist style, and the skirt is three-gored.
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- 8404—Ladies' Two Gored Skirt. Cut in sizes 24, 26, 28, 30 and 32 inches waist measure. This is a two piece model gathered all around the slightly raised waistline.

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## Household Department

### A Christmas Acrostic

Christmas hath a darkness  
Brighter than the blazing noon;  
Christmas hath a chilliness  
Warmer than the heart of June;  
Christmas hath a beauty  
Lovelier than the world can show.  
—Christina Rossetti.

Heap on more wood! the wind is chill,  
But let it whistle as it will,  
We'll keep our Christmas merry still.  
—Walter Scott.

Ring out, ye crystal spheres!  
Once bless our human ears,  
If ye have power to touch our senses so.  
And let your silver chime move in melodious time,  
And let the bass of heaven's deep organ blow,  
And with your ninefold harmony make up full consort  
To the angelic symphony.  
—John Milton.

It is the Christmas time,  
And up and down 'twixt heaven and earth  
In glorious grief and solemn mirth  
The shining angels climb.  
—D. M. Dinah Craik.

Shepherds at the grange,  
Where the Babe was born,  
Sang with many a change  
Christmas carols until morn.  
—Henry W. Longfellow.

The star which they saw in the east  
Went before them till it came and  
Stood over where the young Child was.  
—Matthew.

Merry Christmas, hear them say  
As the east is growing lighter.  
May the joy of Christmas day  
Make your whole year gladder, brighter.  
—Margaret Deland.

Again at Christmas did we weave  
The holly round the Christmas hearth.  
—Alfred Tennyson.  
Sing the song of great joy that the angels began,  
Sing of glory to God and of good will to man.  
—John G. Whittier.

### A CHRISTMAS IN AFRICA

Written for California Cultivator  
By John Bensley Thornhill F. R. G. S.  
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**D**O YOU ever look back at the different Christmases you have spent? I do. I have spent two at sea, five in civilization away from my own country, and nine right in the wilds. The most unique of all those I ever spent away from home was at Nemwala, the headquarters of the district commissioner of the Mashukulumbwe country in Northwestern Rhodesia. Although I am writing of 12 years ago, you will find little about the Mashukulumbwe in the geography books, so to start my story I will tell you a little about them. They are of the most turbulent of the black races in the British territory north of the Zambesi, and are great cattle owners, splendid fishermen and mighty hunters.

In America it is "Go West." In South Africa it is "Go North" and for more years than I like to mention I have been going north. Down South in Africa we knew the Mashukulumbwe, many of whom worked in our mines, under the generic term of "Zambesi boys." We also knew of their weakness for killing people. There is some excuse for this amiable trait. No Mashukulumbwe maiden will look at a lover 'till she knows he has killed a man. Almost every hut in their well built kraals has one or more Kaffir pots on top of it, each pot indicating an enemy out of the way.

My work, which was keeping up with the South African advance and doing the general pioneer work that necessarily precedes the building of each stage of the "Cape-to-Cairo" railway, led me at the time about which I write through the Mashukulumbwe country. An established government in Northern Rhodesia had been formed two years previously, and intertribal wars, slave raiding and slave trading were ceasing and the country was settling down to the peaceful prosperity that always follows in the wake of the Union Jack. After a hundred mile march, the first stage of a 600 mile journey from the railroad, I arrived at Nemwala six days before Christmas, 1905.

Andrew Dale, a former native commissioner of the district down South had been given the not exactly enviable job of ruling the Mashukulumbwe. On his arrival, Dale chose Nemwala for his headquarters. It is one of the finest sites I have ever

seen. Standing on a little knoll of open ground about 50 or 60 feet above flood plain of the Kafue, the Zambesi's largest tributary, it gives a splendid view east, north and south over the rich and open marshes that for a hundred miles or more border that great river. It is about five miles from the Kafue, and a natural canal running northwest and southeast connects the lagoon below the camp with the Kafue. To the west is the interminable open forest of South Central Africa. The buildings, which included three European residences, a court house, postoffice, jail, and quarters for the native messengers and the very small detachment of armed native police, were placed round a great square of about four acres of white sand. They were constructed of poles mudded over with clay and had high pitched, thatched roofs. The soil all round was very porous and ideal for a sub-tropical government post. The bridge of the Cape-to-Cairo railway across the Kafue has been constructed since my visit. It has 13 spans of 100 feet each and is 40 miles south of Nemwala.

Less than a year before my visit, about the time of Dale's arrival, the government had been compelled to send troops up to catch and hang a few Mashukulumbwe for murdering foreign natives traveling through their country. This was a very forcible way of changing the habits of the Mashukulumbwe love lorn swains, who, as I have said, had no hopes of winning a bride without a pot to adorn the top of her future residence.

What with hippos—as we call the hippopotamus in Africa—and Mashukulumbwe, Dale had passed through some thrilling times. On one of his journeys through the Kafue flats—you will hear more about the Kafue flats for the Duke of Westminster and other powerful Englishmen now have large cotton plantations there—the Mashukulumbwe had turned on him. Dale had the good fortune to beat his retreat into the rushes that fringe the banks of the river. The Mashukulumbwe feared to follow him, for Dale was a pretty sure shot with the rifle. For two nights and three days, often up to their waists in water, and forcing their way through rushes half as tall again as themselves, Dale and his armed messenger gradually worked their way home with the Mashukulumbwe keeping on the grass of the flats outside and waiting on their chance to kill him when he broke out. Dale ruled them like a father, and at the time of my arrival not only did he speak their language (a difficult one) fluently, but also he had completely won their confidence. He did all he could to prevent them impoverishing themselves, by discouraging them from selling their cattle for the paltry sums in cash and the tawdry trade goods the enterprising white trader offered. At the time of my arrival the Mashukulumbwe were trooping in in their hundreds and paying hut tax without any demur, as if it were a recognized institution and not the first time it had been imposed.

To celebrate the successful collection of the hut tax Dale boldly invited practically the whole of the Mashukulumbwe nation to a real feast, sports and beer drink. Counting women, he must have had over 2000 adult natives in his camp. I thought this experiment rather a risky one, considering the reputation of the Mashukulumbwe, but I was glad to have the chance of some entertainment for Christmas, and I jumped at Dale's invitation to spend it with him, especially as for other reasons voluntary carriers were rather hard to get, and I most strongly object to impressed labor.

I put in six days before Christmas very comfortably. Both morning and afternoon I went out on the flats and shot puku, the small marshbuck which run in their hundreds on both sides of the Kafue. I also shot spurwinged geese, duck, teal, waders of all descriptions, and once I got a solitary snipe, the first I had ever shot in Africa. As Christmas drew near visitors began arriving. The district commissioner from adjoining government post and his clerk, an ex-artillery officer, trekked in from the northwest. The manager of a very important min-

ing company, who came of a well known South African missionary family, a very pleasant Irishman who was in charge of the ferry across the Kafue, and a Jew trader of the neighborhood brought up our numbers to eight.

The sports on Christmas day opened with a 10 furlong foot race. The 400 starters, a yelling, shrieking crowd of Mashukulumbwe, all bunched up together and led by four Europeans on horseback headed straight for the winning post at which I was standing as judge. The winner was one of the government messengers, and I believe if he could have been gotten to Europe he could have done wonders. For he had about half a mile of wire wound round each leg, and in the middle of the race the wire round his right leg became undone, bringing him down an awful cropper. Gathering up the loose wire in his hand, and with a lot still round his leg, he overtook the rest of the competitors and came in an easy first. Another of the competitions which went very well was throwing spears at pumpkins stuck on poles 40 yards away. After watching it I felt I should not like to fall foul of the Mashukulumbwe, for not only did they throw very straight and very hard but nearly all the spears were so sharp that one could easily shave with them. We had a canoe race on the lagoon in native dugouts (a very exciting event), a sack race, a three-legged race, a race for the little boys which was run off in several heats, and finally after the prize giving, a scramble for the women. Dale's clerk had a pile of fancy Kaffir clothes, cheap jewelry, beads and gewgaws such a women love, and he threw them up into the air right and left. The shrill shrieks of excitement and the wild scimmages of the laughing women were a really good windup to a successful and happy day. The feast came at night. Dale had caused gallons and gallons of Kaffir beer to be brewed. Towards five o'clock liberal supplies of meal and salt were handed to the women, who started cooking for the men. The men were divided into eleven companies, and to each company was given a fat bullock. I wanted Dale to run the bullocks out and let the Mashukulumbwe kill them with their spears, but he would not do so, for he considered the Mashukulumbwe too excited already, so he shot the bullocks one by one with his own heavy rifle.

We adjourned for dinner, and Dale gave us a repast composed of fish, buck and birds, supplemented by plum pudding, champagne and Port, and we wound up with Christmas

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Total .....\$1.30

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crackers. After dinner we had our chairs out on the square, and a huge log fire was lighted in front of us. The big chiefs, with their leopard skin coverings and bedecked with ornaments of savage splendor, sat by our sides, and our servants stood behind us. It was a clear night with a full moon. The young bloods of the Mashukulumbwe nation, of whom I counted 376 fully armed, gave us a splendid war dance, a vivid picture of fighting their foes, killing them and triumphing. Then the girls came out and danced and sang and clapped. The boys and girls together danced and swayed and clapped to the sound of native music and the beating of the war drums. When the white men turned in at four o'clock in the morning the Mashukulumbwe were still at it, and it will always remain a red letter day in their history. It was certainly the happiest Christmas I passed in Africa.

The next day I went down to the lagoon with Dale to try and get a hippo. We waited all the afternoon in the rushes without success; each time the hippo rose he never offered either of us a shot into his nostril, which is the only fatal shot when hippos are in deep water. I think Dale loved everything but hippo, and any hippo within traveling distance of Nemwala was in for a bad time of it. Dale told me that at one time an enraged hippo attacked him in a native canoe, crunched the side of it and forced him to take a 200-yard swim to the shore, and worst of all, to leave his two most valued rifles at the bottom of the Kafue in 50 feet of water.

Two days after Christmas my carriers arrived and I said goodbye to my hospitable host and resumed my journey northward.

#### WAYS OF COOKING BEANS



RECIPES for cooking beans in various ways, promised for last week's paper, were crowded out by special Christmas material. They are:

##### Baked Frijoles

This recipe is used in the kitchens of the better class households in Guadalajara, Mexico.

Soak about one quart of frijoles over night. Boil several hours slowly (where water is hard put in a good pinch of soda). Put two tablespoons butter (or substitute) in frying pan, fry 1½ tablespoons chopped onion. Add the beans and one teacup tomatoes, one tablespoon sugar, three or four red peppers (or ground chili to taste). Salt liberally. Stew together for an hour or so. Before serving pour into dish, cover with grated cheese (or grated bread crumbs, or both) and bake for a few minutes.—Mrs. G. O. Wilkinson, Blythe.

##### Use the Fireless Cooker

I generally bake beans in the fireless cooker. Soak the beans over night. In the morning put over the fire and cook slowly until the skins crack. Drain off the water, add salt, pepper, one or two tablespoons of molasses and a little stewed or canned tomatoes if liked. Pour over enough boiling water to come to the top of the beans. Pork is so high priced now I often use a substitute. A small piece of brisket placed in the middle of the bean kettle or pot, or any scraps of fat meat, I save and use in the bean pot. Use two stones in the cooker.

For stewed beans I soak and prepare as before except after parboiling I add a small piece of fat meat or a soup bone, cut fine a couple of onions, add salt and pepper and water, bring to boil and place in cooker with one stone. They can be cooked on the stove either.

Dried lima beans are excellent soaked over night and boiled in salted water with a pinch of soda and a little salt. Drain off water and make a gravy with milk, just a little thickening and season to taste.

Any dried beans, no matter how cooked, are fine put through a sieve, thinned with milk or water or soup stock and served as soup.—Mrs. May Buerkle, Whittier.

##### Baked Pink Beans

Boil one quart beans in plenty of water for an hour, stir in teaspoon soda, and drain off water. Then add fresh boiling water and cook until done, but whole. Fry medium sized onion, cut

in small pieces, to light brown with three slices bacon. Add this with two cups raw or cooked tomatoes, one tablespoon chili powder and salt to taste and bake three-quarters of an hour.

White beans are nice parboiled the same as pink beans. When cooked take out enough for one meal and season with cream or milk, a little shortening, salt, celery salt and paprika to taste. Add to remainder of beans one-half cup brown sugar or molasses, one teaspoon mustard, salt and pepper to taste and bake slowly an hour or more.—Mrs. T. E. Wilcox, Poway.

##### Boston Baked Beans or Pink Mexican Beans

Early Friday morning put two cups of beans to soak. While washing the breakfast dishes parboil with one teaspoon soda for ten minutes, drain, cover with cold water, drain again, cover with cold water and bring to a boil. Boil slowly, over the simmer burner or on the back of the stove, then if the pink bean is used, drain and rinse again, recover with water and bring to a boil again. This is to remove the strong taste. Then again bring to boil, transfer to the fireless cooker if you have one. If not keep on the back of the stove or over the simmer burner, until you are ready to prepare the supper Friday evening. Then cut one-quarter pound of pork into small pieces and stir in with the beans, mix two tablespoons of molasses, one-half teaspoon of mustard, and one teaspoon of salt, together with one cup hot water. Put this mixture together with three small onions, cut fine, with the beans and return to the fireless, using two radiators, and leave over night. Saturday morning bring the beans to a boil, adding more water if needed, and reheat the radiators and replace until noon. Stir the beans and repeat. The beans will be good for supper Saturday evening, but if instead the radiators and beans are reheated and left until after breakfast Sunday morning, and then the beans placed in a slow oven until noon the beans will be delicious. The longer beans are cooked the more delicious they become and also the more digestible.

If you have not a fireless cooker, leave the beans in the coal range oven over night, or if your gas oven has a lighter burner cook the beans with it only lighted, or put in a small portable oven placed over the simmer burner. The beans must cook slowly for 24 hours or more, adding water from time to time as necessary. Cooked in the gas or coal range ovens the dish should be kept covered until the last hour when it may be uncovered to allow the beans to brown. If you have an electric oven the beans may bake with the lower element turned on to low.—Margarette A. Walker, Anaheim.

##### NO ROAST BEEF FOR CHRISTMAS

Food Commissioner Merritt sends warning that the restrictions of meatless Tuesday will not be removed for Christmas or New Year, both of which fall on that day, according to a telegram received from Herbert C. Hoover.

The telegram was sent to clear up a widespread report that the ban would be lifted for the two holidays.

In addition, Hoover said that liver, tongue, tripe, kidney and other by-products of the prohibited meats come under the ruling applicable to meatless days, and that "plenty of variety is afforded in poultry, rabbits and seafoods."

The impression has been general in some sections that by-products could be sold on the meatless days.

##### TODAY'S BEST STORY

With the boundless enthusiasm of his kind, the food faddist harangued the mob on the marvelous results to be obtained from chewing soap and eating nut butter.

"Friends," he cried, swelling visibly and clapping his chest, "two years ago I was a walking skeleton—a haggard, miserable wreck. What do you suppose brought about this great change in me?"

He paused to see the effect of his words. Then a voice rose from among his listeners: "Wot change?"

To bake potatoes quickly, place them close together in the oven and cover with inverted pie plate.

## "—use foods that require less sugar"

THIS is one of the most important recommendations of the Food Administrator: "In cooking and baking use foods that require less sugar."

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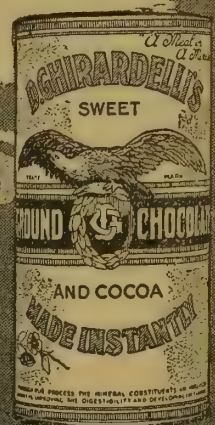
In ½ lb., 1 lb. and 3 lb. cans; a tablespoonful—one cent's worth—makes a cup.

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Los Angeles Market

Los Angeles, Dec. 19, 1917.									
BUTTER									
Produce Exc. Quotations.									
Price to trade 4c higher.									
California extra creamery .....									
Dairy Exch. prices past week.									
Dec.	12	13	14	15	17	18			
'17	45	45	45	46	47	47			
Rcts. wk. ending Dec. 18, 269,900 lbs.									
CHEESE									
Brokers prices:									
California fresh, lb. ....									
Eastern Daisies .....									
Oregon Longhorn .....									
Tillamook Trip .....									
Domestic Swiss .....									
EGGS									
Exchange quotations. Prices include									
cases and fillers valued at 35c. Prices									
to retailers 4 cents above Exchange.									
Fresh extras .....									
Case Count .....									
Pullet .....									
Dairy Exch. prices past week.									
Dec.	12	13	14	15	17	18			
'17	50	50	50	53	55	55			
Rcts. wk. ending Dec. 18, 525 cases.									
POULTRY									
We quote to producers:									
Broilers .....									
Fryers .....									
Hens—Leghorns .....									
Roasters, 3 lbs. and up.....									
Ducks, lb. ....									
Squab, doz. ....									
Rooster, old .....									
Turkeys .....									
Geese, lb. ....									
LIVESTOCK									
We quote cwt. f. o. b. L. A.									
Corrected Wednesday morning Decem-									
ber 19, by the Cudahy Company.									
Cattle—									
Beef steers, av. 1000 to 1100 lbs. 8.50@9.00									
Heifers, good .....									
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Canners .....									
HOGS—									
Av. 125 lbs. ....									
Av. 150 lbs. ....									
Av. 175-200 lbs. ....									
Rough, docked 20 lbs.; piggy sows, 40									
lbs., stags, 40 per cent.									
Prime wethers .....									
Ewes .....									
Lambs .....									
Yearlings .....									
POTATOES									
Wholesale selling price:									
Northern Burbank, cwt. ....									
Russets .....									
Sweet, sk. ....									
ONIONS									
Wholesale selling price:									
Brown.....									
White .....									
Garlic .....									
VEGETABLES									
Wholesale prices:									
Artichokes, doz. ....									
Beans—Wax .....									
Limas, lb. ....									
Ky. Wonder .....									
Beets, sk. ....									
Brussels Sprouts, lb. ....									
Cabbage, lb., 2½; sk. ....									
Carrots, doz. ....									
Cauliflower, doz. ....									
Celery, cr. ....									
Cucumbers, bx. ....									
Hothouse, doz. ....									
Egg Plant, lb. ....									
Horseradish, lb. ....									
Lettuce, doz. ....									
Leeks .....									
Mint .....									
Onions, green, doz. ....									
Okra, lb. ....									
Peas, lb., Telephone .....									
Peppers, Chili, lb., 8; Bell .....									
Parsnips, doz. ....									
Parsley, doz. ....									
Pumpkins, lb. ....									
Radish, doz. ....									
Rhubarb—Strawberry .....									
Romaine, doz. ....									
Spinach, doz. ....									
Squash—Crookneck .....									
Hubbard, lb. ....									
Tomatoes, cr. ....									
Turnips, doz. ....									
FRUITS									
Wholesale prices:									
Apples—Bellflowers .....									
Greenings .....									
Jonathan .....									
King David .....									
Spitzenburg .....									
Y. Newton .....									
Avocados, doz. ....									
Bananas, lb. ....									
Casabas, lb. ....									
Cranberries, bbl. ....									
Grapes—Cornichon .....									
Red Emperors .....									
Grapefruit .....									
Peaches, lug .....									
Pears, lug, 2.00; bx .....									
Persimmons, lb. ....									
Pomegranates, ½ bx .....									
CITRUS									
Lemons, 4.50@5.50; juice .....									
Grapefruit .....									
Jimes, basket .....									
Navels, New, bx .....									
Valencias .....									
DRIED FRUITS									
These are not prices to producers but									
prices made by wholesalers to retailers.									
(25-lb. bx., faced, 50s, ½c less.)									
Apples, evaporated, 50s, 16; extra ch, 16¼;									
pricots, ch., 18; extra ch, 18½; fy., 19;									
ears, 12½; peaches, ch., 12; fy., 12½;									
eels, 15; citron, 30 lb.; lemon peel, 25;									
range peel, 25; prunes, 20-30s, 16½; 30-									
80s, 12½; 40-50s, 11; 50-60s, 10; 60-70s,									
½; 70-80s 9; 90-100s, 8									
Figs — Bulk, 25 lb. bx., blk. \$2.75, wh.									
2.75; Callmyrna, 10 lb. bx., \$2.25.									
NUTS									
Almonds—Not growers' prices but prices									
of wholesaler to retailer.									
I. X. L. ....									
N. P. U. ....									



former years. In fact, celery this year is 90 per cent as compared with 100 last year same date. Lettuce conditions are also under last year's.

Florida's truck crops are suffering from continued dry weather. Injury from frost has not been serious.

Shipments of potatoes have been much heavier than last year, in fact the increase is about 20 per cent, but the crop is estimated as approximately 50 per cent larger. The holding back is somewhat on the part of the growers, but more perhaps due to the shortage of cars. High grade Maine potatoes are now selling in the principal markets at \$1.80 to \$2.00 per hundred pounds.

Barreled New York apples are selling around \$5.00 and \$5.50. Northwestern boxed fruit in Eastern markets sold as low as \$1.50 and \$1.60. Cabbage market is proving exceptionally good. The stock selling around \$30 to \$35 f. o. b. Eastern points. Fancy Indian River grapefruit are selling from \$3.00 to \$5.75.

Cold storage holdings of turkeys are materially lower, in fact less than half those of last year same date. Decrease in other poultry is practically the same. Stocks of frozen beef are now greater than last year same date by 57.1 per cent. Frozen pork, salt and pickled pork and lard, however, all show a decrease of from 15 to 25 per cent.

Post card reports to the bureau of markets of the United States department of agriculture show shipments from California during the past week approximately as follows: Apples, 4 cars; cauliflower, 23; celery, 133; cabbage, 1; dried figs, 5; dried fruits, 94; grapes, 1; lettuce, 37; mixed fruits, 7; mixed vegetables, 45;

## Selecting Improved Bean Seed



NE of the fundamentals in better farming is the planting of the best seed obtainable. It is always difficult as well as expensive to buy improved or selected seed. It is yet more difficult to be sure that you are getting the variety you have paid for. Furthermore, in general, seed which is produced in other localities is not likely to yield as heavily as if it were grown where it is to be planted. Grow it yourself, then you know what you have, also you know it is suited to your locality.

It costs practically no more to grow improved strains, giving larger yields and more profit. The investment of land, capital and labor is about the same except for the larger harvest, which is welcomed. If 25 per cent is gained by using more productive seed it means adding that much to your income with the same acreage. Why plant poor seed or average seed when you can have better seed? A manufacturer wants the best machines he can find. You want the most up-to-

the selected seed in a special seed plot. From the special plot the best plants are again chosen for seed and the rest are sold for market beans. You will find that some plants which are high yielding this year may not have the power to transmit this characteristic next year.

### Plant to the Row Method

Select a piece of soil, level, even depth, texture and fertility.

Plant the product of each selected bean plant from the fall harvest in a separate row, putting a stake at each row with the number of the plant. Every fifth row plant unimproved seed so as to check soil variations.

Make a chart of the plot, showing the number of row and the number of the plant. This is done to prevent loss of record in case stakes are lost or broken.

Care for seed plot the same as the rest of field.

In the fall discard all rows which do not show a tendency to transmit high yield and uniform maturity.



Shorthorns Ready to Serve Their Country

olives, 1; onions, 10; potatoes, 34; raisins, 156; sweet potatoes, 10; tomatoes, 3.

Price of prime steers has materially declined, running around two cents lower than a couple of months ago. It has been reported that this was due to the holiday season and to the general campaign of food conservation.

Chicago reports swine trade lacking in stability notwithstanding heavy military contracts. Packers seem inclined to play with the market.

### PLOWING THE VINEYARD

The "Sun-Maid Herald" refers to one of the successful raisin producers who follows the practice of deep plowing, which he believes is cause of a fine crop of raisins every year. He says he plows seven inches deep, then cross plows the same depth. He adds:

"Some people think deep plowing injures the vines by breaking up the surface roots. As a matter of fact, the breaking up of the roots causes a bunch of new roots to sprout where the old were torn and promotes a healthy root growth. The first plowing should be done early, the first of March if possible, and more rain will be thus conserved. Thorough cultivation insures a mulch that will hold the moisture.

"But the time to begin deep plowing is when the vineyard is young. In this way the roots go down deep, and the vine does not have to depend on the surface roots for its vitality. If old vines have most of their roots close to the surface, deep plowing, of course, works an injury. In such vines shallow plowing is necessary."

date bean machines you can get; the ones which will manufacture the most beans per acre.

No wizardry is necessary in raising better seed. It is mainly a matter of actually doing certain things which anyone can perform. The methods here described for improving yield and quality by seed selection will help accomplish all these things.

### Plants to Select

During the growing season choose plants maturing about the same time with greatest number of full pods, but don't sacrifice quality for yield. The heavy bearing plants must have full-sized beans. As the plants are selected they should be marked with a stake or rag and carefully watched for time of maturity. You should select about 100 plants.

Select only special plants, but growing under normal conditions, as a group of good ones may be caused by superior soil. Plants from outside rows should not be chosen, as they are likely to be better ones from virtue of location.

Gather plants by hand and re-select the best ones again. It is much easier to get the best ones when you have them together for comparison.

Harvest by hand and weigh the product of each plant separately and put the seed in a heavy paper bag, giving each a number.

Keep a record of the number of mature pods and weight of product of each plant in permanent form.

### Seed Plot Method

This method consists of planting

Those plants which have the power to pass along their good points to future generations are valuable.

Before any are harvested select out again from the field the best plants and continue as before.

Harvest and weigh the product of each row separately and plant the next crop from those rows which show the greatest yield per 100 feet of row. Discard the low yielders.

This method of selection may be continued with profit, year after year. Probably no piece of farm work will pay better returns than the time spent in the fall in seed selection. No special work has ever been done in the selection of bean seed, and inasmuch as the demand for good seed is ever increasing and it takes several years to begin to realize on your efforts, no one can get ahead of you if you start now. There may be a fortune in it for you.

### SODA LYE NO REMEDY FOR HOG WORMS

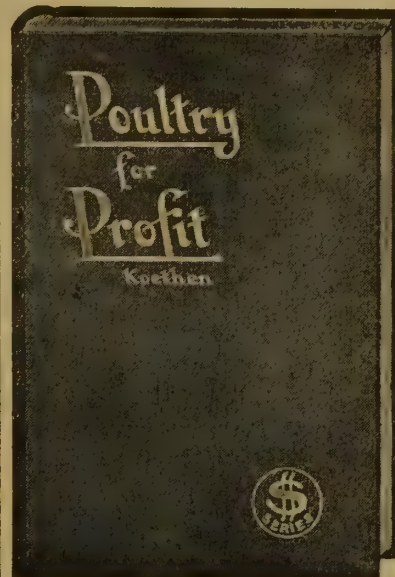
Soda lye has no value as a remedy for or preventive against worms infesting hogs, nor is it likely to be of value against similar intestinal parasites in other animals, according to the United States department of agriculture. Hogs were fed daily with the soda lye mixed in their food in accordance with the directions printed on label of the sample tested. As a result it was found that hogs remained infested throughout the period of treatment—2½ months—and that the extent of infestation was increased rather than decreased.

### WEATHER CONDITION

San Francisco, Cal., Dec. 15, 1917.

	Rainfall—		Temp.	
	Wk.	Season.	Norm.	Max. Min.
Eureka	.10	1.30	13.07	60 38
Red Bluff	.00	1.30	7.62	68 34
Sacramento	.00	.76	5.07	64 36
San Francisco	.00	.83	5.08	68 48
San Jose	.00	.95	4.24	68 32
Fresno	.00	.89	2.65	64 34
San Luis Obispo	.00	.57	4.45	80 32
Los Angeles	.00	.42	3.25	78 46
San Diego	.00	.25	1.97	72 44

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tions for orchard soil improvement.

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Last spring we purchased of you a set of castings to make a concrete mixer. It was constructed per the plans furnished and it duly worked great. D. M. BARNARD, Freeport, Ill.

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An Illustrated Weekly Magazine, Devoted to the Rural Home and Ranch

LOS ANGELES

December 29, 1917

SAN FRANCISCO





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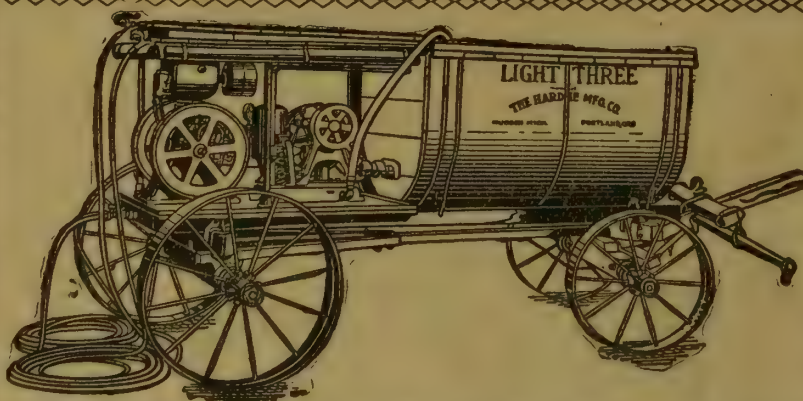
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# California Cultivator

Vol. XLIX No. 26

LOS ANGELES: December 29, 1917

One Dollar Yearly

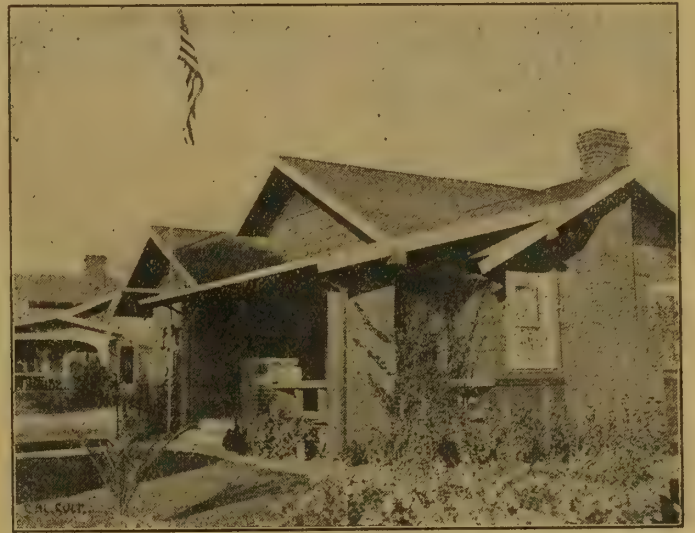
## Nature Does Her Patriotic Bit in Production



Studying Truck Crop Bugs

The sign above the doorway reads: "U. S. Department of Agriculture Bureau of Entomology Truck Crop Insect Investigations." The gentlemen standing on the steps are: By the flag pole, R. E. Campbell, in charge; on the lower step, hands in pocket, H. J. Ryan, engaged in field investigations.

Bug Eat Bug Encouraged and Artificial Methods Also Studied at Three Institutions in Los Angeles County. Interesting Photos and Notes by A. Layman. Also Insect Illustrations from the State Horticultural Commission.



Woglum's Headquarters

The bureau of entomology has continued Mr. Woglum's work in Southern California for many years. He was first located at Whittier, later at Pasadena, now for some months in the building shown above, North Curtis Avenue, Alhambra.



INSECT and fungus troubles of food producers are costing the producers (and incidentally the consumers) millions of dollars. This fact has been fully appreciated for a great many years and we doubt not the oldest of us may recall tramping along the rows of potatoes in the old garden, knocking off the "old fashioned" potato bug into water with a scum of oil on top in the endeavor to save dad's spuds. Later came the Colorado potato beetle, and we have all had it in for Colorado ever since. Of course we used the paddle to knock off the bugs and of course it was our duty to tear off a portion of the leaf on which the egg mass was deposited. Later the whisk broom with bucket of Paris green solution made rather swifter work, though not always so positive in results. Instead of Paris green in water some mixed it with flour or fine lime dust and sifted it over the plants from coarse mesh cloth bags.

Still, bugs are with us and have raised national and even international questions. Many counties and even states have complained because of the rigid quarantines and regulations

which have prevented or at least endeavored to prevent the spread of these pests.

California has led the world in investigation and in police regulations for many years, but it began all too late, for our worst pests in orchard and field today are those brought from

other countries. Now, how shall more of these pests be kept out and how may we best control those already here? Hundreds of different forces are being used. As an illustration see engravings on this and other pages, or, better, take a walk from the car line running between Los Angeles

and Monrovia in the San Gabriel Valley, and within two blocks of each other are three establishments maintained by the state of California and the United States, which are all brought into being because of a desire to aid the producers of California.

The oldest in time of location of these three institutions is that of the bureau of entomology in charge of R. S. Woglum, special field agent. Mr. Woglum has been in California many years, sent here first to make fumigation investigations. These investigations were taken up at Whittier and many other citrus crop sections. In 1917 extended reports were made through the bureau of entomology which have aided very greatly in the furtherance of fumigation work. More recently Mr. Woglum's work was directed from headquarters at Pasadena which were moved to the center of an orange section on North Curtis Avenue, Alhambra. Mr. Woglum's work has been more to secure control of insects by the use of the spray pump or fumigation tent.

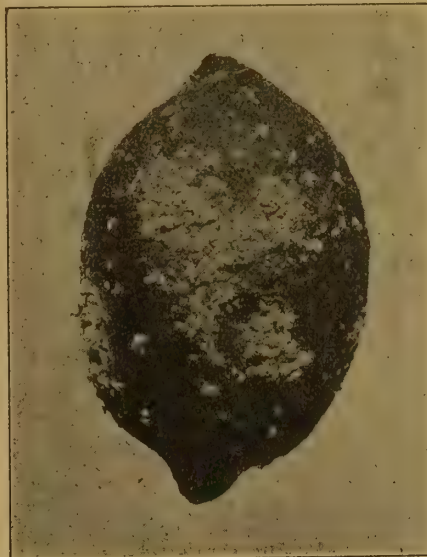
A few months ago State Horticultural Commissioner Hecke was appealed to to aid in the control of the

Continued on Page 654



The Citrophilus Mealybug

Many of the farmers are well enough acquainted that this pest is often referred to as simply "Citri." His official title is, however, Pseudococcus Citrophilus.



Worthless Fruit

The citrus mealybug as it affects and ruins lemons.



Breeding Cages

In these cages are fruits and twigs infested with mealybugs on which are feeding predaceous insects, or, which are being parasitized.



State Insectary, in the Office

The state insectary recently established in Southern California is on North Olive Street, Alhambra, Los Angeles County. It is maintained by and under the general direction of the state commission of horticulture, and, as may be noted in the engraving, is well fitted to perform its work.



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## Melaxuma of the Walnut



NE of the dread diseases of the walnut orchard is melaxuma. Notwithstanding, it is easily controlled, but its control is a case of "a stitch in time." We quote from bulletin by Prof. H. S. Fawcett. This was written after experiments were performed by Prof. Fawcett in 1915, but is still the best information there is on this subject.

This disease, known as Melaxuma, which occurs in the form of black cankers in the crotches and limbs, and occasionally in the form of a sudden wilting and dying of the branches, has been noticed by walnut growers in Santa Barbara County for a number of years (at least since 1909), but has only attracted serious attention during the past two or three years.

Because of the oozing of dark watery material to the surface of affected areas, this disease is often confused, under the name of "black sap," with sunburn, frost injury, injuries to the bark in cultivation, injury from the decay of wood at places where limbs have been cut off, and other troubles in which a "black sap" may ooze out during the active growing period of the tree. It should not be taken for granted, therefore, that because a black ooze is seen on the trunk or larger limbs of a walnut tree that Melaxuma is necessarily present.

As the term "black sap" has already been used by R. E. Smith to designate a result of sunburning, this name was not considered suitable for the disease here being considered. The word Melaxuma, derived from two Greek words meaning "black" and "juice," was therefore adopted and is now in fairly common use to designate the disease herein described.

### Treatment Suggested

From the observations and results of experiments so far made, the following tentative treatment is suggested:

Cut out the cankers that have not gone too far on the trunk and larger limbs and disinfect the wounds thus made. The dead and discolored bark should be cut away, getting a little beyond the margin of dead tissue. If the cankers are not large and the wood underneath has not been stained deeply, it will pay to dissect out all the discolored wood as well as the bark. Probably one of the best disinfectants to apply to the wound is the Bordeaux paste. If the canker is large and has been in the tree a long time, the wood may be stained so deep as to render the work of cutting out all discolored wood too expensive. If the canker has practically girdled the limb, the limb had better be cut out. Limbs not so seriously affected can probably be saved for a number of years by cutting back into the healthy bark around the edge of the killed area, either with or without cutting out the discolored wood, and disinfecting it. It would be safer, if expense in time is not too great, to also dissect out the stained wood, especially if this has begun to soften and decay. Trees should be treated when the areas are starting. Some weeks or months later after it is seen that the progress of the canker is stopped and the bark is healing at the cut edges, the exposed wood should be covered with asphalt paint. If the Bordeaux paste has not been washed away by that time or has not largely peeled off from the wood, the excess may be removed with a wire brush before applying the paint.

The limbs with cankers too large to be treated, as well as the limbs already dead, should be pruned out with a saw or pruning shears, making smooth cuts and leaving no stubs. An ax should not be used in pruning. The larger cuts, one inch or larger, may be disinfected with corrosive sublimate, 1-1000 parts of water, and painted with asphalt paint or other good covering. The Bordeaux paste is apparently not so good to use on the cuts made in pruning out limbs.

As an added preventive against the development of new cankers in the future, the entire trunks and the crotches of all trees in the orchard (both affected and non-affected) may be painted with Bordeaux paste at small expense per tree. It must be borne in mind in this connection that some new cankers will undoubtedly make their appearance after painting with Bordeaux paste. They will have started unnoticed, the fungus having already gotten into or through the bark before the Bordeaux paste was applied. After a year or two when all these have been worked out, the application of Bordeaux paste ought to prevent new ones from forming, except where severe injuries have been made.

All injuries to the bark in cultivating the orchards should be avoided. The injury inflicted on the trunks of walnut trees in some orchards in plowing and cultivating is inexcusable. It is a common sight in some orchards to see every third or fourth tree trunk with a large patch of bark torn or wounded by parts of the harness or the edge of the plow, and to see the lower limbs with bark torn off by the harness of the passing team. All these injuries are ideal places for the Melaxuma fungus to enter and start a canker.

If willows are growing along the edges of a walnut orchard, it would be well to destroy them or, in case they are useful in keeping the soil from washing, to keep them cut back every year or two. The young healthy shoots do not seem to be as subject to the disease as older, larger limbs.

### Bordeaux Paste

The formula for Bordeaux paste is as follows: 12 pounds of bluestone (copper sulphate) dissolved in eight gallons of water in a wooden, earthen or glass vessel; and 24 pounds of quick-lime slaked in eight gallons of water. When the lime is cool, stir together about equal parts by volume of each for making enough mixture to last for one day only. The bluestone is easiest dissolved by suspending it in a sack at the top of the water over night. If the bluestone is pulverized and suspended in warm water it dissolves rapidly. Good lime that is not air-slaked should be used, and after slaking it with the water it should be allowed to cool before being used in making paste. If covered to avoid evaporation each ingredient will keep indefinitely, but after mixing, the paste slowly deteriorates. Where it is being used over a number of days or weeks, just enough of the wet slaked lime and the bluestone solution should be mixed to make paste enough to last for one day, leaving the remainder unmixed in separate vessels. It may be applied with large brushes, as is whitewash.

### Asphalt Paint

Good asphalt paint free from impurities may be made by dissolving hard asphalt in benzine or gasoline until it

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has body enough to form a good covering when applied with the brush. The hard asphalt may either be broken into small pieces and dissolved in the benzine, or the asphalt may first be melted by heating, and after it has been taken from the fire and cooled down somewhat, but not enough to

harden again, the benzine poured in and stirred.

Asphalt paint dissolved in benzine and put up in cans ready for use, can usually be purchased at paint shops or hardware stores. A similar article dissolved in turpentine is also on the market, but it is not suitable for use on tree wounds.

## Pollination of Fruits



SERIES of experiments has been conducted at the John Innes Horticultural Commission at Surrey, England, to determine which varieties of fruit trees are self-fertile and which self-sterile. These experiments were reported in the Journal of Heredity of Washington, D. C., by L. G. Currie, and while of little value to California growers because so few of the varieties are grown here, yet it is a most interesting report of the English experiment. The trees were grown in an enclosure where insects were not a factor in any way in the pollination. The fruits reported are:

### Plums

**Self Fertile**—Denniston's Superb, Early Mirabelle, Reine Claude Violette, Myrphalan (red), La Prune Geante, Monarch, Early Transparent, Reine Claude Bavay, Prince Engelbert, Early Favorite, Gisborne's, Oullin's Golden Gage, Golden Transparent, Victoria, Czar, Pershore, Magnum Bonum (red), Magnum Bonum (white), Kentish, Warwickshire Drooper, Damson var's.

**Self Sterile**—Coe's Golden Drop, Coe's Violet, Wyedale, Grand Duke, Jefferson, Reine Claude d'Althan, Pond's Seedling, Washington, Early Greengage, Old Greengage, Ickworth Imperatrice, Late Transparent, Curlew, Prune d'Agen, River's Early Prolific, Stint, Mallard. The last three set only about 1 per cent when selfed.

### CHERRIES.

**Self-Fertile**—Morello, Late Duke.

**Self-Sterile**—Black Heart, White Heart, Elton, Kentish, Big Frogmore Early, Big Gaboulay, Early Rivers, Guigne d'Annonay, Black Tartarian.

## Going to China

Professor C. W. Woodworth, of the University of California has been granted a year's leave of absence and goes this week to China where he will give a year of service to the University of Nankin, or rather the agricultural and forestry department of the university. This college of agriculture is by far the largest and best equipped of any of its kind in the Chinese Republic. The dean of the college is Dr. Balie, and he has arranged with Professor Woodworth for this year of service. One of the most important branches of the work of the college has been that of forestry, for many of the Chinese recognize the fact that China's floods may be in a measure at least controlled by intelligent forestry. Many of the students and instructors of the institution are now aiding in the first great highway to be built in China which runs from Peking to Tientsin. Professor Woodworth will give to Cultivator readers some information as to things entomological in China. For 4000 years these people have grown crops and, as Dr. F. H. King in "Farmers of 40 Centuries" has shown us in a measure how soils are handled to keep them producing for thousands of years, Professor Woodworth expects to determine how the insect problem is kept in control

without insecticides, or control measures at least as we know them in America.

### SCHOOL LANDS

W. S. Kingsbury, surveyor general of California, states that there are 811,810 acres of vacant school lands in 48 counties of this state, subject to lease by anyone wishing to grow crops. Information regarding these may be had by writing the Surveyor General, Sacramento, for the pamphlet and information regarding filing fees. There are some counties which have no school lands. Amongst these are Alameda, Contra Costa, Kings, Marin, Orange, Sacramento, San Francisco, San Joaquin, San Mateo and Sutter. San Bernardino has the greatest number of acres, 252,685; Merced, the lowest, 20.6.

### HANDLING APPLES

Apple growers will be interested in Bulletin No. 587, which may be had at 15 cents per copy from Department of Agriculture, Washington, D. C.

It touches upon the Handling and Storage of Apples in the Pacific Northwest. Pomologist H. J. Ramsey, formerly located at the pathological laboratory at Whittier, and now pomologist in charge of fruit handling and storage investigations, is the author. The bulletin treats upon the importance of cold storage, functions, various experiments, maturity, harvesting, handling, temperatures, keeping qualities of varieties with some beautiful colored plates.

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### BUG EAT BUG

Continued from Page 651

citrus mealybug which is seriously threatening the orange sections. The excellent work of the state insectary at Sacramento in charge of Harry S. Smith suggested that a branch of that work might well be maintained in Los Angeles. A cottage was secured on North Olive Street a short block from that which has been Mr. Woglum's headquarters. C. P. Clausen was made director. Mr. Clausen has



C. P. Clausen

Mr. Clausen is assistant superintendent and director of the insectary located at Alhambra.

studied citrus mealybugs for years, and the work assigned to him was the study of this pest of the citrus trees.

In 1913 Mr. Clausen was with the United States department of agriculture, in 1914 with the citrus experiment station, and later spent 1½ years in the Orient investigating and collecting parasites of the mealybug. Commissioner Hecke could have assigned no one better qualified to take up this work for citrus growers of California.

Mealybugs were at one time "nothing but mealybugs." It's different now. They're genuine Prussians of the insect world, hence we go after them in "tanks."

There are various members of the family. Four are important; Pseudococcus citri Risso, P. (which means Pseudococcus) Bakeri Essig, citrophilus Clausen and P. Longispinus Targ. The first named, citri, is the kaiser of the bunch from the citrus grower's standpoint. From the layman's standpoint they all look alike. However, ask Clausen.

Years ago we tried fumigating mealybugs. Two fumigations, each double strength, killed some; others said; "Pretty well, thank you." Spraying with Essig's carbolic spray stunk the life out of some—still they increased. (Claremont Pomological Club held a great conference in 1909 and issued a bulletin, at Ontario later another conference. Still they increased and are still increasing.

Now, bug eat bug is considered to have more possibilities of effective results. So Clausen, with E. J. Brangan and Chas. A. Perrin, use 1000

pounds of potatoes a month for "pasture" for mealybugs and then "pasture" other bugs on the mealybugs. When these "other bugs," Brown Lacewing, Green Lacewing, Lepomastix Cryptolaemus Scymnus (there are three or four of that scymnus family) and a few others are bred up so the station has a few billions of them they will be distributed to orchardists—sort of liberty loan—in the hope that they will eat other billions of mealybugs.

They are promising little beggars—beggars for a chance—and the insectary will give them a chance. Another year and we will know more.

Meantime Prof. Woglum of the tropical and subtropical investigations of the United States department is studying artificial control.

Strength to the arm of all these helpers.

### CITRUS TREE FUMIGATION

Written for California Cultivator  
By J. L. Matthews of Covina Argus



IN THE capacity of innocent bystander, or interested observer, roofer-from-the-side-lines, or whatever you choose to call the relation of the newspaper man in a citrus district to the rancher, I have watched the progress of this business of fumigating citrus trees for over 20 years, during which time I have printed the opinions of others, had something to say in a superficial way myself and listened to much talk and conjecture about fumigation. In actual experience I never fumigated a citrus tree, nor had one fumigated for me, but I have lived in the thick of the fumes of cyanogen gas every fall and winter since the time when the east end of Los Angeles County became an important citrus district, and there are some obvious conclusions that cannot be escaped.

I have seen the fumigating process



Larva of Scymnus Bipunctatus Kug

However, the two oval shaped bugs are mealybugs, while the "Scymnus" is just preparing to make them one meal. Note the resemblance between this ladybird larva and the mealybugs.

ses change and improve, and I have seen the necessity for fumigation increase from three-year periods of fumigation to two-year periods, and lately to one-year periods. The citrus rancher knows the value of fumigation, and in Los Angeles County he is coming to realize that fumigation must be done thoroughly every year. But you will be surprised to know, for instance, that in some big associations of ranchers in Los Angeles County, otherwise intelligent and up-to-the-minute in the citrus business, there is sometimes as high as 40 per cent of the acreage that will skip a fumigation, in the very face of the fact that it is



Bug House "Pasture"

The rough cull lemons in the foreground are, many of them, one mass of mealybugs and the cottony material discarded. In the background are flats holding potatoes which have been sprouted. These tender young sprouts make excellent feeding ground for the mealybugs. These mealybugs are used as feed for the beneficial insects.



proven beyond all doubt that this means practically the loss of a crop.

And I recently made an investigation over various parts of the state in the citrus districts, for the reason that I was puzzled to think that, although it is a demonstrated fact that fumigation is necessary, it is not always done when it should be done—in other words every year. And that's how I came to realize what a tremendous amount of significance the banker has in this matter of fumigation.

If a hard pressed citrus grower went to his banker who held a mortgage on his property and told him that he had no money with which to buy irrigating water for his ranch, the banker would immediately have a mental picture of that ranch becoming a dead and dry and valueless thing unless the



*Cryptolaemus Montrouzieri* Mites

This bug is not half as large as he looks to the mealybug which he attacks, but this engraving is vastly enlarged, for the bug himself is even smaller than one of his eyes appear in this engraving.

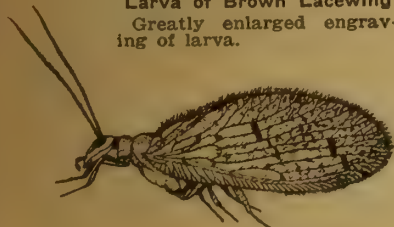
irrigating water was forthcoming. And to protect the loan on that property the money for shares of water stock would be forthcoming at once.

Now that is exactly the situation that is partly coming about, and must be entirely brought about concerning the banker and the subject of fumigation. If the ranch is not fumigated the crop does not set, and there is no money to be had that year. The case is worse than in the case of the lack of irrigating water, for if a rancher irrigates and fertilizes he is out just that much money when in failing to fumigate he loses his crop. If he did not irrigate he would not fertilize nor fumigate nor prune nor improve in any way and therefore would not be out any overhead expenses except taxation. But if he pays all the overhead or cultural expenses faithfully and does not fumigate, thereby losing his crop, he is more deeply in the hole than any other blunder can put him.

In Covina we know that the expenditure of from three to five hundred dollars for fumigation assures the marketing of perhaps from \$3000 to \$4000 worth of fruit, other things being favorable. This then, should bring its obvious lesson. But unfortunately it is not always possible for the rancher to fumigate. Some of them started in the business with insufficient capital. A freeze will put that kind of a rancher temporarily up against it and permanently out of the business if he



Larva of Brown Lacewing  
Greatly enlarged engraving of larva.



The Lacewing

This is the adult of the brown lacewing fly. One valuable feature of this beneficial insect is that, while in the larval and adult stages, it destroys the mealybug.

can't get finances. A hot wave in the summer may cut his normal crop in half. The Southern Californian has to cope with crop failures or partial failures just as does the Nebraska farmer or the tiller of the soil anywhere. So then this matter must come directly up to the banker.

In the city of Los Angeles, and in some other communities in Southern California, we find the big banker, and sometimes the little banker, very much averse to lending the proper

amount of money on a citrus grove, and when pinned down to an admission he says that citrus groves in the aggregate are not first-class risks. Particularly specified groves, owned by certain men, are good risks, they say, but as a matter of fact these men do not need loans nor do they often ask for them because they take very intelligent care of the orchards and have capital with which to continue the care. That shows where the problem lies. Such bankers, who do not have an intimate knowledge of the business, will allow a ranch upon which they hold a mortgage to deteriorate until it isn't worth the mortgage, and then on the strength of the experience will put a general statement of poor risk up against the industry as a whole. This isn't just an offhand statement—it's a fact that is being demonstrated every day.

The low loaning rate on citrus groves recently set by the federal loan banks was brought about because the experts for the federal institutions took all their information concerning citrus groves from the big city bankers, who, to be frank, don't know anything about the earning capacity or the value of citrus groves.

We find an altogether different kind of banker here and there, as I did when talking with President John H. Bartle of the Monrovia First National Bank, who said that the first consideration in loaning money on citrus property with him was whether or not the rancher had thoroughly convinced himself of the need for annual fumigation in Los Angeles County, secondly, that he had generous ideas about fertilizing the soil, and thirdly, but by no means of latter consideration, that he intended to use the loan for the purpose of fumigating, fertilizing and improving his ranch.

W. R. Powell of Azusa, for more than 30 years at the head of the First National Bank of that community, said that he had adopted a policy years ago of establishing a loan through a savings account, and when the rancher had contracted his bills for fumigation, fertilization and other necessary cultural work, these bills were sent to the bank and paid from this non-checking account. In this



*Hyperaspis*, a Valuable  
Native Mealybug Enemy

fashion the bank was able to keep a record of what the loan was spent for, or in other words, that it was spent for the work actually needed and not for a new bungalow or an automobile. The bank is carrying a number of fumigation accounts of this character this year.

In Whittier the banks of that locality say that very few cases are known of bad management of groves, for that particularly favored community has prospered in the citrus business from the first, but the same cultural questions are asked of any man who wishes loans on his citrus property. The mortgages give them power to administer good cultural care, including annual fumigation, if the owner fails to do so. The most difficult properties to keep up in this respect are estates that are going through certain court processes. The citrus ranch that is the estate of somebody, or which is run on the absent treatment plan by some person who lives in New York or Canada, is the hardest proposition from the cultural standpoint, for it is impossible to educate the owner to such expenditures as fumigation and essential cultural needs.

In Porterville and Lindsay there are several bankers who are themselves owners of large acreages in oranges, lemons and grapefruit, and these men are perhaps the best educated bankers as relates to the citrus business to be found in the state. While their need is not so insistent in the matter of fumigation as is the case in Los Angeles County, these banker-growers are sure that the time has practically

arrived when annual fumigation should be practiced, and they most emphatically place the necessity for adequate and thorough scale eradication above all other cultural essentials. Among those I have talked with on this subject have been H. C. Carr, vice-president and manager of the First National Bank at Porterville; G. V. Reed, cashier of the First National Bank of Lindsay; Chester Dowell, cashier of the Lindsay National; King G. Gillette, president of the Pioneer Bank of Porterville. These men do not quarrel with facts. They fumigate their own properties and insist that those ranchers who do business with them understand also its necessity.

If you talk with Colonel H. F. Bray of the Porterville Lumber Company, as I did, an owner of 27 acres of oranges and a resident of the community since 1878, you will find a man who will submit to no argument about the necessity for constant fumigation, or W. E. Sprott, manager of the Porterville Fruit Exchange; W. S. Shippey, manager of several packing houses in the Sunland district; A. S. Rider, manager of the Central California Fruit Exchange. In the Porterville and Lindsay districts an annual fumigation thoroughly done causes the fruit to ripen quicker than where it is not done, according to T. E. Anderson, manager of the Lindsay Fruit Association. The fruit has a better chance to make a quick journey to maturity, freed from insect impediment which

weakens the life of the tree. And early fruit is a condition much sought after in that district.

In the Southern California district almost any large successful grower will allow himself to be quoted emphatically in favor of annual fumigation, as has C. C. Chapman of Old Mission groves at Placentia. Mr. Chapman says that in all his experiments with dozens of kinds of spray materials he never once had made a success of any of them. There is but one way to control black scale so far, and that is with cyanogen gas.

In fact, it is not the successful grower or the intelligent citrus community banker who needs to be convinced of this fundamental fact of the business; it is the outside big-city banker and the grower who has come into the state recently or who has a poor ability to absorb the essentials of any problem.

If you fumigate you get a crop, all other things being favorable. If you don't fumigate you don't get a crop.

#### CITRUS INDUSTRY IN ARIZONA

Written for California Cultivator  
By M. E. Bemis



O a lesser degree the same conditions which affected the citrus fruit in California this year have resulted in a smaller crop in Arizona. A few extremely hot days in June caused a rather heavy drop, and the crop

Continued on Page 658

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## Garden Art

Written for California Cultivator by Ernest Branton



**W**E PRATE so much of art that some will ask what it is and how they may recognize it in park or garden. The only answer is, that art is truth, or truthful portrayal of things as they are found in nature. There is no such thing possible as originality; it is of the highest if it be faithful reproduction. New combinations may be made, and in this way only may originality be expressed; the fundamentals are as old as the world.

In gardens we often see parts daubed with colors like a cheap advertisement on a bill board. Why not make it so if there is commercial value in it? I do not find fault with my friend because the gaudy dabs of color on his terrace front spell "Hotel Raymond," for such display has a commercial value. But why should a private garden have meaningless and shapeless dabs of the same colors on its front terrace? Is fidelity to nature therein or thereby expressed? Why not use one-half or one-fourth as many colors but in a like number of plants, all disposed in natural zones of one color or kind to a zone and to include all of each kind in that zone? That is the natural way. And nature is at all times simplicity and dignity, for the two are inseparable, and one cannot be attained without the other.

Prof. L. H. Bailey, noted world-wide for his good taste and judgment, says: "Every yard should be a picture. That is, the area should be set off from every other area, and it should have such a character that the observer catches its entire effect and purpose without stopping to analyze its parts. The yard should be made one thing, one area, with every feature contributing its part to one strong and homogeneous effect. . . . The fact is, the easiest way to spoil a good lawn is to put a flower bed on it; and the most effective way to show off flowers to least advantage is to plant them in a bed of greensward."

Yet there be those who would spoil fine stretches of lawn with beds that look like colored advertisements, and arrest the eye midway, whereas the view should be across the beautiful carpet of green with a border beyond of the same flowers; in the latter case a fitting frame and finish to a beautiful and unviolated stretch of greensward. Such a faultless mantle of green spreads over one corner of a Los Angeles park, yet when as a park commissioner I had a circular bed of pansies removed from its fair face, nearby residents protested that its beauty was destroyed. This bed, viewed from windows of adjacent apartment houses, looked very much like a metal cap from a gigantic beer or soda water bottle. It is cause for wonderment that no one suggested that the flowers be so arranged as to form an appropriate design and the space rented to a brewery for advertising purposes. Such designing may do for rugs and tiles but not for greenswards; yet if not art in the park or garden, it is not art at all, for the rules of art are everywhere the same, and the fine carpet or rug is a plain broad expanse of one color, surrounded by an appropriate border. It does not have to have rosettes, pin-wheels, transfer designs for easter eggs, or other tomfoolery, scattered over its fair infield.

### Near-eucalypts

There are two groups of trees, not

common in California, yet somewhat grown here, that are closely allied to and much resemble the eucalypts. They are the syncarpia and the angophoras. The timber of both is softer than that of the eucalypts, but the trees have other uses, yet are used for lumber also. The syncarpia wood is soft and brittle but extensively used for flooring and furniture where strength and toughness are not needed. Angophora wood is harder and much tougher. The tree is also closer or thicker in the top and thus is much better for a shade tree than the average eucalypt. In Australia they are used for street planting.

### The Tulip Tree

No tree native to the Eastern part of our country thrives more splendidly in California than *Liriodendron tulipifera*, the tulip tree. In South Pasadena are two giant trees of wide spread, planted by the late H. N. Rust. In South Park, in Los Angeles, there are large tulip trees in the lawns, and during the present summer they bloomed profusely. At the same time they were unsurpassed in foliage by any tree in the park. They are well-nigh perfect in form for shade purposes and were they only evergreens would surpass in usefulness any shade tree we have.

### The Horse-tail Tree

*Casuarina equisetifolia*, the horse-tail tree, will grow in pure sand. It is a splendid tree for fuel purposes, but is not without ornamental value. There is little doubt but it will thrive in beach sand closer to salt water than any other evergreen tree. This should be its main use in California, and hundreds of thousands should be planted close to the coast. Strange to relate, it is also drouth-resistant to a remarkable degree and many may be found in poor sand or gravel at considerable distances from the coast. I have never seen one of these trees that appeared to be stunted or in poor vigor or health. We should use many more of them, and over a greater range of soils and territory.

### THE PINK TECOMA

Miss K. O. Sessions, the well-known horticulturist of San Diego, writes in the California Garden on the pink Tecoma:

There is conspicuous about the city the Tecoma Mackenii, a native of South Africa, a very satisfactory vine for huge growth and free bloom during the summer. It blossoms best after rather severe pruning and can be grown as a shrub, tied up to a tall and heavy stake, or old tree, and severely pruned.

As a vine the shoots will grow easily 100 feet and have grown 300. It is fine for a high fence, a roof cover of a shed or barn, a pergola or pergola arch, or a summer house. It grows easily by layering, also from cuttings.

It is very unusual to find a vine the Tecoma "Queen of Sheba," which has similar foliage and darker pink that has so decided a complement in flowers and blooms from December to March. This vine is even more wonderful in its growth than the summer Tecoma. It could easily cover an acre.

A million mulberry cuttings are being planted on a thousand acre silk farm near Wyandotte, Butte County.



Many Flowering Millet

In our issue of November 3 we referred to a new grass which has been tried for some years on the ranch of Mr. Stead in San Diego County. The botanical name is *Oryzopsis Milaceae*. Another subscriber, Mr. Galloway of Galloway Bros., now brings to the office stalks of the grass and young plants showing habit of growth. The stalks of the dry and fully ripened grass are somewhat woody but he assures us stock will eat it up entire.

The botanical name of the grass means "Many Flowering Millet," but it is also called Indian Millet, Spreading Millet, San Diego Grass, and in the former article it was referred to as "Smilo."

The plant grows readily from seed or may be laminated or even grown from cuttings. The more satisfactory way is perhaps to scatter seed over

the hillside. The grass is so hardy that it will take root during the rainy season and if it becomes thoroughly established it lives through the summer, resisting the drouth and making excellent hillside pasture.

If California needs one thing more than any other it is a good pasture grass. This has been tried in California for something like 30 years, and perhaps it may now receive tardy recognition. In any case, from the reports of these who have grown it, it is worth giving a limited trial.

The seed is very small and so far as any has been available for sale has commanded around \$5.00 per pound. The young plants, the seed for which were planted September 14, came up in 10 days and were ready for replanting about December 1. When full grown the grass stands from three to four feet high.

WORK THAT MAY BE DONE IN THE WINTER



LEAN culture plays a most important part in the fight which must be waged against the insects which menace the success of the

home gardener's efforts, says an expert of the United States bureau of entomology. "Cleaning off all the rubbish left over from last season's gardening aids materially in reducing the numbers of the overwintering forms of the insect enemies of the vegetable garden, whose activities are only too great in any case.

"Cut worms, which hide in the soil in the day time and come out at night to feed on the tender growth and cut small plants entirely off, wireworms that damage the tubers of potatoes and other root crops, and a host of other insects, winter under brush and rubbish on the earth or a few inches under ground. Where they can find protection during the cool weather of winter, conditions are ideal for their survival, and the warm days of the spring will bring them out in countless numbers to feed upon the tender foliage of the young garden truck. Neighboring weed patches shelter many forms. In the Gulf region and westward some insects work practically the year round.

"Aphis, or plant lice, are active during the winter months and find food on ornamental vines and shrubs and growing weeds which afford them food and shelter when other plants are not available. Much may be gained by keeping down the weeds in neglected corners.

"Leaves, stems and other litter should never be allowed to accumulate up to the time of planting, or there will be thousands of insects the coming year where there were hundreds last season. Weeds should be cleared up and burned together with all rubbish.

"The soil should be thoroughly worked over at least once during the

winter, not only to enable it to conserve moisture, but to destroy such insects as may be spending the winter on, or a few inches below, the surface. This is best done at least a month before the seeds are planted.

"If chickens are available for the purpose they ought to be allowed free access to the newly turned over soil for a time, as the fresh meat in the form of insects, which they will find there will prove a very welcome addition to their diet, and its removal will go far towards insuring a fair start to the garden."

INVOICE

This is a good month to "take stock" as to the farm implements, that is, their condition, what repairs will be needed three to six months hence, how may their usefulness be preserved and extended? Draft animals are becoming scarcer and feed to keep them in best working condition is extremely high in price. This will induce many to do as French farmers are doing, buying tractors so far as possible then putting their implements in best condition to do the most work with the least cost. It is asserted that France will increase her production next year, but there are many features which are so discouraging she will need great effort to even hold production level.

Fourteen chemical elements enter into the composition of all plants—calcium, carbon, chlorine, hydrogen, iron, magnesium, manganese, nitrogen, oxygen, phosphorus, potassium, silicon, sodium, and sulphur. Only four of these are of prime agricultural importance; namely, nitrogen, phosphorus, potassium and calcium, because these elements are not only very necessary for plant growth but they are most likely to become deficient and need to be supplied in order to maintain soil fertility and a profitable production of crops.

Serve your country by saving food.

Lettuce Situation in California

By R. G. Risser, Bureau of Crop Estimates



URING the past season lettuce has ranked as the leading winter and spring vegetable in California and the following estimate indicates that it has made substantial gains in acreage over last year.

County	1916-17	1917-18
Los Angeles	2100	3600
Orange	125	200
Imperial	960	2500
Riverside	30	150
Sacramento	200	175
Yolo	175	150
Total	3590	6775

Shipping Season

The shipping season of each of the three principal shipping districts is shown by the following table which indicates the percentage of the total crop moved each month during the past season.

Los Angeles and Orange Counties, 1916: November, 8; December, 10; 1917: January, 11; February, 13; March, 22; April, 20; May, 10.

Imperial and Riverside Counties, 1917: January, 1; February, 21; March, 43; April, 35.

Sacramento and Yolo Counties, 1916: November, 18; December, 7; 1917: April, 27; May, 40.

Los Angeles ships lettuce every month in the year, but the summer shipments are very light. Sacramento shipments were cut down by severe freezes last year and Imperial Valley was somewhat later both in starting and in finishing that it would be in a normal season. It was desired to have the Imperial Valley lettuce come on much earlier than last year and planting was done earlier. Extensive replanting was necessary, but it is expected that heavy shipments will start the first part of January. Scattering shipments may be ready much sooner.

An increased planting of spinach for canneries and of beets, carrots, onions, and other vegetables for seed production has reduced the area of lettuce near Sacramento. The damage done by freezes last winter also discouraged growers from planting so much lettuce this year.

Yield of Lettuce

The yield of lettuce in California is quite variable, but 300 crates per acre of four dozen heads each is considered normal. A grower in the Imperial Valley last year who had 60 acres shipped 43 cars from the first 34 acres, but shipped only nine cars from the remaining 26 acres. Another grower secured 10½ cars from eight acres but

the entire valley produced less than half a car per acre.

Conditions

The lettuce which has been shipped during the fall of 1917 has been far below the standard for good California shipping lettuce although there have been a few lots of excellent lettuce sent out. The weather has been warm, dry, and sunny which is unfavorable to the proper heading of the plants.

The more general use of the highways in the Middle Eastern and Atlantic states for the transportation of war material of all kinds and supplies to the seaports is calling attention to the advantage of better highways and more trucks and autos. Hundreds of tractor "trains" from sections as far west as the western line of Ohio have been made up to carry supplies to the Atlantic Coast points.



**Olive Trees**  
such as these are grown only on our foot-hill locations. — Note the good roots — for hardiness they have no equal.

We have a fine lot of Mission and Manzanillo trees, both on Picholine roots and grown from cuttings. We have had splendid success on all Olive plantings—a most important assurance to you.

Submit a list of your tree wants for special quotation. Do it right now.

We have also a complete assortment of Shipping Plums, Cherries, Prunes, Bartlett Pears, Fall Pears, Peaches, Almonds, Apricots, Walnuts, etc.

Our foot-hill grown trees are free from root diseases common to other localities. Our trees insure your future profits in fruit growing.

And remember—we will accept Liberty Bonds as full or part payment for trees. Write us today.

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Secy. and Mgr.





Established 1877

Forty-first Year

## The California Cultivator

A Journal of Horticulture, Agriculture and Live Stock

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Combined with California Cultivator 1914.  
Livestock and Dairy Journal, Established 1901, Combined with California Cultivator 1916

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## OUR ADVERTISERS RELIABLE

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## THIS WEEK'S COVER

Is it any wonder that the native of the wind-swept prairies or the blizzard visited country farther east goes into raptures over California when he comes over the San Geronio or the Cajon pass and looks down on scenes similar to the one on cover of this issue—where the snow is in the background and the foreground for miles is richly laden orange, lemon and olive groves. This proves to be a season when the trees are not so heavily laden as usual, but there are true riches in the small amount of fruit which the Navel trees are bearing this year. The prices are good; every marketable orange will be picked and, still better, many an orange grower is planning for intercrops which will help in feeding the hungry people.

## INDEX

The Cultivator is now ready for Volume L, for this number completes Volume XLIX, index for which appears on pages 670 and 671. We make no claim of this index covering the whole range of agricultural learning, but a look at it will show that a great number of agricultural topics have been touched, and this fund of information is of little permanent value unless this index, with each week's issue, is preserved and filed.

## A HAPPY NEW YEAR

As labor which is sometimes irksome leads to true happiness, so may the awful warfare into which this country is plunged lead to liberty so general that all the peoples will have great happiness coming to them because of the results of the next 12 months. If there is happiness in contemplation of work well done, we be-

lieve 1918 will end with happiness for this country because of a war well ended. So we wish for all a most happy new year which shall have this most satisfactory ending, and that, as never before, the participation of all of us in the war may be general. Let all be true patriots in the support of our government in word and deed.

Again, may it be a Happy New Year for all.

## ORDER FERTILIZER

Freight is congested. Thousands of commodities are being sidetracked to make way for successful war preparation. But our lands, if they are going to produce, must have fertilizers, and we doubt not a way will be found to transport them wherever possible, but it will certainly take a much longer time to secure delivery than under normal conditions. Hence needs in this particular should be anticipated by months rather than by days. Order early and have on the ground ready for application.

## BUGS EAT BUGS

The greatest drain upon the fruit industry is caused by destructive insects and fungus diseases. Time was when California climate was sufficient to discourage both of these evils, but unfortunately that time has passed long since, and the effort is now being made to use other forces of nature to make their control automatic. It will never be, at least to 100 per cent efficiency, but there have been some successful examples, like that of the vedalia which did bring under perfect control the white scale which at one time promised to wipe the citrus orchards of California out of existence. So we are scouring the earth for new bugs to fight the bugs. Hence the effort today to secure the parasite of the mealybug as given on preceding pages of this issue. Mr. Clausen has been studying mealybugs and their natural enemies for several years and is now located at the southern insectary in Los Angeles County and hopes to develop from a number of beneficial insects now being grown one or more which will prove effective in control of the pest, which sometimes lives in treetops and sometimes on tree or weed roots. This habit of the mealybug makes control by artificial means very difficult. If a parasite can be secured which will control it profit will accrue to a far greater degree than today.

## This Week's War News

France is facing its most serious scarcity of foodstuffs.

Coal shortage continues over the East, and much suffering has been caused by the cold wave.

Over 30 arrests were made in connection with the dynamite explosion at the governor's mansion, Sacramento.

The sinking of a diver at a port on the Pacific Coast caused the death of 19 Americans, several of them Californians.

The seizure of Vladivostok by the Japanese and of Harbin by the Chinese, reported a couple of weeks ago, is now denied.

Plenty of turkey and a royal good time were given to the liberty army in all camps of the United States on Christmas day.

The Red Cross drive for 10,000,000 or more of new members went over the top with nearly 13,000,000, and the roll is still open.

The activity of the submarine continues to decrease, and it is admitted by Germany that she must now depend upon her army.

The demand for discontinuation of teaching of the German language and literature in American schools is becoming more insistent.

Careful survey of the Halifax disaster develops the fact that there were over 1500 killed, 400 blinded, 4000 seriously injured, and 20,000 homeless. The financial loss is in excess of \$50,000,000.

Persistent report has is that immense losses were caused in the Krupp gun and munition plant at Essen, Germany. An explosion, followed by over 24 hours of conflagration, caused immense damage.

The situation in Italy has looked favorable to the Italian army most of the week. The Italians have made some advances, and later retired in some sections. They are still receiving support from French and English troops.

The Germans continue moving large numbers of troops from Russia to France. The conditions in Belgium and France have continued with general artillery action nearly the whole length of the line. Apparently the Americans are occupying a longer sector, and occasional note is made of death or capture of Sammies.

## CITRUS INDUSTRY IN ARIZONA

Continued from Page 655.

which is now nearly harvested will be between half and three-fourths of a normal yield.

As compared with the California crop the few oranges and grapefruit in Arizona, (and I have reference only to the Salt River Valley) is a very small matter. There seems to be a diversity of opinion as to the actual acreage, a survey made recently by the Arizona council of defense finding the acreage somewhat larger than was generally supposed. The explanation is probably that this acreage includes some orchards which have been filled in with other varieties of fruit or consist largely of scattered trees.

According to the best figures of the Arizona Orange Association the acreage of bearing trees is approximately 500 acres and of young trees, 700 acres. This year's crop is running very even and the quality is splendid. The association handles about 90 per cent of the entire crop, and the fruit is practically all contracted for before it leaves the valley. It is netting the grower an average of three cents a pound on the tree. H. A. Severinghaus, one of the heaviest growers in the valley and manager of the association, states that the crop this year will be between 75 and 100 cars of 400 boxes, exclusive of the culls which are marketed locally.

The heavy drop in the summer resulted in thinning the fruit so that it runs very even; there is no surplus of any particular size. Grapefruit this year is rather smaller than it is some years but is better quality and finer texture than usual.

At the present time there is only a small acreage of grapefruit; which is producing heavily, consequently most of the fruit being marketed is the Washington Navel. This has been the favorite orange. An advantage which the growers here have, over the growers of oranges in other sections, is the earliness of ripening. Oranges here ripen two weeks earlier than the oranges of Tulare County, California, and this enables the growers to get a considerable amount of their crop into Eastern markets before the holidays.

Grapefruit seems to be especially adapted to this section, and a considerable acreage is coming into bearing within the next few years. Mr. Severinghaus states that within the next few years there will be 500 cars of grapefruit shipped annually from this valley, that is, when the young groves come into bearing. The acreage of

lemons will always be small as there is said to be but a small area where they can be grown. At the present time there is about ten acres of bearing lemons, which this year will make about three car loads.

There isn't likely to be any boom in the citrus industry, for with cotton netting the grower \$200 and more an acre, oranges or grapefruit, even at \$3.50 a box, don't offer sufficient inducements to a fellow without the capital to wait until a grove comes into bearing. All the same there will be considerable planting done next year, mostly of Washington Navel oranges and a new orange known as Early Seedling. This orange has all the good qualities of the Washington Navel and seems to hold its fruit better and also resists cold better. It is thin-skinned and the flavor splendid. The trees grow larger, and the few old trees have yielded as high as 25 boxes to a tree. This orange is coming into popularity, and as the stock becomes available will be planted more and more.

There is very little smudging done here. Only three groves are equipped for smudging, and to date (November 20) fires have been lighted but three times. Ralph Murphy, who with his father owns several groves in the valley, including the first grove set out, says, "there are very few winters that are cold enough to injure mature trees in an area extending from Scottsdale to the New Black Canyon road about three miles wide, and the hardier varieties will do well further south."

In addition to the area mentioned above there is a considerable section south of the river and east of Mesa which is equally well adapted to citrus fruit. Probably the entire area would total at least 35,000 acres. As this land can be bought for \$250 to \$300 an acre, and as a grove will begin to bear considerable fruit at four years from planting, the citrus industry seems to have a fairly rosy future. Evidently the growers are pretty well satisfied as I am unable to learn of but one grove for sale, and this is a 30 acre grove which is offered for \$40,000. No doubt it would be better for those now in the business if the acreage were extended to approximately the area suitable. There would then be fruit enough produced to be more noticeable in the markets, and it would be better for all concerned.

The Orange Growers' Association plans to build a modern packing house. At present, while they have modern equipment, the quarters are not suitable.

Commercial fertilizers are not used to any extent. Stable manure is used quite largely, and many growers are plowing under green crops. Cow peas have proved excellent for a summer cover crop, and at least one man reports very pleasing results from a winter cover crop of yellow sweet clover.

Insects and fungus diseases have never become serious or caused any considerable losses. Under the careful watch of the state entomologist, Dr. A. W. Morrill, scale and other insects have been kept out, and a rigid inspection of all stock shipped in, together with the cooperation of the growers, has resulted in preventing any dangerous insects from getting a start.

Citrus growing is commonly regarded as necessarily a rich man's game, as it is estimated to cost around \$500 an acre to get a grove to bearing age. Most of our farmers couldn't afford it. Conditions are changing now. Better buildings are taking the place of temporary houses. Barns and silos are being built, and it is not surprising to learn that many who have land in the area suitable for citrus will gradually extend their plantings.

## CHISEL TEETH

The surest way to save \$2.00 is to spend one for California Cultivator.

Good habits, proper food, hard thinking—patriotism.

The income tax will cause the farmer to do some "figgering." He will learn as to "overhead." He will grow those crops which care for the "overhead" and the price of living will be higher.

"Any fool can ask questions." Intelligence is required to ask questions which can be answered with two or three letters—"No" or "Yes." Intelligent questions lead to definite information.

Monuments are a fine institution, but there is difference between a monumental act or a monumental life and one of marble.



# Agricultural News Notes of the Pacific Coast

## Northern California

San Joaquin County will produce a large quantity of irrigated wheat.

Amador County has had sufficient rain that plowing is general in all sections of the county.

The olive packing plant of Libby, McNeil and Libby in Sacramento County is in full operation.

Winter peas are proving profitable and the planting is general in northern portions of Sacramento Valley.

Parker Talbot is Shasta County's new farm adviser. He will have offices with County Commissioner Lammi-man.

The Glenn County farm bureau maintains a market commissioner. There are 700 members of this live bureau.

Shasta County's olive crop is only about half of normal but quality and size is several hundred per cent of normal.

Many members of Eldorado County Farm Loan Association have received their loans from the federal bank at Berkeley.

Beet growers of the north, like those of the south, are in rebellion at prices offered and are not readily signing contracts.

The Orland Project settlers of Glenn County maintain they have the finest showing of Jerseys of any similar section of the state.

Beekeepers of Butte County recently met at Chico and discussed methods of securing greater production of honey another year.

Butte County's olive mills are running full capacity because war conditions have created keen demand for both the olives and oil.

Colusa County is planning for more general rice planting. At Princeton alone it is thought that nearly 3000 acres will be planted.

We have had our annual raisin day, orange day, prune day, etc.; now comes Grass Valley and observes December 14 as bean day.

Farm center meetings are appealing for the deciduous experiment station, movement for which was started at the recent state convention.

Rice growers of Sacramento Valley have appealed to Hoover for relief in the car shortage situation. Over 3,000,000 bags of rice are tied up.

The orange crop of Butte County has been found to be far lower than predicted. It is now thought that less than 20 per cent of former production will be the limit.

The northern end of the valley has been visited by a warm rain which was not heavy enough to do permanent advantage but aided livestock men in giving relief to pasturage.

Bean growers of northern and central California recently met in Sacramento and organized the Central California Bean Growers' Association, for the purpose of marketing and even encouraging more general growing. Over \$3,000,000 worth of bean crops are represented in the membership.

Rice growers of Glenn County recently met with Horticultural Commissioner Wrenn and discussed methods of eradicating water grass and other pests of rice fields. A committee was appointed which will investigate the advisability of forming a regular association of rice growers.

## Central California

Salinas, Monterey County, held a tractor demonstration last week.

Farmers near Oakdale, San Joaquin County, who planted rice last year, will grow wheat this year.

Cattlemen of Merced County are organizing in support of the California Cattlemen's Association.

Raisin growers of Kingsburg, Fresno County, are generally signing the new contract with the Associated.

Farmers of Fresno County are discussing with Adviser Smith as to extensive cotton planting in that county.

The preliminary arrangements for the Madera irrigation project are practically completed and dam site located.

If Terra Bella, Tulare County, is given the normal crop of olives next year she estimates it will aggregate 2000 tons.

Farm Adviser Smith of Fresno County is urging more general planting of shade trees along the state highways.

County Commissioner Collins of Tulare is urging immediate spraying of peach trees which have shown any indication of blight.

Empire, Stanislaus County, which has been a great producer of peas is now contemplating planting an immense crop for next season.

The state sealer of weights and measures has ruled that hereafter the minimum weight of a sack of potatoes shall be 100 pounds.

The Farmers Educational and Cooperative Union of the state, in session in San Jose recently pledged closer cooperation between consumer and producer.

The Farmers' Union of Paradise recently elected O. P. Pearson, president; Mrs. J. W. Benolt, secretary. Delegates were elected to the Stanislaus County Union.

An application has been made to the state water commission for permission to appropriate 60,000 acre-feet per annum from Chowchilla River in Madera, Merced and Mariposa Counties.

The president has signed a proclamation eliminating 431,000 acres from the Sequoia National Forest. Some of these lands near the Kern River, known as Kennedy Meadows, are rich pasture lands.

Foresters making observations in the forests of the Sierra Nevada, especially in the Rubicon River and Tule Indian reservation districts have discovered over \$65,000 of direct insect damage to the forests.

The Farmers' Union, in connection with laborers and consumers leagues, recently met in San Jose and discussed methods of aiding the federal government by producing and conserving.

Meetings of San Joaquin County farm bureaus scheduled for January are, Farmington, 2; Lavelle, 4; Directors, Stockton, 5; Thornton, 7; Linden, 9; Douglass, 10; Lockeford, 14; Ripon, 17; Manteca, 18; Escalon, 21; Live Oak, 28.

A meeting of members of the Prune and Apricot Growers' Association of Santa Clara County was held at Sunnyside on December 6 to consider the building of a packing house at that place. President Coykendall of the association was present.

## Southern California

Coachella Valley recently shipped its first car of lettuce for the season.

Imperial Valley is shipping out immense quantities of cotton and sorghum grains.

Tractor demonstration and school at Riverside Experiment Station, February 11-16.

San Bernardino had nearly 1000 birds on exhibition at its annual exhibition last week.

The Janss Investment Company is anticipating the rainy season by putting two big tractors on one plow.

Stockholders of Fallbrook Olive Association have voted to market through the California Growers Association.

Imperial Valley's grape fruit crop is showing up its usual high qualities and big demand is cleaning up the output.

The third annual farm assembly of Imperial County will be held at Holtville February 5.

There is a project on foot to reclaim rich lands of the Palo Verde Valley along the Colorado in eastern Riverside County.

San Dimas, one of Los Angeles County's largest lemon producing sections, recently shipped 56 cars which averaged around \$4.60.

Imperial County now first in the production of butter fat, claims to have received during the past year over \$4,000,000 for its butter production.

Board of Directors of the Victor Valley Irrigation District are working for a supply of water which will bring the lands of that rich section under more intensive culture.

Farmers of the Coachella Valley, Riverside County, are in arms over application of appropriators of waters which it is claimed are needed on the farming lands of that valley.

It is hoped that 20,000 acres of rich land of the upper Coachella Valley may be brought under irrigation by storing storm waters in canyons of the White River and other streams.

The California Lima Bean Growers' Association made a small before-Christmas payment on all beans delivered. Payments already made aggregate about seven cents per pound to every grower.

The farm bureau of Imperial County has appealed for a continuation of the activities of the labor bureau working under the county council of defense. The labor situation in Imperial Valley is serious.

A road connecting the Imperial Valley-San Diego State Highway with the Laguna mountains will open up some of the most picturesque scenery in the Lagunas. It is only about ten miles long and will cost \$30,000.

Many Los Angeles County vegetable growers have made contracts with the British government to grow turnips. The turnips are to be loaded on ships at San Pedro and taken to British Columbia where they will be evaporated and sent on for use of the soldiers. The contract price is reported to be \$13.50 per ton.

Deputy State Horticultural Commissioner Hoyt and County Commissioner Sharp of Riverside recently stopped erection of a cotton gin shipped to Blythe after operation in boll weevil section of Texas. A careful examination was made however and no weevil were found.

## The Coast and General

Florida reports its lettuce crop in fine condition.

United States has now over 500 cow testing associations.

The prune crop of the northwest was exceedingly light this season.

The Carnation Creamery Company's plant in Idaho was increased by \$175,000 additional equipment.

Large attendance was given at the irrigation institute held recently at North Yakima, Washington.

Boise Valley in Idaho is making one shipment of seven cars of honey. It all goes to the British army.

One fruit company at Yakima, Washington, has supplied to the army 30,000 gallons of cider vinegar.

One sourkroot factory at Vancouver, Washington, had an output of over 1000 tons during the past year.

The construction of a sugar factory in Franklin County, Idaho, has been deferred until some other year.

A syndicate of San Francisco bankers has just purchased \$5,500,000 of Imperial Valley irrigation bonds.

Canada lost \$9,000,000 by forest fire in 1916 which is more than six times the amount spent in forest protection.

The Walla Walla Valley, Washington, has shipped more than \$14,000,000 worth of product in the past 12 months.

The sugar situation in the Hawaiian Islands is being complicated by threats of strike on the part of Japanese workers.

Arizona cotton growers are finding their mistake in planting exclusively to cotton and then paying long prices for hay and stock feeds.

There will be a corn growers and stockmen's convention at College of Agriculture, University of Illinois, sometime during January.

The output of dairies of Clallam County, Washington, has greatly decreased because of many dependable farm helpers entering the army.


Three cars of pure bred Ayrshires were recently received at Minden, Nevada. Some were winners and many, descendants of winners at the P. P. I. E.

The Utah state experiment station is investigating as to a mechanical beet topper which promises to work effectively and without undue cost. It tops, digs and rolls beets into the wagon without their being touched by hand.

The war board of the railroads has urged that every railway give as prompt transportation and delivery of fertilizers as possible. The Broadway limited, between New York and Chicago, and other high class expensive trains, have been taken from many Eastern railways and the rolling stock used so far as possible for actual war service.

The Philippine bureau of agriculture is making a campaign against the pests of the islands, and the Mindanao Herald, published at Zamboanga, hopes it will result in far greater production of hemp fiber and that Zamboanga will be made one of the world's great fiber distributing stations. Because of the importance of fested with either injurious insect or this industry no plant will be permitted to pass quarantine which is infungus.





**Have You Learned that  
KOW-KURE Can Make a Difference?**


It is common knowledge in thousands of the best dairies from coast to coast that Kow-Kure has no equal as a medicine-herb for cows that are "off color." Such common ailments as Abortion, Barrenness, Retained Afterbirth, Scouring, Lost Appetite and Bunches are promptly eliminated by the active medicinal qualities of Kow-Kure, working on the digestive and genital organs.

As a preventive of disease, the occasional use of Kow-Kure will pay big returns in increased vitality and improved milk yield. Used before and after calving, Kow-Kure will prevent Milk Fever and Retained Afterbirth, and enable the system to resist the other diseases which frequently start at this period.

If you have a cow that is not yielding as she should, something is wrong with her organs of production. Try Kow-Kure and note the prompt improvement in appearance and yield.

Sold by druggists and feed dealers; 55c and \$1.10 packages. Send for free treatise, "The Home Cow Doctor."

**DAIRY ASSOCIATION CO.,**  
Lyndonville, Vt.



**Santa Anita Rancho**  
Anoakia Breeding Farm

**ARABIAN THOROUGHBREDS:** Two-year-olds, sired by imported Stallion Ibn Mahrus, head of our Arabian stud. Dams are the choicest thoroughbred mares on Santa Anita Rancho.

**SADDLE HORSES:** Some of which were sired by Ibn Mahrus, world renowned imported stallion. These horses are mostly three-year-olds.

**POLAND-CHINA AND BERKSHIRE BOARS:** Four to nine months old. Sired by famous Poland-China herd boars, Banker's Boy and Glenview Wonder. And Berkshire boars, Kintyre Laird, Grandson's Duke and Fashion's Longfellow 5th. The dams are from the best blood lines. Most all these animals have winnings at World's Fair. Write for catalogue.

**HOLSTEINS:** We will sell a number of young bulls. Some sons and grandsons of the noted State Record Cows. Prince Gelsche Walker, and bulls from one World Record cow and two California State Record Cows. Write for details.

Correspondence Invited

**Anita M. Baldwin**

**W. H. TAYLOR, Superintendent**      **Santa Anita, Cal.**

**Poland Chinas, Medium Type**

Choice breeding stock, both sexes from Panama-Pacific International Exposition prize winning strain; 12 firsts, Junior Champion and Reserve Grand Champion Boar. Junior and Senior and Grand Champion Sows, \$2145 cash awards. Write to

**M. Bassett**  
Hanford, Kings County, Cal.



**Shorthorn Cattle and Berkshire Hogs**

Shorthorn herd headed by Count Glory 426982, grand champion at the California State Fair, 1916. Berkshire herd won Premier Exhibitor's banner at P. P. I. E.

513 Hearst Building  
San Francisco

**CARRUTHERS FARMS**  
Mayfield, Cal.

**Hauser's Digester Tankage**

GIVES GREATEST VALUE FOR LEAST MONEY  
IT MAKES THEM FAT.

**Hauser Packing Co.**      **Los Angeles**

**Shorthorns**

Bred for Range Purposes and of Pure Scotch Blood Lines.  
Show Herd won highest honors in 1917.  
Visitors welcome — information cheerfully given.

**T. T. Miller**  
So. Normandie St., Los Angeles, Cal.

**HOLSTEIN-FRIESIAN CATTLE**

Registered young bulls from best families.

**REGISTERED BERKSHIRE PIGS**

Masterpiece, Longfellow, Robin Belle, Rookwood, Duchess and Rival's Champion's Best Strains. Fine individuals of both sexes — we pay registration fee.  
Careful attention given to mail orders

**Whittier State School**  
WHITTIER, CALIFORNIA

## Corn Silage Cuts Beef Production Cost



THE University of Missouri college of agriculture has recently published data from two feeding tests which should be of interest to every beef producer in the United States, especially with the present high cost of feeds and beef. Seventy head of two-year-old steers were fed in two tests conducted during two different years: first, to secure data concerning the possibility of fattening cattle by the extensive use of corn silage without the use of additional corn in the ration; second, to study the importance of a high protein concentrate when combined in a ration of shelled corn, corn silage and alfalfa hay; third, to compare the relative value of old process linseed oil meal and cottonseed meal in rations containing corn silage. The first test was conducted during the winter 1915-16 and the second during 1916-17. The two tests lasted 133 days and 130 days respectively.

In both years the cattle which received a liberal allowance of corn silage with alfalfa hay and cottonseed meal or linseed oil meal made the cheapest gains. The steers in the first trial which received cottonseed meal, corn silage and alfalfa hay made a profit of \$9.87 per steer. The cost of grain per hundred pounds, with the gain on hogs credited at \$8.00 a hundred, was \$10.15. The cost per hundred pound gain on the steers which received linseed oil meal, corn silage and alfalfa hay was \$8.57, and the profit per steer was \$14.56.

During the second trial the cheapest gains were likewise made by the steers which received cottonseed meal, corn silage and alfalfa hay; linseed oil meal, corn silage, and alfalfa hay. The cost of gain per hundred pounds on cattle, with the gain on hogs credited at \$13 a hundred, was \$14.28 in the case of the lot which received cottonseed meal, corn silage and alfalfa hay; and \$14.06 in the case of the lot which received linseed oil meal, corn silage and alfalfa hay. The profit per steer was \$11.59 and \$15.62 respectively. With corn at \$1.00 a bushel and silage at \$6.00 per ton the profit per steer would have been \$19.38 and \$23.57.

The following is an extract of the conclusions drawn from the experi-

ments by H. O. Allison, who conducted the investigations: "The records of feed as fed in the lots receiving cottonseed meal or linseed oil meal with corn silage and alfalfa hay show the possibility of fattening from three to four two-year-old steers per acre of corn. The average daily gains in live weight made by the cattle in the lots which received no corn other than contained in the silage, while not as large as those in the lots where shelled corn was fed, were satisfactory for fattening cattle. The average daily gains in live weight on the cattle were increased by the addition of a high protein concentrate to shelled corn, corn silage, and alfalfa hay. The gain made by the hogs was greater in the lots which received linseed oil meal than in those which received cottonseed meal, both when combined with shelled corn and when fed without corn.

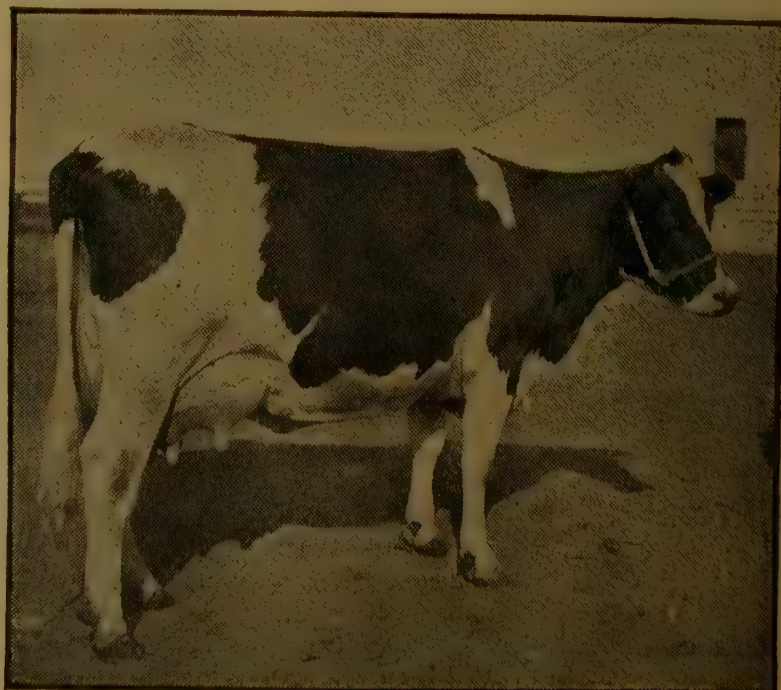
"The steers which did not receive shelled corn in their rations, although not the best, were sufficiently satisfactory to command a good price and to make a good grade of beef, as indicated by the net profit per steer. The difference in the market price of the cattle was not sufficient to justify the feeding of shelled corn in the first trial. In the second trial this difference was sufficient to justify the feeding of corn at \$1.00 a bushel and silage at \$6.00 a ton, but it was not sufficient to justify the feeding of corn at \$1.50 a bushel and silage at \$11.50 a ton.

"Judging from the two tests it may be said that it is ordinarily advisable to feed a high protein concentrate to fattening cattle which receive shelled corn, corn silage and alfalfa hay. The net profit per steer was greater in both trials in the lots which received linseed oil meal rather than cottonseed meal, both when fed with shelled corn and without corn."

### FEED CONCENTRATE WITH SILAGE

Silage alone does not constitute a balanced ration. It is comparatively rich in carbohydrates and fats, and deficient in protein and mineral matter. For this reason best results are to be had only by the use of supplementary feeds comparatively rich in protein.

Alfalfa and clover hay, linseed and cottonseed meal, and feeds of like nature are suggested by the University of Missouri college of agriculture for this purpose.



Morris' Great Cow

The Holstein-Friesian Association of America is calling attention of Eastern breeders to the great work done by Aggie Acme of Riverside. She brings World's Championship to the Pacific Coast by producing 1881.77 pounds in 365 days strictly official test.



## The Babcock Test



VERY dairyman ought to own and use a Babcock outfit for testing the butterfat of his cows' milk.

Under normal conditions a creamery patron may expect some slight variation in the test of cream he delivers to his creamery, but certain conditions cause material fluctuation. These conditions result in much worry on the part of the creameries because of the difficulty of explaining them satisfactorily to the dairyman.

Among the causes for variation in cream tests are improper speed of the bowl, through not turning the handle of the machine a sufficient number of times per minute; low rate of inflow, which reduces the volume of milk running through the separator in a given time; and the amount of water used in flushing the bowl. The latter is one of the most frequent causes for marked variation in tests. Since approximately half of the water used in flushing a bowl will go into the cream can, if the same amount is not used each time the cream test will vary, being lowest when the larger amount of water is used, and vice versa. When the test has dropped, usually the pounds of cream have increased proportionately. This variation is frequently the source of much suspicion on the part

of dairymen toward the creamery, but the trouble could be eliminated entirely if more dairymen understood and used the Babcock test. The simplicity of the butterfat test makes it desirable for the dairyman to own an outfit. The value of its results, especially in herd testing, makes it indispensable. If, however, the dairyman has no tester he may check his creamery test by having a sample tested by some disinterested party. During the past year over 500 samples of milk and cream have been tested by the Dairy Division at the University Farm at Davis for dairymen in different parts of the state. These samples represent tests of cream where dairymen desire to check their creamery tests, tests of milk from individual animals under observation for production, and tests of skim milk in order to detect separator losses. In sending samples of either milk or cream the dairyman should bear in mind that the sample must be representative of the lot from which it is taken, which will be the case only when the larger lot has been thoroughly mixed by stirring or pouring previous to sampling. Samples mailed should be sent in sealed bottles and carefully packed to prevent leakage and breakage. Bottles should be filled, so that samples will not churn in transit.

## Cow Testing Associations

Professor E. C. Voorhies favors us with directory of cow testing associations of the United States up to July 1, 1917. It is compiled by the dairy division of the bureau of animal industry, United States department of Agriculture.

In the chart showing number of cow testing associations in operation on July 1 of each year the fact is developed that Michigan was the first and in fact two years ahead of other states in cow testing work. On July 1, 1906, she had one association. A year later she had four, and, strangely, the following year had only two. But that year Maine and New York entered the lists; Maine with three; New York with one association. After that the increase is rapid year by year. California's first association is reported in July 1, 1909. We take it of course this was the Humboldt County Association. In 1910 California had three associations and has increased the number until she now has 15. The increase in associations in the United States is shown by these figures: July

1, 1906, one; '07, four; '08, six; '09, 25; '10, 40; '11, 64; '12, 62; '13, 100; '14, 163; '15, 217; '16, 364; and July 1 of this year, 469.

The state with the greatest number of associations, as might possibly be guessed by many, is Wisconsin. She now has 81 associations. The second in the list—and we venture it is few guessers who would choose the state which is second, is little old Vermont. She has 47 associations. New York is next with 43. In the number of herds which are members of these associations Wisconsin leads, as she has 2387. New York comes second, but little Vermont crowds her close. New York has 1022, Vermont an even thousand. The number of herds in California's 15 associations is 581, with 18,805 cows, or an average per association of 38.7 herds, or 1253.6 cows. The number of milk cows in the United States, July 1, 1917 was 23,372,200. Less than one per cent, 0.91 per cent, are members of these associations; in other words there are members of the associations 211,966 cows.

## Slaughtering at Home Saves Money

Slaughtering home meat on the farm saves the farmer money, saves freight on live animals to market and the return freight on finished products, utilizes labor on the farm at a time of the year when it is relatively unproductive, permits the housewife to increase her bit in food production and conservation.

Much of the commonly practiced farm killing is wasteful in that the fat from the offal is not carefully saved. If kept clean all fat is edible. That which is soiled should be saved for home soap making. Cheek and head meat of beefs should not be wasted. It is splendid meat for mince meat or hash meat. First and second stomachs make valuable, edible meat (tripe) and are not hard to clean. They can be worked up into sausages

and head cheese. Every farmer can afford a bone grinder to utilize the bones for poultry and hogs. Non-edible offal should be cooked for feed for hogs and poultry. This is a better practice than feeding it raw.

In the short course in butchering and cutting and curing of meats at the University of Missouri College of Agriculture special emphasis is placed on the economical handling of the meat animals under farm conditions.

Meats cured on the farm do not have the uniform cure of the packers' meat. Much of the bacon is too salty to eat. This is largely the fault of the farmer in not giving careful attention to details. Country cured meats can be made uniform, and of a flavor and quality not attained by the packing houses.

### PERCHERON BREEDERS

At the recent meeting of the Percheron Society of America, in Chicago, the president in his opening address expressed the opinion that this was no time for pessimism in the horse business. Breeding has been curtailed materially during the past few years, but the demand at the present moment is good, and even considering the high cost of feed draft horse breeding will prove profitable. He suggested a series of horse breeders' shows during the coming year.

Secretary Dinsmore reported great growth of the society during the past seven years. At that time the society had about 2850 members. It now has increased until there are over 9000, and the resources, funds and securities are in excess of \$106,000. The last year has been the banner year of its history as to the number of registrations and transfers. Ten thousand five hundred and eight registrations were made during the year. All but about a thousand of these were American bred.

After the election of directors the following officers were elected for the coming year: E. B. White, president; W. S. Dunham, vice president; and of course Wayne Dinsmore continues as secretary.

### CURE BEEF AT HOME

Farmers can not only reduce their living expenses but they can perform a patriotic service by curing their own meats. Many farmers cure pork enough to supply the family needs but very few attempt to cure beef. P. F. Trowbridge of the University of Missouri College of Agriculture offers the following suggestions for curing beef on the farm.

Any of the brine or dry mixtures which give good results in curing pork can be used satisfactorily for beef, but since beef is leaner than pork, it should not be allowed to remain in the brine or mixture quite so long or it will become hard and salty.

Dried beef should have the same cure as corned beef, but it should not be allowed to become too salty. It should then be washed to remove the excess of the cure, and smoked if the smoke flavor is desired. A very good country practice is to dry cure the beef with salt and brown sugar, using about a fifth as much sugar as salt, rubbing the meat very thoroughly with the cure every two or three days for about two weeks. It should then be washed, wiped, and hung up to dry in a warm place or transferred to the smoke house and given a light smoke.

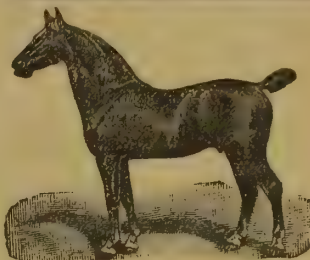
Corned beef is at its very best when it has been in the cure about ten days. If kept in the cure more than a month, it needs considerable freshening before cooking. If the red color of the beef is to be preserved, use a small amount of saltpeter, not more than two ounces to each hundred pounds of the meat. This improves the color of the beef but is detrimental in that it tends to harden the lean fibers.

### PLANT SILAGE CROPS

This is a good time to plan for next season's ensilage crops. There have been hundreds of silos erected during the past few months; there will be other thousands, we believe, in the very near future. As we have said before, "place your order early" will apply to ensilage cutters and other appliances which may be needed to secure the greatest return from feeds raised on the farm. With present prices of concentrates, the successful dairyman is producing and preparing to utilize as much of his feed as possible.

Warranted to Give Satisfaction

## Gombault's Caustic Balsam



Has Imitators But No Competitors

A Safe, Speedy, Positive Remedy for

Curb, Splint, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs and Lameness from Spavin, Ringbone and other bony tumors. Cures skin diseases or Parasites, Thrush, Diphtheria. Removes Bunches from Horses or Cattle.

As a Human Liniment and Antiseptic for external use it is invaluable.

Every bottle of Caustic Balsam sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by parcel post, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

The Lawrence-Williams Co., Cleveland, O.

## TAGUS

### Duroc Jerseys

Home of California  
Defender, World's  
Champion Boar.

Choice pigs for sale, either sex. Big litters, prices reasonable, quality guaranteed.

Place orders early as demand will exceed supply before war ends.

(Swine Dept.)

Pacific States Corp.

Tulare, Cal.

H. C. MERRITT, Jr., Manager

## Fatten Your Hogs

To get fat hogs you've got to feed right. One of the best hog foods available today is

### Cann's Oriental Beans

Imported by us direct from China, where its merits have been appreciated for many years. These beans are bug-proof and thrive almost anywhere. Not affected by frost. Invaluable also as a cover crop. Can be planted for their forage and later turned under for green-manuring.

Per lb., 10c; 100 lbs., \$7.00. Write for prices on large quantities. SEND FOR OUR CATALOG OF FORAGE AND COVER CROPS, POTATOES, ETC.

### ARTHUR CANN

Seedsman

197 S. First St.

San Jose, Cal.

## KEEP IT HANDY

You can never tell when a horse is going to develop a Curb, Splint, Spavin, Ringbone or lameness. Yet it is bound to happen sooner or later. And you can't afford to keep him in the barn. Keep a bottle of

### Kendall's Spavin Treatment

handy at all times. John Sayer of 324 Bronson Ave., Ottawa, Ont., writes: "I would not be without Kendall's Spavin Treatment at any cost. It is a valuable liniment for both man and beast."

Get Kendall's Spavin Treatment at any druggist's \$1.10 per bottle—6 for \$5.50. Treatise on the Horse—free—or write to

Dr. B. J. Kendall Co. Enosburg Falls, Vt., U. S. A.

### DUROC JERSEYS

Sows, gilts and a few boars of the best breeding FOR SALE

H. P. Slocum & Son

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### TREES

**Eureka Walnuts** are the Best—Grafted on native black roots. We also have some grafted on paradox roots, which means a hardy root system and a very prolific grower. Prices reasonable, write today, tomorrow never comes. Geyer Bros. Walnut Nurseries, 214 S. Alhambra St., Alhambra, Cal.

**Here is Your Opportunity to Secure A-1 citrus trees.** We offer several thousand 2-year-old lemons: Eureka and Vina Franca, also Washington navel; also several hundred Valencia on sweet root. We call these good trees and we know whereof we speak. ALBERT JACKSON, Upland, Cal.

**Let Us Show You Our Ideal** twelve hundred acre orchard from which these perfect yearling citrus trees were propagated. Healthy straight stock, budded one foot high on sour root growing in our own nursery. References: R. R. Morris, East Whittier, Cal.

**Placencia Perfection Walnut Trees** on black root. Still have a limited supply of first class stock. Scions used in grafting taken from trees showing a high record for crop and quality after seven years of careful selection. Hugh T. Thomson, Orange, Cal. Phone 502R1.

**Pear Trees**—Offer several thousand Bartlett's, 2 and 3 feet, heavy caliper at 9c each. French prunes. Trees of all kinds. No agents; we sell direct. Write for price list. Carlton Nursery Co., Carlton, Ore.

**By Far the Lowest Priced** means of reaching a buyer for what you have to sell is through classified advertisements in California Cultivator. The cost is only 3 cents per word per issue, with a minimum of 35 cents.

**For Sale**—Valencia trees, extra fine yearlings, straight, thrifty, sour root, high buds, not fertilized, fine soil for balling. Will contract for spring planting. S. R. Coate, Anaheim, Cal.

**For Sale**—15,000 sour orange seedlings. One year, 8 to 20 inches. Nothing better, \$25.00 f. o. b. Randall Bros. Nursery Co., Whittier, Cal.

**Olive Trees**—Mission, Manzanillo, Ascolano. Propagated by me from trees of known bearing qualities. Guaranteed. L. T. Schwacofer, Hemet, Cal.

**Citrus Trees**—All kinds, any quantity. Butler's Morning Side Nursery, Lamanda Park, Cal.

**Walnut Trees**—Placencia Perfection, selected grafts guaranteed stock. Wm. Pollard, South Pasadena, Cal.

**Fig Trees**—Thrifty, large Calimyrnas and Capris. Correspondence invited. C. A. Nelson, Exeter, Cal.

**Apricots, Olives, English Morello Cherries** and Arizona Ash. First class trees. C. E. Moyer, Hemet, Cal.

**For Sale**—French Mayette and Payne Walnut grafting wood, 5c foot. Bowman-Kuhn Ranch, San Jose, Cal.

**Apricot Trees** For Sale—A choice lot. Carsten Truelsen, Nurseryman, Hemet, Cal.

**Citrus Nurseries**, Murphy Oil Company, East Whittier, California. Selected stock for sale; inspection invited.

### SEEDS AND PLANTS

**Recleaned Alfalfa Seed** of known purity and vitality. Grown under various soil and climatic conditions. Write us of your conditions and let us help you in selecting the proper kind of seed to plant for largest crops. Order direct and save middlemen's profit. Desk B. BOMBERGER SEED CO., Modesto, Cal.

**ORDER YOUR SEEDS NOW**—If you are going to need any seed for next season now is the time to render your order. It may be impossible for you to buy what you need later. V. A. Peterson Alfalfa Seed Co., Arbuckle, Cal.

**ALFALFA SEED OUR SPECIALTY**—Strawberry Plants—500,000 Brandywine, Guar. 1st class true to name at special price to Cal. growers. 50 other varieties. Write for prices and Catalog. BUNTINGS NURSERIES, Box 200, Selbyville, Delaware.

**Alfalfa Seed**—Common variety, Hairy and Smooth Peruvian. Grown under ideal conditions. Do not buy until you have compared my prices and samples with seed others offer. E. F. Sanguinetti, Yuma, Arizona.

**Strawberry Plants**—Thoroughbred strawberry plants. Early Ozarks, Gold Dollar, Wm. Belt, Goodell. \$2.50 per thousand. Superb Everbearing \$10.00 per thousand. Mr. J. Christiansen, R. F. D. 2, Canby, Oregon.

**Rhubarb Plants**—Crimson Winter Burbanks \$3.00 per hundred; Victoria \$3.00, Wagner's Giant Crimson Winter \$3.00. 50 cents per dozen. Currier Bulb Co., Seabright, Cal.

**Strawberry Plants**—Gold Dollars, Magoons, Kelloggs Prize, Marshall's, Brandywines, and Mitchell's Everbearing. Prima Vista Gardens, R. R. 4, Arlington Sta., Riverside, Cal.

**Rhubarb**—\$1127.00 from one acre. A crop every month of the year. Write to me and I will tell you how you can do as well. J. M. Stone, Lodi, Cal., Route 4.

**5000 Yellow Calla Bulbs**—Elliottiana. 5000 Asparagus roots. William Richard, Santa Cruz, Cal.

**Mr. Alfalfa Grower**—If you want good seed at the lowest price, write me for samples and prices. Smooth Peruvian a specialty. O. C. Nordahl, Bard, Cal.

**R\*O\*S\*E'S** 50 cents per dozen. Write for Catalogue C, and special prices. Kavan Nurseries, San Bernardino, Cal.

**New Crop Alfalfa Seed** now ready. Not the lowest in price, but high in quality. Leo Turner, Yuma, Arizona.

### HOGS

**The Billiken Brand of Chester Whites**—

Entirely sold out of bred sows and gilts. Have a few open gilts of March and April farrows; also 6 boars, same age. Have 9 young tested sows to offer for late December shipments. These have each farrowed once and will be bred for a late March or early April farrow. Fall pigs, both sexes, now being weaned and will be ready for delivery during December. Good breeding stock is getting very scarce and rapidly increasing in value. If you want some of this easy feeding, melon type, get busy with your orders. C. B. Cunningham, Mills, Cal.

**Grape-Wild Farm Berkshires**—World's Fair Grand Champion Grand Leader 2nd heads our herd, not only himself a champion but the sire of champions. At the 1916 California state fair his daughters won all the senior sow classes including the grand champion sow. At the 1916 Oregon state fair a Grand Leader sow was junior champion. We are offering a number of choice boars of exceptional breeding and are also booking orders for fall pigs. A. B. Humphrey, Escalon, San Joaquin Co., Cal.

**20 of the Finest Boars Ever Sold** to improve the herds of pork producers. High price of pork assured because of the scarcity of breeding stock. Improve your herd with a good Poland-China boar. I have them from six to eighteen months old, priced from \$40 to \$100. Saving all sows for Kings County Poland-China Breeders' Sale, February 20. Bernstein's Ranch, Hanford, Cal. Hogs shipped on approval.

**Superba, World's Grand Champion** Poland-China boar and one of the greatest sires of the breed. Spring boars ready for service, also few sows bred to this noted sire, reasonably cheap. Rough's Greenfields, Arlington Sta., Riverside, Cal.

**Berkshires**—First prize junior boar; first and second senior boar pigs including junior champion; fifteen spring and fall open gilts sired by Ames Rival 115, champion boar; and two junior yearling bred sows priced cheap for immediate sale. F. D. Hall, Perris, Cal.

**We Pay Cash for Hogs of All Sizes**, weights and breeds. Any number from one to several thousand considered. What have you? Durbin and Forbes, 722 San Fernando Building, Broadway 4170, Los Angeles.

**PLW. Duroc-Jerseys**, the most consistent winners wherever shown. Peters, Lamson & Walker, Devore, San Bernardino County, Cal.

**Big Type Durocs**—Well grown out February and March pigs of either sex in any quantity. We ship only the tops and butcher the culls. F. M. Johnson, Napa, Cal.

**Most Money in Duroc-Jerseys**—Bred sows and weanlings, either sex all the time. Delta Farm and Live Stock Co., Colton, Cal.

**Large Yorkshires**—The ideal hog for the progressive farmer. Service boars and fall pigs, both sexes, for sale. A. L. Tubbs Co., Callstoga, Cal.

**Large Type Poland-Chinas** are prolific and profitable. Can furnish boars any age at reasonable price. J. A. Crawshaw, Hanford, Cal.

**Rancho Rubio Durocs** all sold out except some choice fall boar pigs. Write for prices. Elmer Lamb, Ceres, Cal.

**Greenwood Farm Durocs**—"Size with Quality." H. C. Witherow, Palo Cedro, Shasta County, Cal.

**Berkshires**—Sired by Star Leader, the \$1,500 boar, ready for service. Kounias Registered Stock Farms, Modesto.

**Durocs**—P. & L's Defender by Defender heads herd. Joseph Prendergast, Route 2 Box 87A, San Bernardino, Cal.

**Registered Durocs of the big type**—Cholera immune. Derryfield Farm, Odd Fellows Building, Sacramento, Cal.

**Carruthers' Farm Berkshire Hogs**—Our herd won Premier Exhibitor prize at the P. P. I. E. Exposition, Mayfield, Cal.

**Poland-Chinas**—A few good breeding boars. S. F. Williams, Orland, Cal.

### PATENT ATTORNEYS

Patents that protect are secured through The PACIFIC COAST PATENT AGENCY, INC., Savings & Loan Building, Stockton, California; send for our little booklet on "PATENTS"

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**For Sale**—One of the best 80 acre ranches in Kern County. Has a first class water right, also an Artesian well. Black sandy loam land. Fine state of cultivation. Small house. Located on the railroad, close to school, good neighborhood, all settled up around it, near a good trading point. Will sell for \$135.00 an acre. \$35.00 per acre cash, and the balance long time 7 per cent. Central Real Estate Co., 909 Baker Street, Bakersfield, Cal.

**Oregon, California Government Lands**. Latest Green Booklet Free. Tell "How, Why, Where." Write Joseph Clark, Sacramento.

**Free List of Monterey County bargains** Bohannon Realty Co., King City, Cal.

### CATTLE

#### OREGON JERSEYS

**Bull, Fussy Fern's Noble Boy**, Junior Champion, his dam also first prize State Fair, R. of M., 488 lbs.; other bulls for sale, whose dams have made up to 1040 lbs. There is butter in these pedigrees. Write for one.

Reid Stock Farm,  
Second Floor Wilcox Bldg.,  
Portland, Oregon.

**Guernseys**—We will sell stock from our prize winning, high producing herd, at reasonable prices, valued according to individuality and breeding. Our supply is limited but if the buyer wants a number of animals and will write us we will furnish him with particulars. Revada Guernsey Farm, Yountville, Napa Co., Cal.

**Pedigreed Bull Calves**, Registered \$50.00, unregistered \$25.00. Service bulls \$75 and up. Good individuals from producers. Cows with yearly records at a profit, tuberculin tested. Write or come and select. Horses. N. H. Locke Co., Lockeford, Cal.

**Registered Holsteins out of A.R.O. Dams**. Grandsons of King Korndyke Hengerfeld Ormsby who has 20 A.R.O. daughters with records of over 29 pounds. Look up this sire. Geo. Kounias, Modesto Farms, Modesto, Cal.

**D. O. Lively Stock Farm, Inc.**, 215 Hobart Bldg., San Francisco. Breeders of Hereford cattle. A few choice heifers for sale. We buy and sell live stock on commission. Farm at Mayfield.

**Venadera Jerseys**, the herd with official yearly records. Calves of both sexes for sale. Guy H. Miller, Route 1, Modesto, Cal.

**Veramont Stock Farm Pure Bred Herefords**. Location Plumas County. Ideal for stamina and vigor. Bulls for sale. Address H. M. Barnardover, San Jose, Cal.

**Registered Holstein Bulls** from high producing dams for sale at reasonable prices. Also a few choice females. McAlister Sons, Chino, Cal.

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**Young Holstein Bulls**, bred right, grown right, priced right. Creamcup Herd. M. Holdridge, Modesto, Cal.

**Sunshine Farm Jerseys**—Bulls from officially tested dams for sale. E. E. Greenough, Merced.

**Registered Holstein Bulls** of various ages for sale. Millbrae Dairy, Millbrae, Cal.

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### MACHINERY

**WHY BUY NEW? SAVE HALF** Material guaranteed. It's second-hand after used few times; but not worn out. **USED AND NEW GALV. AND REDWOOD TANKS**—2000, 3000, 4000, 5000, 6000, 10,000, 25,000-gal. redwood, about half-price; new 1000-gal. galv., \$35; 2000, \$48; used 5000 galv., \$75; 10,000 galv., \$150; 17,000 galv., \$250; 25,000-gal. redwood, \$35; many others guaranteed. **PUMPS, CENTRIFUGAL**, rotary, single, double-acting, deep well pumps. No. 2 Ames double-acting, fine, \$145; 50 brass cylinders all sizes; old-style pump head, 18-inch stroke, \$38; small Bulldozer, \$42.50; large size, 20-inch stroke, \$68; 24-inch Stearns pump, \$75; 2, 3, 4, 5 hor. centrifugals. No. 5 two-stage horizontal B. & J., good as new, cost \$400, our price, \$150; 25 others.

**Engine snaps**: 2½ h., \$39; 3 Foos, \$115; 18 Fairbanks, \$275; 34 Lambert, \$350. Many others.

**WINDMILLS, SPECIALLY PRICED** 8, 10, 12, 16-ft. sizes. Pump as much water as new ones, at half price; costs nothing for fuel.

**900-GAL. WAGON TANK AND WAGON**, \$90; 700-gal. galv. wagon tank, \$48; slip, \$5; lawn mower, \$6; low down tank pump, \$6; diaphragm pump, \$16; broadcast seeder, \$13.50; 60 ft. 10-in. riveted pipe, \$25; 4 gang Stockton plow, \$28; 8-ft. orchard disc, \$37.50; 14-in. sidehill plow, \$14; weeder, \$14; power sickle grinder, \$9; 4 gang 10-in. mouldboard, \$25; 4 gang and 5 gang Flying Dutchman disc plows.

**RANCH MACHINERY** Walking plows \$4 to \$14; two mowers, \$28, \$35; 10-ft. rake, \$22; 5-ft. Fresno, \$12 to \$14; two-wheel scrapers, bone grinders; 150 new discs for plows, half price. Harrows, cultivators, ½-in. cable, 6c; belting; sundries. DEMMITT CO., downtown office, upstairs, 120 N. Main. Yards, 816 Yale, Los Angeles.

**Gasoline Engines**, the largest stock of used gas engines in California from 2 h. p. to 100. Thoroughly overhauled. Machinery Exchange, 733 North Spring St., Los Angeles.

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### WANTED

**Wanted**, by established California company, ten men with rigs preferred to solicit and collect in Central, Southern and Northern California, prefer resident agents who can work part or all time, good pay and several weeks work to right parties. Address J. H. Yetter, 115½ North Broadway, Los Angeles.

**Position Wanted** as manager of orange orchard. Best of references given. Geo. F. Whitmore, 1653 4th Ave., Los Angeles. Phone West 2368.

**Ranch or Poultry Work** wanted by a single man 45 years old. Good references. Box F., Care Cultivator.

### ENGINES

**Several New and Slightly Used Engines**, ARNOTT & CO., implements, 112 S. Los Angeles St., Los Angeles.

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**Mammoth Geese**, the kind you want Stock for sale. Chas. McNeely, Alpaugh, Cal.

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**White Leghorn Baby Chicks**—Broilers are now 34 cents per pound. A 1½ pound bird can be raised in 8 or 9 weeks and will sell for 42 cents. 1000 chicks, January and February are worth \$110.00. Heating brooder and feed will cost \$50.00. Total cost \$160.00. You can raise 850 of them, sell the whole flock at 42 cents, amounts to \$357.00, leaving \$197.00 profit in nine weeks. Raise some broilers and send beef and pork to our Allies. If we don't lick the Kaiser he will lick us. We are waiting for your order now. Broilers will not be any less this year. Lyon Hatchery, Gardena, Cal.

**Order Now**, pure bred White Leghorn chicks, 15c each until March 15th, then 12c. Eggs \$1.00 per 15; \$2.00 per 30; \$6.00 per 100. Big plant, best strains foundation stock, thousands of breeders, 20,000 feet under roof, green feed and fresh cut bone fed daily. Remember, the chick or egg cost is small compared to the feed cost, so get the best. Catalogue free. New ton Poultry Farm, Dept. 3, Los Gatos, Cal.

**Mission Hatchery Chicks**—January-February. R. I. Reds, Barred and White Rocks, Black Minorcas, Anconas, Brown Buff, White Leghorns. First class utility stock, well mated; hatched right in our large modern plant. 12,000 chicks weekly. Price and quality talk, see our free circular about them. MISSION HATCHERY, Box 17, Campbell, Cal.

**Baby Chicks** from my thoroughbred and carefully selected flock of S. C. White Leghorns. Orders booked no wfor spring delivery at \$12.00 per 100, \$110.00 per 1000. Only eggs from my own and fully matured hens used in my incubators. Correspondence solicited. J. R. Heinrich, Poultry Yards, Arroyo Grande, Cal.

**Spring Chicks**—We are booking orders now. S. C. White Leghorns only selected and fully matured stock that is bred to lay used in the breeding pens, which assures strong and vigorous chicks. \$12 per 100; \$100 per 1000. H. A. Schlotthauer, Exeter, Cal., Route 4.

**Penn's Quality Barred Plymouth Rocks** are correctly bred. Blood lines that produced the WORLD'S FAIR and other noted winners BOTH in Utility and Exhibition classes. Eggs and breeding stock. Catalogue. GOLDEN RULE POULTRY FARM, St. Helena, Cal.

**Our Business** is trap-nesting and breeding S. C. White Leghorns for more and better eggs. Breeding males furnished with a pedigree having particular reference to egg production of their progenitors. Chix and eggs for sale. Write for circular. Enterprise Poultry Ranch, Chino, Cal.

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**Baby Chicks**—We start in January to hatch those sturdy youngsters, like we had last season. We will have lots of them too, but please order early. White, Brown and Buff Leghorns, R. I. Reds, Barred Rocks, and Black Minorcas. Campbell Poultry Ranch, Campbell, Cal.

**Day Old Chix**—Barred Rocks, Rhode Island Reds, Black Minorcas, Brown Leghorns, Buff and White Orpingtons. Other popular breeds a matter of correspondence. Enoch Crews, Seabright, Cal.

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**Poultry Wanted**—We pay the highest market price for all the local poultry we can get, no matter how large the quantity; also fresh ranch eggs. We remit immediately. National Poultry Co., 607 E. Third St., Los Angeles, Cal.

**Buff Orpingtons, Buff Leghorns, Bourbon Red Turkeys**—First prize winners at the best shows for the past four seasons. The Ferris Ranch, S. Reservoir, Pomona, Cal.

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**For Sale**—Rhode Island Whites, 2 dozen pullets in lots or entire lot, also a few cockerels. C. A. Pears, Box 233, Tulare, Cal.

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**Book Your Orders** for White, Brown or Buff Leghorns, Anconas, Barred or White Plymouth Rocks, Black Minorcas, and Buff Orpington chicks with the Stevenson Hatchery, Watsonville, Cal.

**"Eastman's-Bred To Lay"** Hoganized, Trap-nested, Barred Plymouth Rocks. JANUARY CHICKS. Eggs. Fairmead Poultry Farm, Fairmead, Cal.

**Official 200 Egg White Leghorns** in Washington Contest. Charles Hudson, Escondido, Cal.

**Booking Orders** for chicks, Brown Leghorns exclusively good egg strain. Mrs. G. M. Guerard, R. D. 3, Merced, Cal.

### MISCELLANEOUS

**Famous Hairy Peruvian Alfalfa Seed**—Highly recommended by U. S. department of agriculture. Only carefully selected seed shipped. Prices and samples gladly furnished on application. E. F. Sanguinetti, Yuma, Arizona.

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Registered Shires — Blackhawk Stock Ranch. Importers and Breeders. Easton & Ward, Burlingame, Cal.

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Indian Runner Ducks 280 Egg strain.—Baby ducks \$20, 100. Eggs \$6 per hundred. Rocks and Reds, \$15, hundred. Incubator 300 eggs, \$8. Expert hatcher will hatch and raise every variety of poultry on shares. Satisfaction guaranteed. Box 615, Inglewood, Cal.

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Lumber—Sash—Doors—Plumbing — Supplies—Building materials of all kinds. New and second hand. A. R. W. shingles 55 cents per bundle. Send list for estimate. Dan P. (Mission Street) Dolan. 1620-1660 Mission Street, San Francisco, Cal.

TURKEYS

Our Geese and Turkeys Win Again — Grand Champion Sweepstake Special, for best pair of birds in show. For size vigor and quick maturity, our stock are best, East or West. Stock and eggs in season, also Collie pups. Correspondence solicited. John G. Mee, St. Helena, Cal.

For Sale—Bourbon Red Turkeys. A few young toms of extra fine stock. Eggs in season. John S. Adams, R. R. No. 2, Box 20, Pomona, Cal.

Giant Bronze Turkeys and Eggs—Choice breeding stock. M. M. Reiman, Planada, Cal.

For Sale—Mammoth Bronze turkeys. The Best in The West. Geo. A. Smith & Son, Corcoran, Cal.

For Sale—Bourbon Red and White Holland Turkeys. E. A. McKinley, Ukiah, Cal., R. D.

RECORD ASSOCIATIONS

The National Society of Record Associations recently held its annual meeting in Chicago, 15 record associations being represented by delegates.

Secretary Dinsmore reported that the executive committee had at a meeting March 3 completed the draft of recommendations re sanitary laws which had been furnished to stockmen in the different states where sanitary legislation was pending, and that these recommendations, representing the best information which the members of the executive committee had been able to compile, had been of considerable value in shaping legislation in different states. He called attention to the completion of the second case which the National Society of Record Associations had had before the interstate commerce commission. The hearing had been conducted before Examiner Disque of the interstate commerce commission last January, which took practically a week's time, and the case was subsequently submitted on brief and argument. Decision had just been handed down prior to the annual meeting under which the interstate commerce commission sustained its original decision in the matter of the shipment of live stock in L. C. L. lots in virtually all points, but that in the official classification territory the weights on larger animals had been slightly advanced over the weights set in the first decision.

It was resolved, that the interstate shipment of pure bred swine by express in crates be permitted when accompanied by an affidavit of the owner to the effect that said swine to the best of his knowledge and belief are not affected with cholera and that cholera has not existed upon the premises from which said swine have been removed for a period of not less than three months immediately prior to

date of shipment. Also that said swine have not been subjected to the serum and virus treatment within 30 days immediately prior to date of shipment."

Jess C. Andrew, of the American Shropshire Registry Association, was elected president; J. R. Pfander, of the National Duroc-Jersey Record Association, was elected vice-president; Wayne Dinsmore was re-elected secretary-treasurer.

TO ALL CALIFORNIA WOOL GROWERS

You are requested to attend the 10th annual meeting of the California Wool Growers' Association, which will be held at University Farm, Davis, on Thursday, Friday and Saturday, January 3, 4 and 5, 1918. The meeting will be called to order promptly at 1:30 p. m., January 3.

An interesting program has been arranged, which will include addresses and discussions on the following subjects: "Better Methods of Selling Wool;" "The Sheep Market and Its Future;" "Auction Sale of Rams;" "Feeding Sheep for the Market;" "Livestock Shipping and the Shipper;" illustrated lecture on "Sheep and the Forest Reserve," by Mr. Rachford, of the United States forest service. The entire evening Friday, after 7:30 o'clock, will be spent discussing "National Forests and Summer Grazing." A "Mutton" banquet will be served Thursday evening. Come and take a part in this meeting. Get the habit and you will regret it if you are forced to miss a meeting. Come and meet your old friends and make some new ones.—L. L. McCoy, president; Fred A. Ellenwood, secretary.

Queries

Questions to be answered in this department should be received at the office one week before reply is expected. Write plainly on one side of the paper and sign full name and address. Unsigned communications receive no attention.

Fertilizer For Walnuts and Peaches

What is the best fertilizer for walnuts and peaches next to stable manure?—Subscriber, Pomona.

This matter of fertilizing depends very much upon soil conditions, that is if the soil is deficient in humus, as probably it is, then in place of the stable manure which is unavailable other green manure crops must be used, or straw, damaged hay, or almost any form of vegetable matter. This may be worked into the soil either by plowing or disking. It is too late this season for most of the green manure crops. One might plant rye or barley and perhaps get enough crop with the late spring rains to put a few tons of green stuff under. This lightens up and helps soil. If green manure crop is planted a quick acting commercial fertilizer would be beneficial. After the soil has been fairly well supplied with vegetable matter, benefit would be secured from the application of complete fertilizer directly to the trees, but this should be later in the season, say about March or April.

Ducks Dying

Can you tell me the cause, also the cure for the disease of my Indian Runner ducks? They are dying at the rate of six or seven a day out of a flock of 50. They are fat and healthy in every way that I can see. They drop dead shortly after being fed. Am feeding chopped alfalfa, bran, rolled barley and milo.—Subscriber, Delano.

Have your ducks been running too much in the hot sun? Sunstroke often

kills ducks in just this sudden fashion. Being fat they would be more susceptible to such an attack than if they were thinner. If they have been running at large, it may be they have eaten something poisonous. Salt from an ice cream freezer carelessly thrown on the ground has killed many ducks. I hardly think the trouble is in the ration, but if you are not moistening the bran and barley you would do well to do it. Soft feed is much better than hard for ducks. Ducks cannot be doctored. Removal of the cause of disease is the only cure.—J. A. K.

Purity of Breeds

After three breeds of poultry have been running together how soon after being separated and properly mated may purity be expected?—Subscriber, Pomona.

Some breeders believe that when a hen has mated with a male of a different breed the strain is never completely eradicated but may show occasionally for the rest of her life. Others hold that purity may be expected as soon as the fertility which resulted from that mating has disappeared. I should not like to sell hatching eggs from such a hen unless I had first tested them myself, but there seems little likelihood of such a strain remaining after a month's time.—J. A. K.

Not Growing Tobacco

As there have been many inquiries from prospective planters of tobacco we have taken pains to make some inquiries as to the success of former efforts in this line in this state, and so far as we can learn there is no planting of any extent at the present time. From Secretary A. E. Miot of the Tulare County Board of Trade, we have the following:

"The tobacco industry collapsed several years ago. Just why we could never tell. Experiments were made and pronounced satisfactory; then much planting was done for several seasons,

and the prices paid for the tobacco were satisfactory—then all at once the industry blew up for lack of a market; we had plenty of tobacco but no buyers. For this sudden change in the market we have never been able to account and no satisfactory explanation has ever been given."

Walnuts Burning

I have some 15 year old walnut trees, thrifty growers, that set a good crop of nuts every spring but invariably get burned later in the season. Would it be advisable to top-graft these trees over, and what variety would be more heat resistant? If so where could I secure scions of the variety recommended?—Subscriber, Pasadena.

Hot weather cannot be the sole cause of the apparent burning of the walnuts when it takes place every year, as good walnuts are produced in the vicinity of Pasadena. Further data would be necessary before an opinion could be given, but it is quite likely the trees do not have sufficient water in the latter part of the summer. Water enough should be applied to keep the soil moist to a depth of five feet at all times, and this should be determined by occasionally digging a small hole with the shovel.—J. B. N.

More general demand is being made on the forest ranges for pasture next summer, and it is now anticipated every forest reserve will be filled to its limit.

Brighton Farm Herds

Registered Shorthorns

and

Berkshires—Both Sexes

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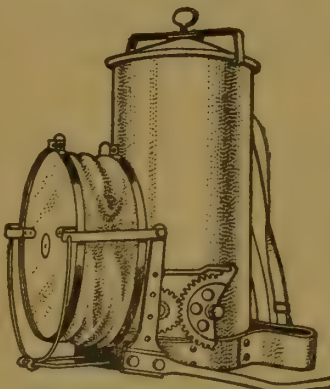
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When writing advertisers, mention the Cultivator.

## Marketing Honey

Written for California Cultivator By E. Ralph de Ong



HERE are two ways of preparing honey for the market, extracted honey\* and comb honey. The latter sells for a higher figure but requires more skill and time on the part of the beekeeper and considerable extra honey for its production. Comb honey is also more difficult to market, especially to ship 100 miles or more, than extracted honey, but if a local market is available these factors are really a benefit to the small beekeeper. His time in the apiary can be spent to a better profit, there being an abundant opportunity for skill in producing large amounts of honey and marketing it in a neat package and working up a retail trade, for with this type of package it is not difficult to persuade even a suspicious person that there is no possibility of adulteration.

Extracted honey lends itself to production on a large scale, it being less intensive, requires less skill, less danger of swarming, smaller supplies of nectar will be utilized by the bees, and less skilled help is needed in handling the crop. After the honey has been extracted, the empty comb, known as the "drawn comb" is return-

ed to the hive for refilling, thus conserving the honey and time of the bees that would be used in building wax. A crop of extracted honey is very easy to market, the usual custom being to use a wooden case containing two five gallon tin cans. These when filled makes a convenient sized package for handling and may be shipped any distance without danger of impairing its value. Retail trade usually requires a small package, generally of glass, as this makes an attractive article. The pure food laws have done much to establish confidence in the public as to the purity of extracted honey, and as it sells cheaper than comb honey the demand for it is constantly increasing. Bakers and confectioners are using increasing amounts of honey, especially the cheaper grades; restaurants can often be interested in cheap honey as a basis for table syrups, not to be sold as an adulterated article, but simply a high class, pure table article. Some progress is being made towards a more modern system of honey marketing which will make it easier for the beekeeper to market his product without being at the mercy of the speculator, but much is still to be done along these lines.

## How to Draw a Farm Lease



QUESTION often coming to the Cultivator has to do with form of lease and method of division of returns from leased land. We note in "The Farm Journal" a form used in Pennsylvania and other Eastern states. This does not apply in its entirety to many sections of California but it has suggestions which may prove of value to land owners and tenants.

Make two copies and sign both; the tenant keeps one, the landlord the other:

### Form of Lease

This Agreement, Made this . . . . day of . . . in the year . . . , between . . . party of the first part, and . . . party of the second part, provides as follows:

1. The party of the first part leases, for the consideration hereinafter stated, to the party of the second part, the following described land and premises: . . . . : To have and to hold the same subject to the conditions and limitations as herein agreed upon, for a term beginning the . . . day of . . . 19 . . . , and ending the . . . tion that the same is renewed from year to year under the same conditions should neither party notify the other in writing of his wish to terminate this lease . . . months before the end of the lease year.
2. It is the desire of the contracting parties to conduct the general business of crop production, stock raising and stock feeding on the above described farm; the general plan of crop rotation to be as follows: The land to be occupied by corn for two years, small grain to follow the corn for one year, and the small grain to be succeeded by two years of grass or tame hay.
3. The party of the first part, or farm owner, will furnish all the material necessary to keep the buildings, fences, and other improvements in good repair, and he will pay for such skilled and mechanical labor as may be necessary in making repairs or constructing needed new improve-

ments, and will also pay all taxes on the land and buildings of said farm, including the farm road tax.

4. The party of the second part will furnish all work animals, labor, machinery and tools necessary properly to equip said farm, and will maintain them at his own expense, except that he shall be allowed pasture in season for a reasonable number of work animals, not to exceed . . . in all. The party of the second part agrees to plow, sow, till, plant and cultivate said land in a good farmer-like manner and in the proper season; to put into crops all land that is not seeded down; to harvest all crops in their proper season; to haul out and scatter on the proper fields, most in need of it, all manure produced on the farm, by the first of November each year; to mow the roadside, to cut the briers, and to keep all noxious weeds from going to seed on the farm. He also further agrees to do all the work, not requiring the services of a skilled mechanic, of repairs to buildings and fences, with the materials furnished by the party of the first part and free of charge to him. He also agrees to haul all material used on said farm and to haul all the products thereof to market, free of cost to the party of the first part.
5. The parties to this agreement shall each bear one-half the expense of providing the farm with stock for breeding and feeding purposes, such stock to be of the kind and breed agreed upon, and to the amount necessary to stock the farm with a view to providing sufficient stock to consume the surplus crops grown thereon; they will each pay for one-half the feed purchased for consumption by such stock; they will each pay one-half the taxes and insurance on their undivided property, for one-half the machinery work of the threshing bill, for one-half of all grain or grass seed and fertilizers used on said farm, and one-half the veterinary bill for caring for their jointly owned live stock.
6. All animals raised for sale or

purchased for feeding shall be fattened and disposed of when ready for market at such times as may be mutually agreed upon by the parties hereto. No farm products shall be sold except by mutual agreement, and when such sales are made, whether of livestock or of crops, the proceeds shall be divided equally between the parties hereto.

7. The party of the second part shall not sublet the farm or any of the fields thereon without the written consent of the first party, and the first party reserves the right of free entry upon the premises for the purpose of making improvements thereon, and to plow or till certain fields after the crops have been removed, in case the lease is to be terminated.
8. It is agreed that the second party shall have the use of the garden on the farm, shall be allowed to raise a reasonable amount of poultry, not, however, so as to interfere with the proper management and working of the farm, and shall be allowed pasture for not exceeding . . . cows for his own use.
9. It is further mutually agreed that at the termination of this lease, if other means of settlement fail, the party of the second part shall divide each class of the jointly owned livestock into two parts, and the party of the first part shall have choice of taking either of these parts as his own; and if a price can not be agreed upon for the second party's half of the straw and fodder, which it is agreed shall be left on the farm, it shall be bought by the first party at a price to be fixed by two disinterested persons of whom each party to this agreement shall select one, or in the event of their failure to agree, at the price fixed by a third whom they shall select.
10. Witness our hands this . . . day of . . . in the year 19 . . .

### TRACTOR SHORT COURSE

A short course in the management of gasoline tractors will be held at University Experiment Station, Riverside, during the week of February 11-16, 1918.

Owing to the rapid increase in the use of tractors and the war demands for drivers, qualified operators are hard to find and high wages are offered. Experience has demonstrated that the life of a tractor depends in large measure on the management given it, and the loss due to inefficient operators is very heavy.

For the past two years the university has conducted a successful course in tractor management at the university farm at Davis. The demand now seems so great that a repetition of the course is offered at Riverside.

Shop and lecture work will be offered on such fundamental questions as lubrication, care and adjustment of bearings and carburetors, grinding of valves, repairs and replacements. Several of the leading makes of tractors will be available for demonstration and practice work.

A registration fee of \$1.00 constitutes the only charge for the course. Any one may register. Applications should be sent to Dean, Citrus Experiment Station, Riverside.

When Paris was threatened and its downfall seemed almost certain in 1914, General Joffre commandeered all autos, trucks and taxis, and conveyed hundreds of thousands of French soldiers to the Marne where the advancing Teutons were stopped and one of the world's greatest battles won—by the auto.



## Early Chicks Are Best

Written for California Cultivator By G. W. Kretsenger



WITH eggs selling at 50 and 60 cents a dozen and feed costing three to four cents per pound, there are going to be very few early chicks hatched, for the poultryman feels that it is a waste of good money to set 50 cent eggs when he needs ready cash to pay his bills.

If the poultryman knew the several advantages of early hatched chicks he would set eggs in December and January regardless of cost, for he would realize that the increased returns received in the fall would more than offset the high cost of setting eggs in January and December. At the present time it is costing about 30 cents a month to feed a hen, so unless there are some good layers in the flock our expenditures are going to so-exceed our receipts that it will take some very heavy spring laying to make it possible for the producers to break even.

It has been proven by several experiment stations that it is the early hatched chicks that make the best winter layers and are therefore the best money makers. It is the January chick that produces the greatest number of eggs during the fall and winter. The later the chicks are hatched after this month the poorer the results the following fall and winter.

Many poultrymen object to the early hatched chicks because they claim they pass through a long molt in August and September, during which no eggs are laid. It is true that January and February chicks are more apt to molt than the April and May chicks, but the duration and extent of the molt depends to a great extent upon the management of the flock. If the chickens are properly handled and fed the early hatched chicks will have a molt of short duration during which time only a few of the neck feathers are lost. It is usually the early hatched chicks that have been forced to lay at four to five months of age that passed through a complete molt in September.

The wise poultryman should not allow his pullets to start laying until

nearly six months of age, for he knows that by allowing his pullets to come to maturity he will produce hens that will be superior to the hen from pullets that have started to lay at four months. Often the four months old laying pullet remains a pullet all her life, that is, her sexual organs never develop and she lays a pullet or semi-pullet egg all her life.

If there is any tendency for the young chicks to lay at four months of age they should be put on a ration of grain and bran until fully mature. By bringing our chickens to full maturity before allowing them to lay we can to a large extent prevent our yearling chicks, no matter when hatched, from passing through a complete molt.

There is another advantage in early hatched chicks that is not often considered, and that is the cockerels from January chicks sell in March at a price that would usually pay for the raising of both pullets and chicks to the age of three months. In March the January hatched cockerels weigh one to one and a half pounds and sold during the years of 1915-16 for from 35 to 45 cents a pound. During March cockerels bring a higher price than during any other month in the year, so it ought to be the aim of the poultryman to get his cockerels on the market at this time. The cockerels from the April and May chicks are sold at from 20 to 25 cents per pound, which often does not pay their own expenses, let alone the expense of the pullets.

If the poultryman is to produce winter laying pullets and cockerels that will be in marketing condition during March and early April, he should be overhauling his incubator at the present time with the idea in mind of getting hatches off during the early and middle part of January, even though at the present time it seems to be rather an expensive operation to start our incubators going. All experiments so far have proven that it is the men who are producing January and February chickens that are making the greatest profits in the chicken business.

## The Profitable Flock

Written for California Cultivator by Jean A. Koethen



P OULTRYMEN who would increase the returns from their flocks must increase the average production of the flocks.

This, according to Helen Dow Whitaker of the Washington experiment station, is the one great lesson of the first Northwest Egglaying Contest which closed October 31. A flock average of 120 eggs should mean a return over feed cost of \$1.80 per bird, but if the egg yield is increased above 120 eggs per bird the returns over feed approach the \$5.00 mark.

In this contest there were 47 hens whose eggs sold for \$6.00 or over, and 16 pens of five birds each whose eggs sold for upwards of \$25. Many other hens laid eggs that sold for \$5.00 or over per bird. The hens counted the best layers were not necessarily those which laid the largest number of eggs, but those whose eggs brought the largest returns. All three medal winners were White Leghorns. Hen No. 1 laid 230 eggs which sold for \$7.77. Hen No. 2 laid 237 eggs, but they sold for three cents less than those of No. 1. Hen No. 3 laid 224 eggs which sold for \$7.62.

The three best pens were also White Leghorns, but some hens of

other breeds made nearly as good individual records as the Leghorns. An Oregon laid 197 eggs; an Ancona, 184; a Salmon Faverolle, 192; Barred Rocks laid 198, 197, and two of them 192 eggs each respectively; Reds laid 232, 207 and 195; and a Rhode Island White laid 195 eggs. This, in Mrs. Whitaker's opinion, is sufficient evidence that egg production is not a question of breed but rather of the breeding back of the strain. Any such high producer, mated to the son of a high producer, may be made the foundation for a flock of heavy layers.

### STORRS EGG LAYING CONTEST

Storrs, Connecticut, December 12, 1917. Report for the sixth week ending December 12, 1917:

The hens in the laying contest at Storrs are still not able to quite equal last year's performance. In the sixth week birds laid a total of 1613 eggs, or a little more than 100 better than the preceding week. This brings the total to date up to nearly 8000 eggs. There are still six pens that have not been able to get started. On the other hand, there are 33 pens that have laid over 100 eggs each, and one of these

has laid more than 200 in the first six weeks of the contest.

During the first month each pen of ten birds averaged consumption of nearly 19 pounds of grain and 49 pounds of mash, or in other words, each pullet ate a little less than seven pounds during the month. The relatively high amount of mash consumed is of importance for two reasons. In the first place the milled feeds have been lowered in price, and not only this but hens can reasonably be expected to lay more eggs when fed a good rich mash.

The three best pens in each of the principal varieties are as follows:

#### Barred Plymouth Rocks

Jules F. Francois, 184; Rock Rose Farm, 144; Harry H. Ober, 110.

#### White Wyandottes

Obed G. Knight, 174; Brayman Farm, 174; J. Frank Dubois, 125.

#### Rhode Island Reds

Pinecrest Orchards, 195; Flintstone Farm, 142; W. Mansfield Poultry Farm, 123.

#### White Leghorns

Hollywood Farm, 189; Braeside Poultry Farm, 189; J. Frank Dubois, 178.

#### Miscellaneous

Cook & Porter, (Buff Wyandottes), 213; Oregon Agricultural College (Oregons), 199; Dr. N. W. Sanborn (Buff Wyandottes), 114.

### SUGAR USED IN MAKING CANDY IN UNITED STATES

The sugar used for making candy in the United States, according to information obtained by the food administration, is sufficient to meet all the sugar requirements of England under the rationing standard adopted there.

If the people of the United States would cut out the eating of candy the sugar saved would be more than sufficient to meet all the sugar requirements of France.

If one-half the sugar used in the making of candy in this country in 1917 could have been saved it would have been sufficient to meet the sugar requirements of Italy for a year under that country's present sugar standard.

The money spent for candy in the United States in the past year is nearly double the amount of money needed to keep Belgium supplied with food for a year.

Of the total sugar consumption of the United States, according to the best estimates obtainable, about one-third goes into the manufacture of various foodstuffs, including confectionery, while the remainder is consumed as sugar. The amount of sugar employed in the making of confectionery is variously estimated from 150,000 to 500,000 tons per year. There has been compiled no absolutely accurate data from which the exact amount may be determined, but a conservative estimate would place this at somewhere about 400,000 tons per annum.

The confectionery business of the country, measured by the value of its product, is about two-thirds as large as the butter business, a little less than one-third as large as the wheat flour business, slightly larger than the canning and preserving of fruits, and about two-fifths as large as the bakery business.

Lots of men can tell the railroads how to run their business, but put them in exclusive control of a wheelbarrow and they'd break their shins, front teeth and the second commandment.—S. P. Bulletin.

Every ball of the YUBA TREAD kept at work at food production helps as much as a hundred balls flung into German trenches.

Write for the Catalog

**Yuba Manufacturing Co.**

Dept. B14

433 California St.

San Francisco



### The Best Feed on the Market

Has the highest protein at the lowest price \$2.90 per 90-lb. bag, subject to market changes; see that your hens eat as much Dry Mash as they do grain; feed them lightly of grain in the morning and make them work for it; either have a scratching pen or spade up a part of the ground and rake the feed under; keep "A-1" Dry Mash in a dry form before them all day; about one hour before feeding them their grain in the evening WET their Mash and let them eat all they will; put it on top of the Dry Mash, then feed them all the grain they will eat; this stuffing process will give them a full crop to carry them through the long night of inactivity; analysis is printed on every bag; give it a trial. At your Dealers or

The Globe Mills, Los Angeles

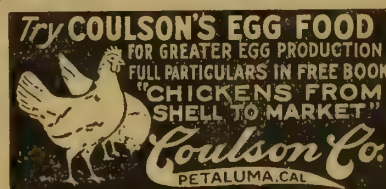
### Bargains Bargains

### Mandy Lee Incubators

We are selling out our line of Mandy Lee Incubators. While they last we will offer the 140 egg Mandy Lee Incubator for \$16.00, F. O. B., Los Angeles. These machines are a snap at this price. Six patented and distinctive features. Absolute satisfaction guaranteed. A few of the other sizes for sale. WRITE FOR CATALOGUE.

Globe Grain & Milling Co.

913 East 3rd Street  
Los Angeles



### PIPE-PIPE

100,000 feet New and Second-hand Pipe and Casing.  
Pipe—1/2, 3/4, 1, 1 1/2, 2, 2 1/2, 3, 3 1/2, 4, 4 1/2, 5, 6, 7, 8, 9, 10, 11, 12, 15 inch.  
Casing—3, 3 1/2, 4, 4 1/2, 5, 5 1/2, 6, 8, 10, 11, 12, 14 inch; 2000 feet 6 1/2-inch 20-lb. ten thread.  
Riveted Pipe—4, 6, 8, 10, 12, 14, 16, 18 inch.  
All above pipe and casing is practically as good as new, with good threads and couplings on each joint. We also carry valves and fittings, pumps, engines, boilers and rail. See our stock and get prices before buying elsewhere.

### ADAMS PIPE WORKS

Bay and Mateo Sts., Los Angeles, Cal.  
Phones: FI917; Bdwy. 1264

### MACHINERY

OF EVERY DESCRIPTION  
BOUGHT and SOLD  
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When writing advertisers, mention the Cultivator.



## Los Angeles Market

Los Angeles, Dec. 26, 1917.

## BUTTER

Produce Exc. Quotations.  
Price to trade 4c higher.  
California extra creamery .....51

## CHEESE

Brokers prices:  
California fresh, lb. ....26  
Eastern Daisies .....28½  
Oregon Longhorn .....23  
Tillamook Trip .....26½  
Domestic Swiss .....34

## EGGS

Exchange quotations. Prices include cases and fillers valued at 35c. Prices to retailers 4 cents above Exchange.

Fresh extras .....55  
Case Count .....51  
Pullet .....51

## POULTRY

We quote to producers:

Broilers .....34  
Fryers .....27  
Hens—Leghorns .....22@24  
Roasters, 3 lbs. and up .....25  
Ducks, lb. ....20@23  
Squab, doz. ....4.00@5.00  
Roosters, old .....14  
Turkeys .....25@27  
Geese, lb. ....22

## LIVESTOCK

We quote cwt. f. o. b. L. A.  
Corrected Wednesday morning December 26, by the Cudahy Company.

Cattle—  
Beef steers, av. 1000 to 1100 lbs. 8.50@9.00  
Helfers, good .....6.00@6.50  
Cows, good .....5.50@6.00  
Canners .....4.50@5.00

HOGS—  
Av. 125 lbs. ....14.50  
Av. 150 lbs. ....15.50  
Av. 175-200 lbs. ....16.00  
Rough, docked 20 lbs.; piggy sows, 40 lbs., stags, 40 per cent.  
Prime wethers .....9.50@10.00  
Ewes .....9.00@9.50  
Lambs .....14.00@14.50  
Yearlings .....10.50@11.00

## POTATOES

Wholesale selling price:  
Northern Burbank, swt. ....2.00@2.60  
Russets .....1.85@2.00  
Sweet, sk. ....3.25

## ONIONS

Wholesale selling price:  
Brown .....2.25  
White .....2.25@2.35  
Garlic .....7

## VEGETABLES

Wholesale prices:  
Artichokes, doz. ....1.25  
Beans—Wax .....13@14  
Limas, lb. ....13@14  
Ky. Wonder .....13@14  
Beets, sk. ....1.00  
Brussels Sprouts, lb. ....8@12  
Cabbage, lb., 2½; sk. ....1.40  
Carrots, doz. ....30  
Cauliflower, doz. ....1.00@1.10  
Celery, cr. ....3.50@3.75  
Cucumbers, bx. ....2.00  
Hothouse, doz. ....1.25  
Egg Plant, lb. ....7@8  
Horseradish, lb. ....15  
Lettuce, doz. ....25  
Leeks .....30  
Mint .....40  
Onions, green, doz. ....25  
Okra, lb. ....13@14  
Peas, lb., Telephone .....14  
Peppers, Chili, lb., 8; Bell .....12  
Parsnips, doz. ....40  
Parsley, doz. ....20  
Pumpkins, lb. ....2  
Radish, doz. ....20  
Rhubarb—Strawberry .....1.25  
Romaine, doz. ....40  
Spinach, doz. ....25  
Squash—Crockneck .....70@75  
Hubbard, lb. ....2  
Tomatoes, cr. ....1.35  
Turnips, doz. ....35

## FRUITS

Wholesale prices:  
Apples—Bellflowers .....1.35@1.50  
Greenings .....1.75  
Jonathan .....1.80@2.25  
King David .....1.75@2.00  
Spitzenburg .....2.40@2.75  
Y. Newton .....1.40  
Avocados, doz. ....6.00@9.00  
Bananas, lb. ....5½@5½  
Casabas, lb. ....2  
Cranberries, bbl. ....17.50  
Grapes—Cornichon .....1.60@1.65  
Red Emperors .....1.75  
Grapefruit .....3.50@3.75  
Peaches, lug .....1.25@1.35  
Pears, lug, 2.00; bx .....2.75  
Persimmons, lb. ....7@10  
Pomegranates, ½ bx .....1.80@2.00

## CITRUS

Lemons, 4.50@5.50; juice .....2.25  
Grapefruit .....3.00@3.50  
Limes, basket .....1.00  
Navels, New, bx .....4.25@4.50  
Valencias .....4.00

## DRIED FRUITS

These are not prices to producers but prices made by wholesalers to retailers. (25-lb. bx., faced, 50s, ½c less.) Apples, evaporated, 50s, 16; extra ch., 16½; apricots, ch., 18; extra ch., 18½; fy., 19; pears, 12½; peaches, ch., 12; fy., 12½; peeled, 15; citron, 30 lb.; lemon peel, 25; orange peel, 25; prunes, 20-30s, 16½; 30-40s, 12½; 40-50s, 11; 50-60s, 10; 60-70s, 9½; 70-80s, 9; 90-100s, 8.  
Figs—Bulk, 25 lb. bx., blk. \$2.75, wh. \$2.75; Calimyrna, 10 lb. bx., \$2.25.

## NUTS

Almonds—Not growers' prices but prices of wholesaler to retailer.  
I. X. L. ....22½  
N. P. U. ....21½  
Hickory Nuts, lb. ....10  
Peanuts, raw .....14  
Pecans, lb. ....19  
Walnuts—Cal. Walnut Growers' Association named prices Oct. 1:

No. 1 Soft Shell, lb. ....20  
No. 2 Soft Shell, lb. ....16  
Budded, Diamond Brand .....24  
Budded, Standard Brand, (same size as No. 1 Soft Shell) .....21  
Prices delivered in East 1½c higher.

## HONEY

Prices of wholesaler to retailer:

Extr. White, lb. ....12@14  
W. W. lb. ....13@15  
Comb, case, W. ....4.00@4.50  
W. W. case .....4.80@5.00

## RICE

Wholesale quotations:  
Cal. ....7.50  
Broken .....5.80@6.00

## BEANS

These are prices made by wholesaler to retailer.

Lady Washington .....13.00@13.50  
Limas .....13.00@13.50  
Pinks .....8.50  
Manchurian Reds .....9.25  
Baby Mex. ....9.00  
Garbanzos .....10.00  
Small White .....13.00@13.50  
Blackeyes .....10.00  
Tepary .....9.00@10.00  
Lentils .....25.00

## HAY

Quotations by Nichols-Loomis Company. Prices to growers f. o. b. L. A. carlots:

Tame Oat .....25.00@27.00  
Volunteer Oat .....18.00@20.00  
Wheat .....20.00@23.00  
Barley .....23.00@26.00  
Alfalfa .....22.00@25.00

The Alfalfa Growers Association of Southern California quotes:

Alfalfa, \$27.50 per ton f. o. b., where the \$1.50 freight rate applies, and \$26.50 f. o. b. where the \$2.50 freight rate applies.

## GRAIN AND FEEDSTUFFS

Wholesale cwt. f. o. b. L. A.  
Alfalfa Meal .....1.95  
Alfalfa Molasses .....2.00  
Barley, Rolled .....3.20  
Barley, Recleaned, Whole .....3.25  
Barley, Hulled .....3.80  
Beet Pulp .....2.00  
Bran, Heavy .....2.25  
Cocoanut Meal .....2.50  
Cottonseed Meal .....3.40  
Corn, Yellow .....4.45  
Corn, White .....4.55  
Corn, Cracked .....4.50  
Corn, Feed Meal .....4.55  
Corn, Egyptian .....3.60  
Middlings .....3.25  
Milo .....3.15  
Oat Chop .....1.90  
Oats, White .....3.30  
Oats, Rolled White .....3.35  
Oats, Hulled .....4.75  
Oats, Rolled Chicken Groats .....4.85  
Oilcake Meal .....3.65  
Wheat, No. 1 .....4.00@4.05  
Wheat, Cracked, No. 1 .....4.40  
Red Millet .....4.65@4.75  
Rye .....4.00  
Blood Meal .....5.00@5.10  
Bone, Green .....2.75@2.85  
Bone, Dry .....2.95@3.05  
Charcoal, 50-lb. sk. ....3.00  
Clam Shell .....70@80  
Grit, Granite .....75@85  
Oyster Shell .....1.45  
Sunflower Seed .....5.25  
Soya Bean Meal .....3.60  
Scratch Feed .....3.80@3.90  
Gritless .....3.90@4.00  
Rice Bran, ton .....40.00  
Middlings, ton .....45.00  
Rice Polish, ton .....49.00

## San Francisco Markets

San Francisco, Dec. 24, 1917.

## BUTTER

Dairy Exchange quotations, lb.:  
Fresh extras .....51

## CHEESE

Dairy Exchange quotations:  
Cal Flats, 22½@23. Y. Am. ....25  
Ore. Young Am. ....24½  
Jack cheese, full cream .....24@25  
Half skim .....18

## EGGS

Extra .....49  
Selected Pullets .....45½

## POULTRY

We quote from producers, lb.:  
Hens, large, 25@26; Leghorns .....24@25  
Small Colored .....24@25  
Broilers, 1-1½ lbs., 38; 1½-1¾, 33@35; 1½-2, 30@33; 2-3, 26@28.  
Capons, lb. ....38@40  
Roosters .....25@27  
Squabs, doz. ....4.00@5.00  
Ducks .....17@23  
Geese .....19@20  
Belgian Hares, live, lb. ....19@21  
Turkeys .....28@34  
Old, live, 25@26; dr. lb. ....31@34  
dr. old, 3 cents under.

## LIVESTOCK

Prices gross weight:  
Cattle: The following prices are for grass fed stock. Hay fed brings ½ to ¾c more.  
Steers, lb. 8½@10; undesirable, 6@8; cows and heifers, 7@8½; undesirable, 4@6; calves 7@9½.  
Hogs—Hard grain-fed, weighing 100 to 140 lbs., 14½; 140 to 175 lbs., 15; 175 to 300 lbs., 15½.  
Sheep—Wethers, 12@12½; ewes, 9½@10½; lambs, 12½@16.

## POTATOES

Wholesale selling prices at wharf:  
Sallinas Burbanks, cwt. ....2.50@3.00  
River .....1.85@1.50  
Sweets, cwt. ....3.90@4.00

## ONIONS

Wholesale selling price on wharf:  
Australian Brown, cwt. ....1.75@1.85  
Bermudas .....2.00@2.50  
Garlic, lb., new .....4@5

## VEGETABLES

Wholesale selling price.  
Artichokes, doz. ....40@75

Beets, sk. ....1.25@1.50  
Beans, string, lb., 9@15; Limas .....7@8  
Brussel Sprouts, lb. ....4@5  
Carrots, sk. ....1.00@1.25  
Celery, doz. ....30@50  
Cucumbers, Hothouse, bx. ....2.25@2.50  
Egg Plant, lb. ....6@7  
Lettuce, cr. ....1.00@2.25  
Peas, lb. ....5@11  
Parsnips, sk. ....1.00@1.25  
Peppers, Bell, lb., 7@8; Chili .....4@6  
Pumpkins, sk. ....90@1.00  
Rhubarb, bx. ....1.50@2.00  
Squash—Marrowfat, sk. ....90@1.00  
Cream, lug .....1.00@1.25  
Hubbard, sk. ....1.10@1.25  
Tomatoes, lug .....50@1.00  
Southern, cr. ....1.25@1.60  
Turnip, sk. ....90@1.00

## FRESH FRUITS

Strawberries, ch. ....5.00@8.00  
Pears—Winter Nellis bx., 1.25@2.00; winter pears, 1.00@1.50.  
Apples—Bellflower, 1.10@1.50; Spitzenburg, 1.00@1.85; Red Pearmain, 70@1.05; W. W. Pearmain, 1.10@1.50; Newton Pippins, 1.00@1.50.  
Melons—Casabas, cr., standard, 65@85; doz., 65@75.  
Citrus Fruits—Lemons, bx. according to size, fy. 4.50; ch., 4.00@6.00; lemonettes, 1.00@2.50; grapefruit, fy., 2.50@3.00; ch., 1.50@2.00; Tulare seedless limes, vels, fy., 3.75@4.25; ch., 3.00@3.50; Mandarin oranges, cr., 2.00@2.25; Tangerines, ½ bx., 2.00@2.50.  
Tropical Fruits—Bananas, Hawaiian, 5 lb.; pineapples, doz., 2.75@3.50.  
Pomegranates—One-half orange bx., 1.75@2.00.  
Persimmons—Bx.: 1.25@1.50.  
Olives, ton, 160.00@200.00.

## DRIED FRUITS

Not producers' prices but prices of wholesaler to retailer.

Peaches—Unpeeled, lb. standard, 9½; choice, 9½; extra choice, 10; fancy, 11.  
Figs—In 50-pound boxes, per pound.  
White Adriatic, standard, 8½; choice, 9½; extra choice, 10½; fancy, 11½; Calimyrna, fancy, 15½; extra fancy, 16½.  
Apricots—Bulk basis: Standard, 13½; ch., 15; extra ch., 15½; fy., 16½; extra fy., 17½; fy. Moorparka, 17½; extra fy., 18½.  
Prunes—60s to 90s, 6½ basis; 50s to 60s, ½c premium; 40s to 50s, 1½c premium.

Apples—In 50-pound boxes, lb.: Fancy 14½; extra ch., 14; ch., 13½.  
Pears—Bulk basis, lb.: Fancy, 11½; extra ch., 9½; ch., 8½; standard, 6½.  
Raisins—Cases: Sun Maid, seeded, 16-oz. cartons, \$4.20 for 48s and \$3.15 for 36s; fy., \$4.20 for 48s and \$3.15 for 36s; do, 12-oz. 45 to cs. \$5.25; ch. 16-oz. cartons, \$3.00 for 36s; do, 12-oz. cartons, 45 to cs. \$3.10.  
In bulk: Sun Maid, \$1.75; fy., \$1.90; ch., \$1.75.  
Sulphur-bleached Thompsons, extra fy., \$5.37½; fy., \$5.12½; ch., \$4.87½; soda-bleached, \$4.75.  
Loose: One-crown, \$4.15; 2-crown, \$3.40; 3-crown, \$3.65; 4-crown, \$3.20.

## NUTS

Almonds—Cal. Almond Growers' Exch. Gross prices: Nonpareils, 21½; I. X. L., 19½; No Plus, 18½; Drakes, 16; hard shell, 11½.  
Chestnuts, Cal. lb. ....10@20  
Peanuts, lb. ....11@12½  
Pecans, lb. ....19@20  
Pine Nuts .....19@20

## HONEY

Comb, W. W., lb. 15@18; Amber .....12@15  
Extr. W. W. Alfalfa .....14@15  
W. W. Sage .....16  
Lt. A. Alfalfa, 14; do Sage .....15  
Amber Sage .....11½@13½  
Beeswax, lb. ....38@40

## BEANS

Jobbers' prices, cwt., new crop, re-cleaned.  
Limas .....12.60@12.75  
Bayous .....8.75@9.00  
Small Whites .....12.00@12.25  
Mexican Reds .....8.50@8.75  
Large Whites .....11.25@11.50  
Pinks .....7.40@7.60  
Blackeyes .....8.00@8.25  
Red Kidney .....13.00  
Cranberry .....11.75@12.00

## HOPS

Per lb.: California crop of 1917, 28@33; on contracts, spot, 1916 crop, 18@22, old, 8@15.

## RICE

California rice, new crop, cleaned, 100 pound head rice, 6.50; brewers, 5.25; screenings, 5.37½.  
Rough rice, 100 lbs., 3.50@3.60 to growers at shipping points.

## HAY

Under date of December 22, Scott, Magner & Miller says:  
Arrivals of hay for the week have been 1116 tons. Prices in San Francisco have remained practically unchanged. The railroad situation continues as difficult as heretofore.

The government has placed further orders in California for shipments outside of the state. If large quantities are taken for government purposes and our stocks of hay on hand are cut down to that extent the question arises as to whether our stock on hand is large enough to stand a continuous drain in this direction and still take care of all local requirements as well as to be able to furnish hay in the districts where it is needed to sustain herds of cattle that have no pasture.

We are facing a serious situation on account of lack of grass and this matter has had the attention this week of government representatives. The stock of hay on hand at the present time is believed to be about the same as we had on hand at this time a year ago. Last winter much hay was used to carry cattle along and with the same condition confronting us now it is thought that we have enough to carry us through this season unless large quantities may be permitted to be shipped out of the state. The crop is short this year throughout the Pacific Coast states as well as in Arizona, Texas and New Mexico.

The prices on hay all over the United States are approximately \$30 per ton. The situation to everybody feeding stock is serious throughout the entire country.

Fancy Wheat Hay (light 5 wire bale) .....29.00@30.00  
No. 1 Wheat or Wheat and Oat Hay .....26.00@28.00  
No. 2 Wheat or Wheat and Oat Hay .....23.00@25.00  
Choice Tame Oat Hay .....27.00@27.50  
Other Tame Oat Hay .....23.00@25.00  
Wild Oat Hay .....23.00@25.00  
Barley Hay .....24.00@26.00  
Alfalfa .....24.00@27.00  
Stock Hay .....20.00@22.00  
No. 1 Barley Straw .....60@80

## GRAIN

Grain Exchange prices, ctl.  
Corn, Cal. Yellow, cwt. ....3.30@3.50  
W. Egyptian, 3.20@3.25; Brown 3.05@3.10  
Barley, Feed & Brewing, cwt. 2.80@2.85  
Milo .....3.05@3.20  
Oats, Red Seed .....2.90@3.25  
Feed .....2.72½@2.77½  
New Black .....3.10@3.40  
Wheat—Government prices: Common white hard, base price is \$3.50 per cental, or \$2.10 per bushel of 60 pounds delivered in terminal warehouses in bulk; soft wheat, base price 2 cents per bushel less, or \$2.08 per bushel; white club (including sonora), \$2.06 per bushel. If wheat, after cleaning, weighs 60 pounds or more to bushel, base price stands; if 58 to 60 pounds to bushel, 3 cents per bushel reduction; if 56 to 58 pounds, 6 cents per bushel less; if less than 56 pounds, grain becomes sample grade and sells on its merits up to within 1 cent per bushel of 56-lb. wheat. Sacked wheat 4 cents per bushel more, less tare for weight of sacks.

## FEEDSTUFFS

Wholesale prices per ton:  
Bran .....38.00@40.00  
Cornmeal .....31.00@32.00  
Cracked Corn .....31.00@32.00  
Cocoanut Meal .....45.00@46.00  
Middlings .....50.00@54.00  
Alfalfa Meal .....32.00@33.00  
Rolled Barley .....58.00@60.00  
Shorts .....41.00@42.00

## SEEDS

Prices in round lots, lb.:  
Millet, recleaned .....4½@5  
Alfalfa .....20@21  
Flax .....6@6½  
Rape .....2½@3

## Citrus Fruit Market

Los Angeles, December 26, 1917.

With holiday demand and light supply, orange have been sailing. Some Navels from Central California have sold around \$6.00 and \$7.00. Tulare and Northern California orchards are practically cleaned up on Navels. Shipments from southern points will not begin to any extent until after the new year. The lemon market has also been exceptionally good.

Shipments since November 1, 1917, Southern California: Oranges, 2081 cars; lemons, 446; total, 2527. To same date last season: Oranges 2202; lemons, 655; total, 2867. From Central California: oranges this season, 1489; lemons, 51; total, 1540. Same date last season: Oranges 3222; lemons, 96; total, 3318. Northern California: Oranges this season, 165. To same date last season, 756.

## AT THE AUCTIONS

December 19  
New York: Both Nav. and Val. higher. Val. \$3.10-\$4.30, Nav. \$3.46-\$5.15, Lem. \$3.30-\$4.85.  
Cleveland: Nav. \$3.50-\$5.85, Tang. \$2.75, Lem. \$6.50.  
Boston: 2 cars, higher on Val. Val. \$3.80-\$4.95.  
Pittsburg: 7 cars. Val. \$3.70-\$4.75, Lem. \$2.85-\$3.05.  
St. Louis: 6 cars. Val. \$3.35-\$4.95, Nav. \$3.45-\$3.85, Lem. \$2.75-\$4.55.  
December 20  
New York: 5 Nav. 3 Val. 1 Lem. Val. \$3.30-\$5.00, Nav. \$3.15-\$5.00, Lem. \$2.90-\$5.15.  
Boston: 5 cars. Nav. \$3.95-\$5.00.  
December 21  
New York: 6 Nav. 1 Val. Nav. \$3.10-\$5.10, Val. \$2.75-\$5.10, Lem. \$2.70.  
Cleveland: 1 Val. 2 Nav. Val. \$3.50-\$4.80, Nav. \$5.45-\$6.15.  
Boston: 3 cars. Nav. \$4.00-\$5.20.  
Cincinnati: 2 cars. Nav. \$2.10-\$3.95.  
St. Louis: 1 Val. 1 Lem. Val. \$3.50-\$4.80.  
Philadelphia: 2 oranges, 1 Lem. Nav. \$2.45-\$3.00, Lem. \$2.35-\$4.15, Val. \$2.75-\$4.75.

## MARKET NOTES

Postcard reports to the bureau of markets of the United States department of agriculture show shipments from California during the week ending December 24 approximately as follows: Apples, 8 cars; cabbage, 3; cauliflower, 29; celery, 61; dried fruits, 109; dried figs, 2; garlic, 1; grapes, 1; lettuce, 35; mixed fruits, 4; mixed vegetables, 33; olives, 1; onions, 18; peas, 1; potatoes, 89; raisins, 158; sweet potatoes, 5; tomatoes, 1; turnips, 1.  
The rumor which gained circulation to the effect that California fruits might be placed in the non-essential food class is emphatically denied in Washington, and it is now asserted will be given equal showing in the matter of transportation. This is strengthening the fruit market and aiding in planning another year's work.  
Washington asserts that some canners have been hoarding stocks awaiting higher prices. This especially of meat packers.  
Early Navels and the latest of Valencia never commanded the price received this year.  
The campaign to secure 100 cars of apples for soldiers in the trenches ended entirely satisfactorily.  
State Market Director Weinstein is aiding in securing just returns to the producers.  
Portions of Southeastern United States were hit by a severe frost, seriously lowering the lettuce output and practically killing the young radish crop. Beets



were not so seriously injured. Snow fell as far south as Memphis.

The car situation has generally improved and the movement of potatoes into Chicago has been more general.

All dried fruits are holding remarkably firm and even an advance of one cent is noted on evaporated apples.

The food administration is keeping a line on the potato movement by requiring every handler of potatoes in carlots to operate only under federal license.

#### CLOSE SHAVE

"Mamma," said little Elise, "do men ever go to heaven?"

"Way, of course, my dear. What makes you ask?"

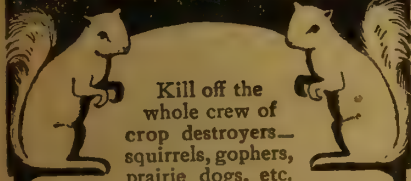
"Because I never see any pictures of angels with whiskers."

"Well," said the mother, thoughtfully, "some men do go to heaven, but they get there by a close shave."—San Francisco Monitor.

If your meat grinder seems dull, grind a piece of scouring brick through it.

Luck may turn against a man, but work never does.

## Gas 'em!



Gas 'em with Carbon Bisulphide quick'y, easily and economically.

One burrow of squirrels will destroy more grain than your family can save in fifty wheatless days. Remember—these ground pests cost the farmers of the Pacific Coast more than \$6,000,000 last summer. So be forehanded—be truly patriotic—conserve the seed in your fields.

The University of California says: "From November until the end of February (the rainy season in California) the best way to attack the ground squirrels is to fill their burrows with gas from Carbon Bisulphide."

So too in other states! If the ground is full of moisture, whatever the month may be, Carbon Bisulphide is the best killer of squirrels, prairie dogs, gophers, etc.

A squirrel killed before March is worth a dozen killed later. Because—most young squirrels are born late in March or early in April. So gas the old squirrels now. Write today for prices and interesting folder telling how Carbon Bisulphide—the profit-saver—works.

**WHEELER, REYNOLDS & STAUFFER**

626 California Street  
San Francisco, California

## Use CARBON BISULPHIDE



**P. S. C. Rosin Spray**  
For Mealy Bugs, Scale, Aphids, etc.

**MAKES GOOD**

**Read This Letter**

SANTA BARBARA COUNTY  
HORTICULTURAL COMMISSION  
SANTA BARBARA, CALIFORNIA

Pacific Soap Company,  
Los Angeles, Cal.

Gentlemen:  
We have had an extensive trial, amounting to a commercial use of your P. S. C. ROSIN SPRAY.

In this use we have treated red scale, purple scale, black scale, red spider and aphids and wherever used the results are entirely satisfactory to the writer and to his inspectors, who in a large degree are responsible for the commercial control of pests in the county.

I believe the spray is a great improvement over fumigation or any other method of scale control that has been in use for the last twelve years.

Yours very truly,  
(Signed) C. W. BEERS,  
Horticultural Commissioner.

If Your Dealer Can't Supply You Send Us Your Order.

Write for Booklet  
Sold in tins, kegs and barrels  
Prices on Application.

MANUFACTURED BY

**PACIFIC SOAP CO.**

Inc.  
5800 CENTRAL AVE., LOS ANGELES

### ANTS, FRIENDS OF THE CITRUS MEALYBUG



ANTS are great friends of the mealybugs which do such serious damage to lemons, grapefruit, and oranges in California. These ants keep certain brown lacewing flies and ladybird beetles—natural foes of the mealybug—from attacking and killing this citrus pest. For this reason entomologists of the United States department of agriculture, in Farmers' Bulletin 862, advise grove owners to keep ants off the trees by painting a band of paraffin around the trunk and cover this band with a mixture made of finely powdered flowers of sulphur and tree-banding sticky material. The entomologists also advise the use of poisoned syrup to attract and kill the ants. If the ants are kept out of the trees, the natural enemies in many cases will control the mealybug to a point where its damage will not be commercially important.

The use of fumigation and spraying



A Modern Fumigating Outfit

Throwing the tent over a tree. The chemical handlers are shown in the background, ready to insert the hose carrying the gas under the tent as soon as it is arranged. (See article on Page 654.)

methods was also investigated. It was found that fumigation with hydrocyanic acid gas, while effective if repeated a number of times in somewhat larger doses than are used in control of the black and red scales, is not commercially practicable. Its use is recommended only where there are very few trees, or in yards where expense is not an important consideration.

Spraying with cresolated distillate emulsion and with soap-powder emulsion was found to be effective, provided the spray was applied with considerable force and not merely sprinkled on the backs of the bugs. These sprays, however, can be used only during the cool months of the year, either when the fruit is maturing or after it has been picked. The sprays are too strong to use during the hot weather or when the trees are laden with immature fruit.

Spraying with plain water under pressure sufficient to dislodge the mealybugs from the trees has been found effective by many growers. This method has the important advantage that it can be used safely at all times.

Whether trees are fumigated or sprayed, however, every effort should be made to encourage the natural enemies of the mealybug. In many cases, the entomologists believe, undeserved credit is given to insecticides when, in fact, the lacewing flies and ladybird beetles unobserved by orchardists really are responsible for the control of the bugs.

The bulletin contains explicit directions for making and using the sprays and suggests definite schedules for handling different kinds of

citrus trees under various conditions. As a last word the bulletin cautions growers whose trees are clean not to use picking boxes which have carried infested fruit until they have been fumigated with hydrocyanic acid gas and not to allow laborers to use picking sacks, gloves, and jumpers which may carry mealybugs until these articles have been soaked in gasoline for five minutes.

#### SOLDIERS GARDENS



WHILE in training English Tommies find satisfaction in growing their own gardens. Through one of the Cultivator contributors, A. R. Gould, we have from one of his friends in England's training camps, the following regarding these war gardens. He first refers to receiving interesting numbers of the California Cultivator and says farm papers are always interesting, especially the advertisements. This is according to the belief of the editorial department notwithstanding it does its best to make

the columns as interesting as possible, but seriously, the advertising columns of any paper, as advertisements are made these days, are most interesting.

The following is quoted direct from Corporal T. A. Weston's letter: "You'll note I'm still in England and at intervals am able to get home to Orpington for brief spells. Was home for five days two weeks ago and got up my spuds and did other jobs. Fruit crop poor this season for some reason due, no doubt, to my not being at home to spray just when needed. Generally speaking the crops everywhere are good, though the wet August did a lot of damage, for the gales were suited to October. Just now weather is lovely and my camp gardens are great. Our sergeant major reckons we have the finest canvas camp in the country. Flower beds like a park, all my own planting, barring a few patches around some tents. My own tent is a picture, mostly antirrhinums (snapdragons), and a most gorgeous show. We've also nearly two acres to vegetables, and I guess we shall harvest some ten tons of spuds plus tons of cabbage, swede, parsnips, etc."

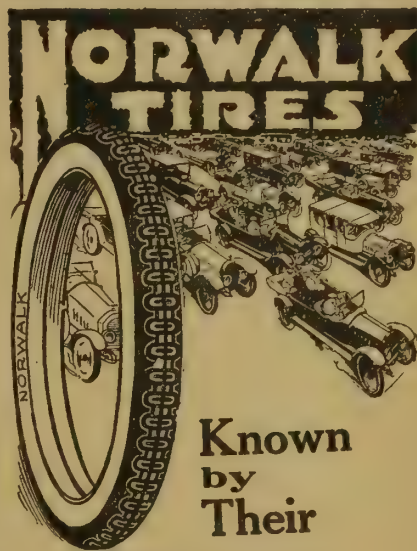
#### WEATHER CONDITION

San Francisco, Cal., Dec. 22, 1917.

	Falls		Temp.	
	Wk.	Season	Norm.	Max. Min.
Eureka	.14	7.50	14.57	64 44
Red Bluff	.22	2.12	8.72	68 36
Sacramento	.04	.80	6.03	62 40
San Francisco	.05	.88	6.90	62 44
San Jose	.00	.35	5.18	68 36
Fresno	.00	.39	2.99	64 34
San Luis Obispo	.00	.57	4.94	84 38
Los Angeles	.00	.42	4.13	86 46
San Diego	.00	.25	2.47	78 46

#### FOR ALMOST HALF A CENTURY

Citrus nursery trees—the best which can be grown are the only ones the orchardist can afford to plant. It takes experience and skill to produce them. The Wallace Nurseries has been getting experience for 47 years, and their skill is proven by a long list of satisfied customers. Their office is in Los Angeles.



## Known by Their Mileage

The remarkable perfection of Norwalk Tires is the result of years of painstaking effort on the part of the world's foremost tire authorities. Constant improvements have been introduced until these tires have arrived at a stage of development where it seems that no possible chance for betterment remains.

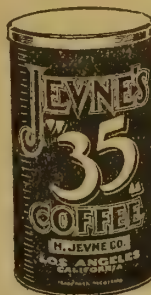
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1211 Van Ness Ave., San Francisco

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"Send Me Jevne's '35,' Coffee"

This is the way thousands of housewives insure good coffee for their table.

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and have fun TRAPPING

Skunk, coon, fox, etc., are bringing high prices. Write for price list and our 36-page free book, TRAPPING FOR PROFIT. Tells how to trap, and how to handle furs to bring the most money.

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Largest direct fur merchant on the Pacific Coast

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SUPPLIES  
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## ALFALFA LAND FOR DAIRYING

Also first-class Orchard, Bean and Sugar Beet land. Twenty acres and up with easy terms of payment.

**BRENTWOOD IRRIGATED FARMS,** In Contra Costa Co., 63 Miles from San Francisco  
For Price and Descriptive Matter Address

**BALFOUR, GUTHRIE & CO., LAND DEPT.,** 350 California St., San Francisco



## The Cultivator Patterns



8408—Ladies' Shirtwaist. Cut in sizes 36, 38, 40 and 42 inches bust measure. This is a semi-tailored waist having rather a full collar and a soft detachable collar.

8604—Girls' One Piece Dress. Cut in sizes 8, 10, 12 and 14 years. The dress is in one piece from shoulder to hem, but it is held in at the normal waistline by a narrow leather belt.

8620—Ladies' Tunic Waist. Cut in sizes 36, 38, 40 and 42 inches bust measure. The back of the waist is perfectly plain, and the tunic is side pleated.

8139—Ladies' Shirtwaist. Cut in sizes 36, 38, 40 and 42 inches bust measure. This is a simple blouse waist with lace-edged collars and cuffs.

8594—Ladies' Bolero Dress. Cut in sizes 34, 36, 38 and 40 inches bust measure. The bolero has the side closing, and the two-gored skirt is gathered all around to the underwaist.

8635—Children's One Piece Dress. Cut in sizes 1/2, 1, 2 and 3 years. The lower part of the dress is gathered to the yoke all around.

8417—Boys' Russian Suit. Cut in sizes 2, 4 and 6 years. The blouse is in the new length, and the usual straight trousers are included in the pattern.

PRICE OF ANY OF THE ABOVE PATTERNS 10 CENTS EACH.

### HOW TO ORDER PATTERNS

Write your name and address plainly in full, give correct number and size of each pattern you want, and send 10 cents in coin or (1 or 2 cent) stamps for each number. In order to furnish our readers with the very latest New York City styles, all pattern orders are filled in New York City. Therefore, we promise to deliver all patterns ordered within two weeks; we guarantee safe delivery of all patterns. Address

Pattern Department  
California Cultivator  
Los Angeles

## Household Department

### A MAN IN OUR TOWN

Written for California Cultivator

There is a man in our town  
Who thinks he's wondrous wise.  
When Hoover says "Tis meatless day"  
He shuts up both his eyes.

He sees not, hears not, will not heed,  
But sits him down to think:  
"Now, isn't there some better way  
To plan to eat and drink?"

Says he, "I'll have my meat,  
No matter what they say.  
I'll buy me more the day before.  
For Me no meatless day."

He grunts and growls and wonders why  
This thing has got to be.  
The law should be as he desires  
And each one's will be free.

To bonds and loans and Red Cross drives  
He never gives a cent,  
On "running down" the other man,  
His mind seems ever bent.

But wait, old man, you'll Hooverize  
And pay your debt in full.  
You'll say too much and "get in bad"  
The U. S. you can't "bull."

### WASTE ACRES

Written for California Cultivator  
By Maude Barnes



**N** PASSING through a desert country the burning sands, cacti, sage, and mesquite meet the eye, and an occasional glimpse of a cultivated spot is a relief. When such a country is our home we see more than we do by passing through it and learn some of the secrets it knows so well how to guard.

The desert charms. The beautiful sunrise, the sunsets, and the stillness in God's untraveled country make an indelible imprint on the brain. The thought of the rushing cities, the greed for wealth and position fade away, and contentment comes.

Here the magic artist, Mirage, stretches out his brush and touches the sandy wastes, turning them into alluring, ever-changing blue lakes with beckoning trees around their borders inviting the thirsty to drink of the clear waters at their feet.

The desert is jealous of her children. When one returns to the outer world she still holds an influence over him. As time passes he may think he has forgotten, but a longing unbidden will come for the desert's peace and quiet, the flight of time unnoticed and the drowsy content he once knew. It may be only a dream of brown acres surrounded by vari-colored hills with purplish mists around them, but it is the power of the desert that brings the vision.

On the Colorado desert almost 200 feet below sea level, near the Salton Sea, is the little town of Mecca. Here the iron monsters that bring the trains from the East and West pause for water as did the stage coach of long ago. The Spanish padres as they journeyed from Mexico to California's coast stopped here also to rest and refresh themselves. Giant palms wave their fan like branches, bringing to mind scenes in far distant lands.

By following an unused road that leads to the south of Mecca, the traveler will come to a homestead. Beaten paths lead from all directions to an artesian well which still sends out a small stream. Here the wild animals of the desert and hills come for water. The paths are worn smooth from the many feet which travel over them. By a row of cottonwood trees stands a little cabin with its door opened wide. Directly in front of the doorway is a baby's high chair.

Evidences of a hasty flight are apparent. A trunk is in the center of the room. Part of its contents are strewn around. On the table are dishes placed ready for a meal, but

over all is drifted the sand of the desert, and as plainly as Time can write his mute message, it is written for all to read who will, that many a year had passed since the little high chair was occupied or a fire burning on the hearth.

With the first settlers to go and take up claims in the Coachella Valley went Charles Vendon with his wife and baby. Leading them on was the thought of a home and watered acres and plenty for the years to come.

Success favored the putting down of a well on the selected home site, and out of it flowed a stream of clear water. Soon around the new home there were signs of vegetation. With her own hands Mary Vendon planted a row of cottonwood sprouts leading out to the well, and looking into the future she could imagine the trees they would make and almost feel the grateful shade they would cast.

From the Martinez Indian Reservation a short distance away, Charles Vendon procured help for clearing away the brush on his claim. Jose Manuel was one of the men who came to work, and often his daughter Sitka came with him. The Vendon baby won Sitka's attention and then won by it's baby wiles, her heart.

Week by week and month by month found the Indian girl more and more at the Vendon home. In her love for the baby and its mother Sitka displayed the silent determined way of her people. She was ever guarding them from the harmful things of the desert. She watched the improvements on the homestead and knew to the very day when the time would come for the Vendons to "prove up," and claim the land.

When the last spring came before the final proving up on the claim and carpeted the desert for miles around with delicate flowers and soft breezes stooped to kiss them, Mary Vendon closed her eyes and across many miles her mind traveled to an Eastern farm she could see with a row of lilacs in front of a white farm house.

Surely she could smell their perfume! In reality she knew it was the scent of the buckthorn carried to her on the breeze that had brought her day dream.

The Overland for the East had just left Mecca. On the rear platform of the last coach stood a woman holding in her arms a child who was waving a handkerchief to a man and an Indian girl.

"Sitka, we are left behind, but a visit to the old home will do Mary good and make her dream come true. It will not be long until they will come back."

Sitka's eyes were dim as she untied her horse and without a word mounted and road away to the reservation. Every week after Mrs. Vendon's departure Sitka would come for news of the absent ones.

In the land of little rain the miraculous touch of water to the soil, and the planting of seed, aided by the sun's warm rays, had changed the barren land to fruitful acres. All around the little house crops were growing. Sweet potato vines covered the porch, and the cottonwood trees were beginning to fulfill their promise of shade.

One day Sitka found the house empty and on the baby's high chair by the door was pinned a note: "Have just got word that Mary and the baby are ill. Hope to catch the Overland that is almost due. Sitka, look after the ranch. I'll be home soon."

Week followed week, and Sitka looking for the Vendon's return, cared for the ranch as best she could. At last a letter came saying: "Baby and Mary are better. We will be home next week."

Next week came and passed, but the Vendons did not come. Other weeks came also and passed on bringing the months that make the years.

The Vendons had started on their homeward journey but they could not be traced. There occurred at this time a very bad wreck of a western bound train where the cars plunged from a bridge into the waters below. The coaches that hung suspended above the water caught fire and burned.

It was supposed the Vendon family were among the number who perished, but Sitka could not be made to believe it was possible. Mr. Vendon had written they were coming, and nothing could move the stolid mind of the Indian girl. So she still guarded the homestead.

Months grew into years and gradually the desert claimed its own again, and the little homestead became part of the waste acres.

Into the valley came a man looking for a location. He followed the unused road from Mecca to the old Vendon claim. That night he camped near the cabin. He told that, as he was sitting by his camp fire planning how he could bring the land into a productive state, he heard the crackling of the brush near by and before him appeared an Indian woman carrying a gun. She did not speak, but her actions left no doubt in the man's mind that he was expected to leave. Not until he spoke and said that when day came he would go away, did the Indian woman offer to leave.

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—See the Apache Trail of Arizona



On the morrow he left not to return, nor has there been any one who has cared to or dared reclaim the homestead.

On a moonlight night the little cabin shows dark against the cottonwood trees. A shaft of moonlight shining in the open doorway brings to view the baby's chair.

Along the paths come the wild things of the desert and hills. A sly coyote quenches his thirst and slinks away to give place to a wildcat. The last wiled bark of the coyote is heard in the distance and the wildcat's call is answered by its mate, before the timid rabbit dares to venture and add its tracks to the trail.

Over all seems to linger the presence of the undaunted spirit of the Indian girl guarding the place.

#### LET'S EAT MORE ORANGES

Written for California Cultivator



MOST of us here in California don't need to be urged to do that. And most of us think, too, that the way to eat them is in the original package fresh from the tree. But sometimes

or cold water until gelatine begins to thicken, then pour into molds or empty shells of oranges. If placed in orange shells, after jelly becomes cold, cover with egg whites beaten stiff with one-half cup sugar.

#### Orange Whip

One ounce gelatine, one pint orange juice, one-half cup water, two-thirds cup sugar. Soak gelatine in the cold water half an hour, then stand over hot water till dissolved. Add sugar, stir until melted and strain into the orange juice. Stand aside till partly jellied, then whip with egg beater till like white of beaten egg. Turn into mold to harden. Serve plain or with custard sauce or with orange cocktail over top.

#### Orange Pie

Make short pie crust. Bake. Sprinkle powdered sugar over bottom, fill with sliced and sugared oranges scatter sugar and grated orange peel over top and serve at once.

#### SOME RECIPES

From the Sperry Cook Book

#### Graham Bread

Two quarts graham flour, 2 cups

**MAY** the NEW YEAR  
bring to you great  
happiness in a wider  
horizon, an eye that sees  
more clearly, a heart that  
beats in tune with other  
hearts, and, withal, a bright  
hearth fire.

we do like a change, so, just for variety, here are a few suggestions for using them in combinations.

#### Orange Cocktail

Dice two oranges, two bananas, can of sliced pineapple. Mix, pouring over the blended mixture the juice of one lemon. No addition of sugar is necessary. Place in sherbet glasses and serve. A candied cherry is a pleasant addition.

#### Orange Omelet

Beat yolks four eggs, add four teaspoons powdered sugar, four tablespoons orange juice, one-half teaspoon salt, grated rind of one-half orange. Beat whites stiff and fold into yolk mixture. Turn into hot buttered omelet pan, cook very slowly until browned underneath, then put in oven to finish. This omelet burns very easily because of sugar in it, so it must be cooked very carefully. Try one for your New Year's breakfast.

#### Orange Surprise

Heat one-half cup orange juice and one-fourth cup sugar over hot water; beat yolks of two eggs, add one-fourth cup sugar, stir into hot mixture and cook until spoon is coated with the custard. Add one tablespoon gelatine softened in one-fourth cup cold water, and strain entire mixture into one and a half cups cream. Stir over ice water

potato water, 1 yeast cake, 1 quart flour, 1 tablespoon salt, 1 small cup molasses or sugar, 1 tablespoon melted lard.

Dissolve yeast cake in lukewarm water. Mix all ingredients into as stiff a dough as can be stirred with a spoon, adding lukewarm water to make it the proper consistency. Let it stand over night. In the morning stir it down with a spoon thoroughly. Have bread tins greased. Fill each one about half full and let rise to the top of the pan. Bake in moderate oven 1 hour for good-sized loaves.

#### Graham Wafers

Half cup butter or nut butter, 1 cup sugar, 1 egg, 1 teaspoon bicarbonate soda, 2 tablespoons milk and flour.

Beat the butter to a cream; add the egg and beat again until light. Gradually beat in the sugar. Dissolve the soda in two tablespoons of water and add it to the sugar mixture. Add the milk and work in sufficient graham flour—about three cups to make a very stiff dough. Knead until the mixture will hold together. Roll into a very thin sheet and cut into two-inch squares. Lift carefully with a cake turner, put into slightly greased pans and bake in moderate oven until thoroughly crisp and lightly browned—about 8 minutes.

#### Germea Pudding

One pint germea (uncooked), 1 ta-

blespoon melted butter, 3 large peaches, sliced thin, 1 tablespoon sugar, spices to taste, either cinnamon or nutmeg.

Butter a baking dish, put in a thin layer of germea, then a layer of peaches. Season with the butter, sugar and spices; then layer of germea, then peaches and season as above; then cover all with a custard made of three eggs, tablespoon sugar and 1½ pints of milk. Bake 1 hour and serve with sauce of cream, sugar and cinnamon.

#### Oatmeal Soup

One pint cold oatmeal, 1 tablespoon butter, 1 tablespoon chopped onion, 1 teaspoon salt, 1 bay leaf, yolk of 1 egg, 1 quart milk, 1 saltspoon pepper.

Put the butter and the onion in a soup kettle. Push the kettle to one side of the fire and let onion cook, without browning until soft; then add the oatmeal, milk, bay leaf, salt and pepper; stir carefully until the ingredients reach boiling point. Strain through a fine sieve, reheat, and pour while hot into the tureen over the beaten yolk of the egg. Cornmeal mush or any cold cooked breakfast cereal may be substituted for the oatmeal.

#### GREEN PEPPER CHEESE SALAD

Select and wash three medium-sized green peppers. Cut around the stem of each with a slender paring knife to remove the seed and white sections. Stuff the inside of the pepper with cottage cheese, pressing it firmly. Chill, and when ready for use, cut the pepper into one-fourth-inch slices and place two or three of these slices in a nest of tender lettuce. Serve with a salad dressing.

When baking lemon pies do not have your oven too hot, as the lemon will curdle and boil over your crust.

**food**

- 1-buy it with thought
- 2-cook it with care
- 3-serve just enough
- 4-save what will keep
- 5-eat what would spoil
- 6-home-grown is best

*don't waste it*

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## THE DAHLIA

Those who desire to save their own seed should now select the best blooms for that purpose, marking them in some way. A good method is by tying a piece of string or raffia round the stem. It takes quite a time for the seed to mature. When it is ripe the pod turns brown and becomes dry. It should then be gathered and further dried by exposure to the sun in a window or similar place, when a brisk rubbing in the hands will loosen the seeds. Growing anything from seed is rendered much more interesting by keeping track of the parents; an easy thing to do in the case of dahlias, as one pod will produce many seeds.

If you are growing seedlings and intend planting the tubers next year, keep a record. Professionals do this by means of numbers, as to color and habit, so that you may arrange intelligently in the future, getting colors harmoniously neighbored and the tall flowers behind those of medium stature and the dwarfs in front. Keep in mind that you want to work for a dwarf habit of growth, also a bushy one, with blooms that look you in the face. Many beautiful varieties are droopy in habit and must be turned up for admiration. A stiff-necked generation is desired. The dahlia of the future won't need staking. Another quality, that of keeping after being cut, is susceptible of being cultivated. The old, stiff, ball-like flower kept; some of the newer styled ones do also.

Constitution, the ability to stand cutting, is indicated in dahlias as in humans by a strong neck. Some of the most beautiful new paeony-flowered sorts are weak-necked. Bloom is not everything. The dahlia foliage is attractive and can be made much more so. There is no reason why it should not be variegated. For massing effects, foliage and habit of growth are as important as quality of bloom. Possibly a cross might be effected between the garden kinds and the sea dahlia, with startling results. The possibility is most entrancing when we think of the wonderful foliage and drouth-resisting habits of the latter and the admirable cutting quality of its blooms. It opens up a vista of glorified Shasta daisies in all conceivable colors. This marriage conceivable colors.—A. D. Robinson in California Garden.

## HIGH PRODUCING GUERNSEYS

Amongst other large Guernsey producers, the American Guernsey Cattle Club reports Effie of Alfalfa Farms on fourth official test, making a record of 15,111.7 pounds of milk and 746.56 pounds of fat within the past year. The total production of fat for the four years was 2416.43 pounds, an average of 604.11 pounds per year. Another high producer was Lady's Hope of Maple Hill, 15,126.4 pounds of milk and 776.63 pounds of butterfat in one year at the age of 3½ years. Only three cows of the breed have beaten this record. Another high producer is Ada of Sunny Valley, 12,495.3 pounds of milk, 690.15 of butterfat at the age of 4½ years.

## TO INCREASE YIELD OF DAIRY COWS

The yield of a dairy herd can be increased by from one-tenth to one-fourth by feeding silage made of milo, sweet sorghum or Indian corn. That such results can be achieved with cows which previously had only alfalfa hay or alfalfa with grain feed is shown by a four-years' test recently completed at the university farm at Davis, described in bulletin on "Trials with California Forage Crops for Dairy Cows," obtainable free by writing to College of Agriculture, Berkeley.

The succulence and the palatability of silage both aid in increasing yield of milk. Another important character of silage is that it is of starchy composition and relatively low in protein (flesh-forming substances) and therefore ideal to be fed with high-protein alfalfa, the great dairy feed of California.

For California conditions Indian corn seems to be the best silage crop to plant on irrigated land, with sweet sorghum a close second, but for dry farming or where the water supply is limited the grain sorghums, milo and feterita, or Sudan grass may be placed first. Average yields of ten to fifteen tons of green forage have been obtained at the university farm during the past four years on grain land receiving one irrigation, in case of Indian corn, sweet sorghum, milo, feterita and Sudan grass. All these crops, if cut at the time of approach-

ing maturity for Indian corn and when fully matured for the other crops, produced silage of excellent quality and palatability and of special value as a succulent feed for dairy and beef cattle as well as sheep during the late summer or the winter season.

Per unit of dry matter furnished in the rations of silage fed those containing sweet sorghums proved slightly more efficient than the rations containing Indian corn silage, but Indian corn silage proved about ten per cent more efficient than the rations containing Sudan grass silage.

One advantage the California dairyman has in the use of the silo is that under California climate and crop conditions silos may be filled twice a year and their capacity thus doubled.

## WORLD'S WHEAT PROSPECTS

Important figures on the world's wheat crop for 1917 gathered by the United States food administration show that combined production of all countries is about 32,000,000 bushels less than last year and about 400,000,000 bushels less than the pre-war average. This decrease from the pre-war average is more than 10 per cent. France shows the greatest decrease of all countries, her 1917 crop being 54.5 per cent less than her average crop before the war.

The total world crop of wheat is estimated at 3,347,924,000 bushels of which the United States produced 659,797,000 bushels, the greatest amount of any nation. Other principal wheat countries arranged according to size of crop are Russia (in Europe), India, Canada, Argentina, and Australia. Approximately two-thirds of the wheat crops for 1917 was grown in countries open to world commerce.



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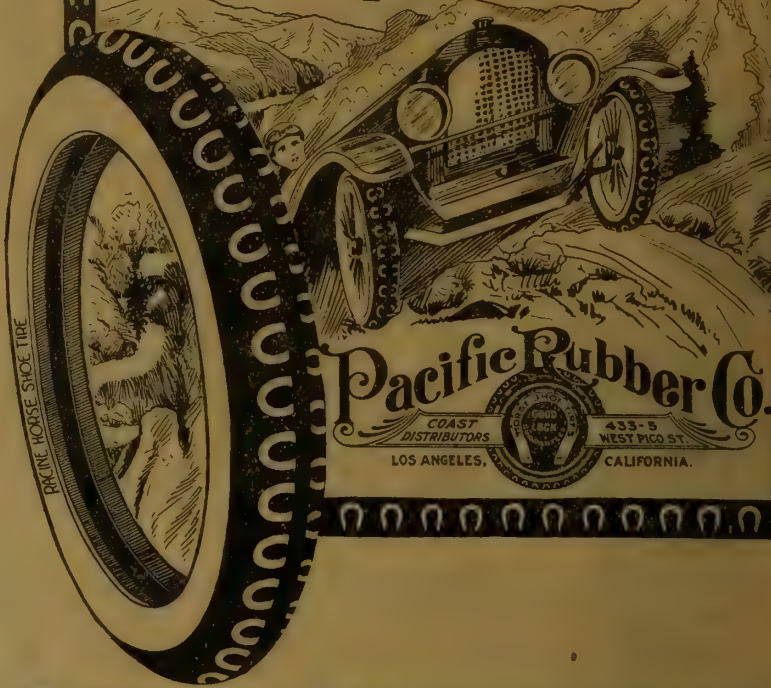
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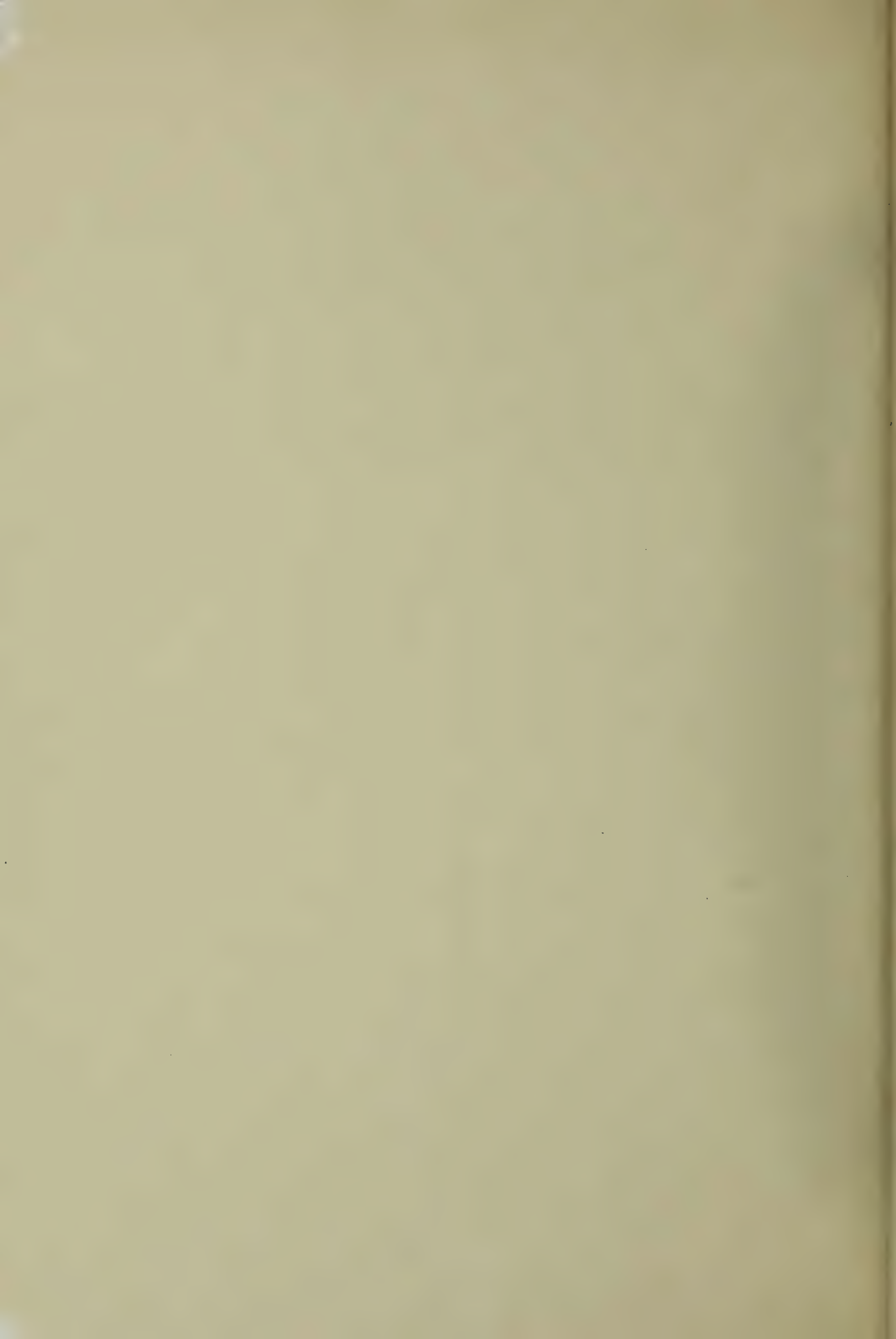
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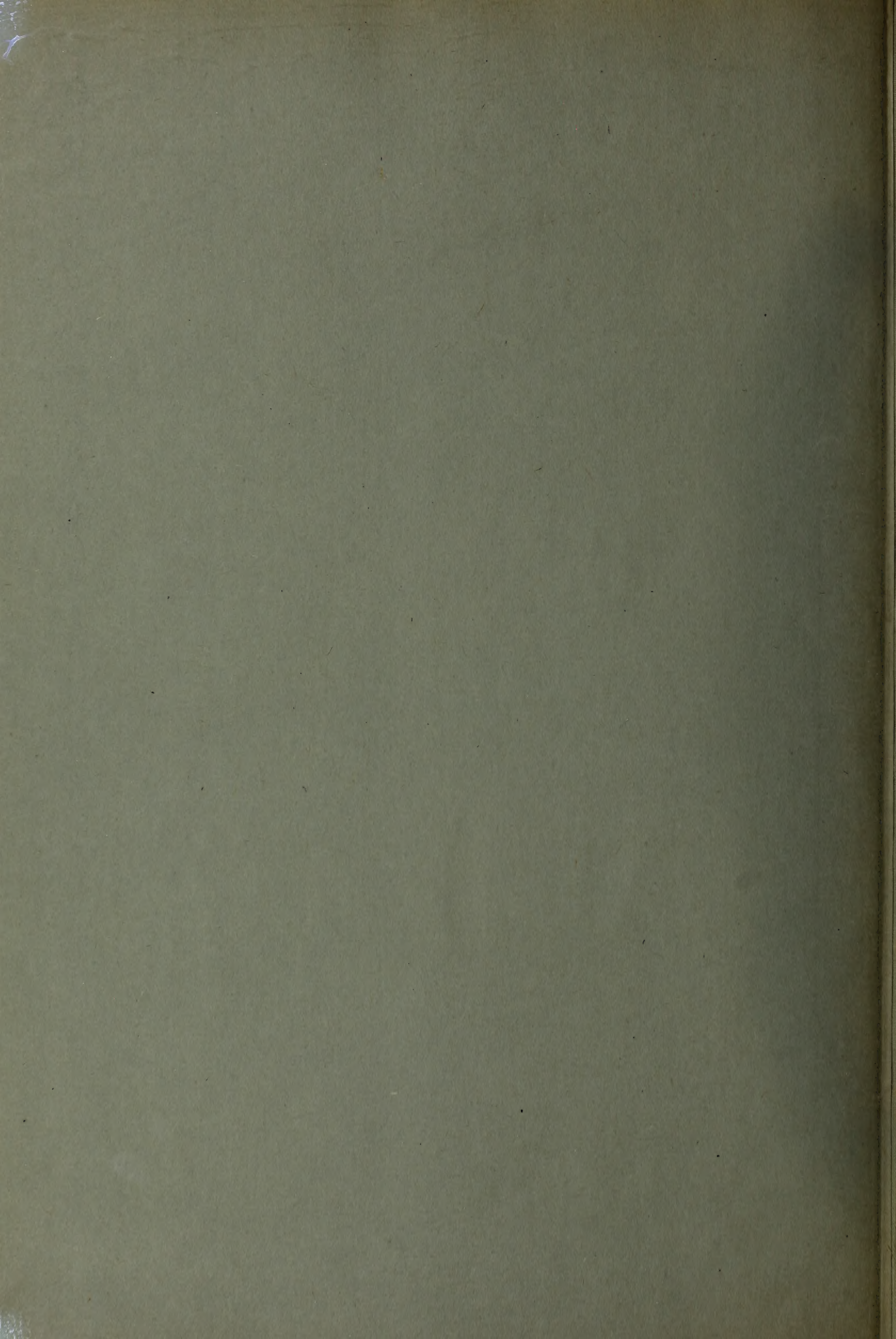










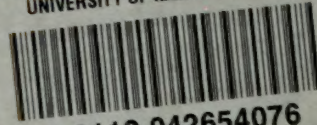








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